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# Internal Communication Issues in the Firms: Does It Affect the Productivity?

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## Abstract

Communication is born as a response of the human being to interact with other people in companies to motivate human resource and obtain the expected results and work with the best workers in an increasingly competitive market; internal communication plays an important role in improving the working environment and an excellent performance of workers. The constant change brought about by world globalization, forces organizations to apply methods that organize the means to lead the company to obtain better performance and make full use of all its resources; without it, it is created an environment of instability and uncertainty among its members. Business communication can be seen as a strategic tool in relation to the organization with the environment and interaction with the staff, showing the results expected by the company analyses by empirical data. The research is developed through a descriptive and empirical methodology to identify through surveys to workers from different companies, the current problems presented by organizations in internal communication; thus establishing the consequences of poor organizational communication; finding the real problems that affect the companies of the Colombian industry and of the world, to find possible solutions.

**Keywords:** internal communication, companies, competitiveness, human resource, labor climate

## 1. Introduction

In the 18th century and at the beginning of the 19th century, transcendental changes took place in Europe that affected the rest of the world, the civil wars, the French revolution and the industrial revolution, since they brought new changes to humanity. The industrial revolution generated impacts and fundamental changes in the economy, technology and in the way of organizing work and the lifestyle of the population. Improving processes in firms was gaining more importance when they were parameterizing the principles of work organization; the parameters start with capitalism and the boom of industry, emerging paradigms in aspects of work such as productivity, competitiveness, and efficiency.

Due to the processes and changes that were gradually caused by globalization, a new need arises in companies to adapt and apply new methodologies within the company in order to structure communication channels to improve quality in the processes and products, leading the company to be more competitive in the environment and obtain better performance, making full use of all its resources.

Proposes the bases of relations in the business environment, as the industry examines how to satisfy communication needs, benefiting the company and achieving customer satisfaction, reaching a synergy between workers and company goals (Casillas & Moreno-Menéndez, 2017).

When the great crises appeared in countries like United States of America, England, Germany that left thousands of people unemployed, an atmosphere of distrust on the part of the workers was generated, because of this the public relations are born, when the great depression happens in the United States of America, this is where employers decide to rely on workers and recognize that the solution to the problem of productivity was to maintain constant feedback with

employees. Workers were no longer seen as a factor of production to be considered as proactive, efficient, innovative, which is motivated by a series of factors in the environment; emerging skills competencies and the ability to influence people to achieve the objectives of the organization, through management indicators, measure the effectiveness of communication and the productive projection of each company; transmitting values to progress in a sustainable manner.

## **2. Problem Statement**

Internal communication in organizations is one of the fundamental axes to face each of the challenges related to market expansion, globalization, quality, and competitiveness. Faced with these business challenges, organizations must not only be focused on the economy, production, and administration but also communication as the main axis of business action; because this constitutes the central system of all the processes of an organization. Likewise, from this perspective, it can be said that communication is established as a condition and strategic tool for the processes of the relations of the organization with the environment, and the interaction with the internal personnel.

Currently, it can be seen how firms have realized and believe that communication is able to face globalization, achieving greater organizational development, as well as good communication, a way of acting and think externally, and internally of it. Which generates a change in the behavior of people, right decisions, problem solutions, positive attitudes and collaborative work. That is why those in charge of giving a good internal communication must have in understanding that the process that is implemented, influences the personality and emotions of each person, contributing in turn to job satisfaction, learning, among others.

The interest of the present investigation lies in being able to provide a solution to the problem in progress. For this reason, it is necessary to raise awareness among all the people who are part of an organization about the importance of carrying out this research which leads to satisfactory results. That is why this research aims to demonstrate the impact, the relationship between communication and organizational development. Communication could be understood as a strategic path (Scandeliuss & Cohen, 2016; Birim, 2016); whose effects and causes can be reflected commonly in different areas such as labor, leadership, relationships, teamwork, decision making and consequently in the levels of production and development.

Internal communication and organizational development are closely linked, that is why communication is of great importance within human relationships; knowing that it is a process by which one person transmits information to another (Nakamura, Umeki, & Kato, 2017; Turner, 2017). Communication as a daily and important activity within companies, therefore the success or failure of an organization depends on the people who work in it because it is these that define the work processes and use the resources of it.

The reasons why there are problems in internal communication are the decrease in motivation, the deficiency in internal feedback, the relegation of human talent, the difficulty in a corporate strategy and the lack of knowledge of the organization chart, it is for this should highlight the importance of effective communication between the organization (Nakamura et al., 2017) and all the parties with whom they interact, since the fundamental thing is to analyze and evaluate the attitude or opinion of each of those who are part of a company in order to maintain an affinity and solidarity among them, to promote reciprocal development.

And this is why a poor organizational communication also brings with it consequences such as the decrease in productivity as does understand Castellani, Montresor, Schubert, & Vezzani (2017), an obstacle in the flow of information, lack of competitiveness, low commitment of workers and a lack of knowledge in the market objectives which if alternative solutions are not generated to this problem, they affect the company not only internally but externally, seriously affecting compliance with business goals and objectives, transcending also the performance of both human talent and the organization.

## **3. Justification**

Communication is a tool used by companies to make their values, vision, and objectives known among their collaborators. On this depends, the synergy, the personnel aligned with the corporate strategy and, that the different teams are effective and productive to successfully achieve the proposed objectives. However, caring for communication is vital. Most of the problems in organizations are related to not planning and managing internal communication between the workgroups. Not giving the necessary importance to these situations at the right moment commits the organization, having harmful consequences for its results. So it is necessary to detect communication problems and implement the necessary solutions to prevent or eradicate them completely.

In this study, we approach the internal communication problems in companies, analyze the flagella that directly affect most of the organizations, leading them to not reach the objectives proposed at the productive level. It is desired to propose different contingency or mitigation plans to stop the damage caused by the mismanagement of communication in organizations, under a descriptive analysis. Every day the companies are forced to involve the organizational



communication because there is a need to be always in constant contact with the members of the company to make the different decisions aimed at increasing the competencies in the market. Corporate strategies are necessary to obtain the results that are expected (Fernandez Hurtado and Martinez Martinez, 2017; Brooks, Chen and Zeng, 2017). This article can highlight the relevant information to systematize the communication problems that affect organizations.

Currently, firms, but especially SMEs, present problems in their external results for the reason of not having communication protocols and monitoring production processes, this generates that business relationships between organizations are affected and automatically distort the company's objectives, mission, and vision. Generally, when workers do not have a solid communication channel, they increase the margin of error in their respective positions in the company and the level of effectiveness is reduced considerably.

A clear example of the above is when customers receive their product in a different way than requested; from the moment the purchase order is entered until the request is sent to the production plant and dispatched, the client's request is altered, which represents not only an inadequate image of the company but a lack of respect for the client and his orders in question.

Therefore, action and prevention measures must be taken that are stipulated, and are part of the company's protocols to increase the effectiveness of productive performance.

#### **4. Literature Review**

##### *4.1 The Decrease in Employee Motivation Affects Productivity*

It can be said that companies are a group of people who work every day to achieve a common goal. Internal communication is a key part of organizations to spread their values, vision, mission, and objectives among the human capital that makes up, to deliver a strategic alignment that is efficient and productive enough to achieve the financial goals of companies.

Lo, Lin, & Hsu (2016); Herzberg (1974) designed an experimental study, in this case, it was specifically designed to study motivation at work, using the critical incident method. Through personal interviews, subjects are asked to remember and describe events related to their work that has made them feel especially good or especially bad; the study also records whether the impact was short or long-term.

Communication allows coherence and integration between actions and objectives; in this sense, the ISO 26000 standard gives particular importance to the human capital that works in the company and is adequate to measure such perception by the impact it promotes in human development. The role played by the employee is fundamental in the company's strategies (Spangenberg, 2016; Castka & Balzarova, 2008). As companies give importance to generate a corporate culture of permanent communication with their work team, it allows to shape a strategy that motivates its employees constantly, keeping them informed of their achievements and failures, in such a way that the firms make sure that the objectives are understood by all, seeking to collect the opinions of each one, Castka & Balzarova (2008) Argue that ISO 26000, aware of the influence and importance of human capital within organizations, clearly establishes the impacts it has on people in terms of human rights, labor practices, fair operating practices, environment, consumer issue and the active participation and development of the community, and relate the dimensions of the norm with human development to obtain better processes and results for the company.

It is important that companies support and recognize the achievements of their employees, so that they realize the importance of their work, and motivate them to develop their productive activities with more pleasure and greater efficiency.

In such a way that the employee feels an important part in the company with the role in which works, a greater participation is generated, exchange of ideas and knowledge, allowing to optimize and improve the processes and services provided by the company before these costs are reduced indirectly and profits also increase.

At the birth of a sense of belonging of the worker towards the company, motivation and confidence within the company are increased, making them participants of the projects and decisions that are made, managing to create a commitment on the part of the employee towards the company.

In the workplace, several authors point out the need to establish health and safety programs, training and development; quality motivation programs in employment and better working conditions; of stability in jobs and social assistance to its employees. Programs in which values such as safety, training, team work, worker recognition and benefits prevail, strengthens employees' sense of belonging and trust (MatthewPotoski & J.Callery, 2018); turning the worker into the best publicity of the company, since they will be the ones that best speak of the business organization.

Achieving a synergy between the corporate strategy of the company and its employees will improve the productive processes, leading the company to be more competitive in the environment, a work team connected with the objectives of

the company will be more productive. According to the words of Matthew Potoski & J. Callery (2018) being socially responsible with human capital provides advantages to the company, and certainly, improves your productivity, efficiency, achievement of goals, quality in the activities you carry out and, therefore, improve your financial performance and image of the company.

Theories of traditional motivation focus on specific elements that motivate employees in the pursuit of the performance of the organization. For example, the reasons and the theory of needs of Maslow & H (1943); Lee & Raschke (2016) states that employees have five levels of needs: physiological, safety, social, ego and self-actualization.

Applying Maslow theory in a business environment, organizations must be concerned about the welfare of their employees, seeking to improve personal development and self-realization of each individual that is part of the company's environment, with the ability to meet their objectives autonomously in an indicated environment. According to Maslow's needs, they stand out according to the recognition of the person, the particular achievement, and respect for others; they manage to satisfy the needs of each person, managing to develop self-confidence and feel valuable within society, obtaining motivation to aspire to meet new objectives.

According to Herzberg's model, it is a theory of satisfaction, which implicitly assumes the equation "*happy employees = high productivity*". Although satisfaction can influence performance and vice versa, the translation of performance satisfaction is not automatic. Satisfaction is important from the employee's perspective. But, for there to be motivation in the primary and etymological sense (movement action), there must be an impact on the behavior; the impact on the mood of the employee is not enough (Drieschner, Lammers, & Van Der Staak, 2004).

Maintain a constant motivation in the company to generate benefits such as increased productivity, the key to performance and profitability of it; the understanding of the ownership of employees, the levers of motivation and the development of the adoption of this type of alternative approach, on the conventional empirical analysis (Di Cintio, Ghosh, & Grassi, 2017). Although motivation is important, it will not be a guarantee for employees who achieve greater productivity, because they may be affected by other external or internal factors.

#### *4.2 Internal Feedback Generates Information Flow within the Firms*

A process of efficient internal communication requires the creation of a means that allows the correct feedback, since it is necessary to develop any type of action that allows knowing the aspirations and insufficiencies of the workers, knowing that it must go beyond a mailbox of suggestion. The management of the communication, in turn, is responsible for managing, planning and evaluating the information flows that concern both the external and internal client, in relation to the objectives of the company and the sector to which it belongs. Starting from the axiom according to Lu, Yuan, & Wu (2017) whether it is proposed or not, the organization always communicates, the strategic management of communication becomes an element of primordial competitiveness within organizational contexts. As the author refers Yildirim (2014); Podsakoff, Whiting, Podsakoff, & Mishra (2011) thus, the contributions of communication to the organization can and need to be measured as other activities carried out by it.

The feedback seeks to be a useful tool for the operation of a company, for this it is important that this is a permanent process and not something sporadic, in which a system should be implemented in the feedback, that is, a rigorous methodology that allows analyzing the information in order to evaluate the objective processes and opinions.

Currently, it is essential to have an internal communication plan in organizations, because an informed worker is more productive, is connected to the company, feels motivated and contributes to the achievement of the proposed objectives, in order to obtain favorable results at the financial level, internal clients are the main ambassadors of companies; it should be noted that the communication that occurs between the leader and his team is the most relevant. The use of digital tools for the transmission of information within organizations, it is becoming timelier every day because it arrives in a timely manner and in real time to workers.

Within the organization, the internet platform proved to be a facilitator in the communication environment, which makes it a valuable tool for internal business management. Therefore, the information flows go in both directions, providing knowledge management to the organization, never before allowed. Interpreting itself as the means of excellence of internal communication, which can help improve and popularize the flow of information of the organization. In addition to this function, even internally, it is related as a tool for the management of information and knowledge of the company.

From the above, this environment provides a database information platform in all areas in an organized and controlled manner. On the other hand employees are connected to a powerful communication medium that connects them to the world. Access to relevant news and events is immediate and more efficient. Participation can be encouraged and facilitate the lives of organizations.

Then, according to Wang, Yuan, & Wu (2017) communication, therefore, contributes vaguely to the strengthening of identity because it is not based on institutional or conceptual contents. Well-managed internal communication promotes

cooperation and unity, having excellence in the management of tasks and the recognition of the realities of each individual and their working group. The lack of internal communication strategies causes stagnation in the management, processes, actions and relationships.

The fundamental capital of companies in the 21st century is being highlighted by their human capital, which is of great importance the care and respect for them, because employees can participate in important decisions of the company, providing different opinions and useful tools for the development of better business management. Success in human management in companies is confirmed by the active recognition and assessment of the human factor.

#### *4.3 Relegating Human Talent to a Second Level Generates Insufficiency in Business Competitiveness*

Despite having demonstrated the great value that knowledge has, its sharing and its transfer, which are highly beneficial for society, between the company and the workers, there are still attitudes and behaviors that are contrary to such proposals. Sometimes it is due to circumstances that arise in the company that impede or hinder transmission (Antoniades, Calomiris, & Hitscherich, 2016).

It should be noted, that within business communication it is important that it flows properly. However, there are certain factors that impede, transform the message or hinder the general process of it, and are called barriers, which can range from physical elements to individual attitudes, and a group as an extended absence of employees. The key to identifying these barriers and eliminating their effect is to carefully identify all aspects of them.

(Khedery, 2015) The primary function of human talent is the development of human capital that allows the company to be more competitive every day, operating at maximum efficiency and effectiveness, so that it achieves the success of its strategies.

Based on the above, it can be seen how human talent is a fundamental part of the business, since this is the essence in business management, therefore if it is relegated, it hinders an economic improvement for the company in the productive scenario, that is, if the leaders of the companies do not have a good relationship with their workers, they are not able to stimulate the potential of these, therefore, a lack of competitiveness of the company will be generated. It is necessary to emphasize that the effectiveness of companies is superior when it considers workers as strategic resources, given that in order to be competitive it must strive to be productive, offer quality and excellence in customer service, both internally and externally; value ethics and transparency, as well as social responsibility towards workers and society.

Furthermore, in the 21st century, the competitive advantage of companies is not measured or measured by their natural, technological, energy and financial resources, but by the level of preparation and empowerment that human talent receives; being this not only the motor but also the only competitive advantage that differentiates it from other companies, making them adapt to the changes that are taking place in the area and the global market.

For this reason, the mission of managers is to establish a strategy to create a correct work environment that ensures that the right person is in the right place within the company (Sirola & Pitesa, 2018), ensuring that the commitment in the improvement process can satisfy all demands of the company and consumers.

In short, a human talent management system is defined as something very significant, given that it manages and measures the performance of employees through feedback (Cai, Wang, Cui, & Stanley, 2018), training and support, this allows a clear vision of the competencies that are required to achieve personal and business success.

In addition, adequate personal relationships contribute significantly to the success of knowledge transfer, and create trust and reciprocity among the members of the company, while distancing raises barriers and hinders the transfer. According to Rezvani et al (2016); Gözükarar & Çolakoğlu (2016) the influence of human factors such as interpersonal relationships, motivation, satisfaction, or participation in the company, are key to the success of productivity and the application of knowledge management taking advantage of all human talent.

In conclusion to develop competitiveness strategies and achieve success in a company, it is necessary to establish adequate personal relationships, manage, support and exploit the human potential that the company has, in order to improve performance and quality in each of the productive activities of companies.

This is why the benefits of carrying out a perfect strategy of talent management, helps companies to achieve the identification of the skills and competencies of their workers, which allows to take stock of the skills that exist in companies, despite the changes that are taking place in the global economy; the exit of talent is still one of the concerns of companies, so it is important that retaining a talent for leadership and growth in the market. Therefore, having a strong management culture, also determines the level of organization of the companies, likewise, if the workers tend to be positive about the practices of this management, they come to have more confidence in the future of the companies, which helps ensure a position in the market leadership.

It should be noted that these efforts are an indispensable strategic tool to face the new challenges imposed by the

competitive environment at the business level. With regard to promoting excellence at the level of individual skills according to the operational activities of companies, ensuring the development and management of the potential of each person.

This refers to management trends, which aim to optimize the management of company personnel, and thus contribute to the development and increase of competitiveness and productivity, these trends try to redeem the human being within an organization, looking for through the identification and management of the potential of the workers, and the goals proposed by the organization can be achieved.

#### *4.4 Difficulty of Workers to Focus on Corporate Strategy*

The internal communication problems in the company make it difficult to socialize the goals and objectives, which means that the strategies are not precise, encouraging a low commitment on the part of the workers, and so that the internal reputation of the company is affected to the company. As it ratifies by Akin Ateş, van Raaij, & Wynstra (2015), with its premise: *“the structure follows the strategy”*, in which he attributes to the strategy the previous and independent quality that then conditions the structure, subsequent and dependent that derives from the strategy to be able to fulfill an effective function.

Then, an effective company would be one that manages to add value to each of its interrelationships, and does not lose sight of its contribution to achieve the mission, move towards the vision, meet the objectives and make the strategy a reality (Hetzl, 2016).

What role do workers play in corporate strategy?, it is vital to understand and understand that managers and employees should receive all the information necessary to not distort what they want to achieve, so that the planning in the corporate strategy must be clear to identify their strengths and risks; restructuring and implementing processes that control and reduce the margin of error in companies. Authors as Joniaková & Blštáková (2015); Ding, Li, & George (2014) express, human management has evolved from an administrative-operative perspective towards a strategic one concerned with the critical problems of organizations. To do this, it is necessary to know the human talent that is part of the organization, how they capture the information and the position they take in face of the challenges faced by managers every day, their ability to improve productivity, profitability and achieve the company's dynamism. Be competitive, know their potential and review their ability to work as a team, as in many cases, they determine the progress and durability of the organization, it because of a good human talent and at ease with their work makes internal processes efficient and effective.

In this way, an appropriate business management with a permanent link with the productive assets of the company (workers), will obtain an orientation towards innovation, with the environment that surrounds it (e.g., Frank, Cortimiglia, Ribeiro, & Oliveira, 2016).

Therefore, it is essential to disseminate to all employees about the strategic objectives, the mission, and vision of the company, in order to generate a link with the different areas.

This means that retribution is one of the most powerful means available to companies to send credible messages to their employees about what the company's philosophy, values, objectives, and strategic orientation are; and properly managed, can act as a trigger or catalyst in business change and development projects. When it is instrumentalized on a tangible element, they enjoy an almost immediate visibility, receiving a dose of credibility difficult to achieve with other measures (Price & Sun, 2017).

This leads to knowing the importance and the need for vigorous work in the corporate culture to achieve flexible organizations, open to change, adaptable: but, above all, committed to strategic processes in competitive markets such as those of today (Gündüz & Semercişz, 2012).

In this sense, the internal organizational culture of a company makes reference to the customs, norms, practices, projects, beliefs, that is, the modes of proper conduct externalize themselves to the collaborators (Gattringer, Wiener, & Strehl, 2017). This is what speaks of an organizational culture with an internal and external favorable image.

To finish, the role that workers play in the corporate strategy is very important, since this way, the organization achieves the efficient and effective internal system that it requires for the relationship with the client, supplier and market; in the moment that human talent stops operating properly, the system stops, cuts its process, the most common difficulties and mistakes start within the companies, such as: poorly planned product dispatch to the client, due to lack of communication between the commercial department and logistics coordinator, either because one of the parties is not doing a job with productivity and excellence or because of a poor delivery of information from one to the other, this means extra costs for the company and, in very frequent cases, loss of client, therefore in the company will affect the phrase: "Organizations work with tangible and intangible inputs to produce goods and services in order to obtain profit".

How to focus workers on corporate strategy? For human talent, compensation is important, is what they receive in

exchange for their services for the company. Over the years, remuneration became not only the payment to the worker but also a strategic management tool to develop and mobilize human capital, orienting the capabilities, attitudes and behavior of employees towards the achievement of business objectives (Katsikea, Theodosiou, & Morgan, 2015).

Therefore, the objective of companies in terms of employees should be, retain, attract and motivate, these three facets are usually broken down into a list of purposes exposed below (Katsikea et al., 2015).

1. Attract good professionals.
2. Retain them selectively and performance motivation.
3. Improve the work climate and employee satisfaction.
4. Increase performance.
5. Develop talent.
6. To favor the cohesion of the teams and the synergy between units and departments.
7. Promote the commitment and identification of employees with the interests of the company.
8. Communicate objectives and strategy.
9. Disseminate and give credibility to corporate values and philosophy.

Why talent abandons organizations? All causes come together in one sole demotivation. It is enough to perceive, review and analyze what demotivates the members.

The talent usually goes from the companies for the following reasons:

1. The existence of 'tyrant' boss.
2. Lack of autonomy and independence.
3. Unfair internal policies.
4. Problems in recognition.
5. The organization is sinking.

Job satisfaction or job happiness is an important pillar for organizations and to which attention should be paid, even more in the era of changing markets that we live. It is vital, for the survival of an organization, as well as for its permanence and progress, to have people aligned and happy in their work roles (Ward & King, 2017).

To end a good work not only must have nice motivated, but also satisfied with their expectations within a company, the retribution should not be only economic, there are other factors such as, training, development, participation, reward, importance to your personal life, help in personal and children's education. In order to obtain the key objective: The strategic corporate alignment between managers and employees.

#### *4.5 The Organization Chart as an Integral Part of the Firm*

In this way, the organization chart is the graphic representation of the structure of an organization, with time it can be restructured, since, it is variable. Respond from human resources to work hand in hand with each area of the company, that is, a structure is ideal for planning and control.

Then, Rydén, Ringberg, & Wilke (2015) affirm that, an organizational culture is clearly defined and identified in a company when it has: vision and shared values, collective sense of purpose, common mental models, natural leadership and unwritten rules that are lived in everydayness

In this way, in most of the companies nobody is in charge of the processes, they almost do not realize it, does a company have a general manager who takes charge of the dispatch of the orders, of seeing that the products arrive to the clients? Probably not. Who is in charge of developing new products? All departments take part, but nobody is in charge. The companies of today consist of vertical structures. The person who verifies the credit of a client belongs to the credit department, which is part of the financial organization in the organization chart. Those who choose the items in the order work in the warehouse and probably depend on the manufacturing manager, those who are part of a process look inside their own department and up where their superior is, but, nobody looks out, where they are the client. The performance problems of companies lie in the inevitable consequence of the fragmentation of the process (López-Navarro & Camisón-Zornoza, 2003).

It is important to understand that, in terms of processes, the results allow us to determine the importance of stakeholder participation in defining the objectives of the area, as well as to implement and develop them. These processes of involvement, make communication mechanisms achieve the necessary coordination, which will lead to the success of

the processes, determined to integrate the work teams, under a precise decision making in pursuit of compliance with financial and productive goals (Abubakar, Elrehail, Alatailat, & Elçi, 2017).

Given the little communication existing in companies between one department and another, by vertical structures, it is caused that workers do not know who is each of the members of the organization, what are their responsibilities and how they should respond to the tasks of the company, in addition to its subordinates. In this way, Pikhart (2014) affirm that due to the lack of functional delimitation and, therefore, to the lack of conceptual unity in reference to the bodies that are responsible for business communication, it is difficult to establish a historical evolution of their structures. This is why at present the companies do not present economies of scale, that is, the importance of the internal relations of the organization to reduce risks, share responsibilities, vision towards the same objectives. Working aligned alleviates companies from having to hire personnel to reorganize, which due to poor programming requires a process again.

Likewise, the inflexibility, insensibility, lack of directing the client, obsession with the activity rather than with the result. Business people know that factories, service facilities, and sales offices located far from the central office have to be treated as separate organizations, detached from each other and autonomous so that they function efficiently. New technologies free companies from this need to compromise. High bandwidth communication networks allow the central office to have the same information as the branches and see the data they use and vice versa in real time (Persson, 2006).

Connecting the organizational chart of the company with the technological advances and the process diagrams for each department is a good step to better understand the processes that constitute a company, exposing the names that indicate its initial state and its final state.

In conclusion, the new organizational and managerial schemes mirror the way in which the organization thinks and operates, in search of a worker with the capacity to develop the company's objectives; the flexibility before the changes introduced by the organization; a flat, agile and modern structure that generates an atmosphere of work that encourages those who are part of it; a system that is based on the effectiveness of the process where success and risk are shared as mentioned above, creation of internal relationships based on networking; and a participatory work team in the actions of the organization.

## **5. Methodology**

In the study of the problems in the internal communication of companies, a descriptive and empirical methodology is established to identify the diagnosis of low business productivity, through the realization 100 samples in count participated workers from different companies; the current state of its communication and thus establish the consequences of a poor organizational communication, based on the variables used, finding the flaws that affect many companies in the Colombian industry and the world, which leads to productive scenarios, based on the information gathered through exhaustive research, its quantitative and qualitative analysis responding to the objectives set out in the research.

The variables used in the research are the following:

The decrease in employee motivation affects the productivity of firms, this variable presents a high degree of importance (Kim & Patel, 2017), through the events that the employee lives in his workplace, he can feel very good or very bad and this triggers a short or long-term impact.

Internal feedback generates information flow within the company, a variable that indicates that an efficient communication process requires the creation of a medium that enables the correct transmission of information as it is essential to develop any action.

Relegating human talent to second place generates insufficiency in business competitiveness, human talent is paramount in a company and, depending on the importance given to it, and its effectiveness depends since the employee is the essence of management or business management.

The difficulty of the workers to focus on the corporate strategy, since the problems of internal communication in the company, make it difficult to socialize goals and objectives.

The organizational chart as an integral part of the company, since the organizational chart is the graphic representation of the organizational structure, as stated by Da Silva Gonçalves Zangiski, Pinheiro De Lima, & Gouvea Da Costa (2013) an organizational culture is defined in a company when it has shared vision and values, a collective sense of purpose, common mental models, natural leadership and unwritten rules that are lived in everyday life.

## **6. Analysis and Result**

The results obtained are negative with respect to the satisfaction of the personnel of the companies, according to the level of communication that is handled by the company. The results indicate a level of lack in the planning, integration, and importance of human capital that different companies have, especially small and medium-sized companies, where

management considers these factors of study to be of little importance for the company to maximize its competitiveness, both in the administrative and productive scenario.

Based on the information collected and the variables investigated, it is necessary for companies to introduce in their objectives and goals the importance of employee satisfaction as well as the human capital they have, taking into account that the decrease in employee motivation workers affect productivity, the lack of feedback within the company distorts the flow of information by raising the margin of error; In the same way, it is important that the human resource goes from a second plane to a close-up, where it is understood that this depends on the companies working successfully, in what way? Focusing the workers on the corporate strategy, bringing them closer to the mission, vision, objectives, and composition of the company regarding their organization that can be visualized through the organization chart.

Table 1. Means, standard deviations and correlations

Variables	Mean	S.D.	1	2	3	4	5
Mission, vision and objectives	0,36	0,482	1	-0,06	-0,085	-0,039	1,00**
Manage, plan and evaluate	0,37	0,485		1	-0,10	0,255**	-0,06
Human talent	0,36	0,482			1	0,09	-0,09
Economic retribution	0,33	0,473				1	-0,04
Organization chart	0,36	0,482					1

\*\*  $p < .05$

All correlations with an absolute value larger than 0.084 are significant at the level  $p < 0.05$ . Mean values and standard deviations are overall values of non-centered variables. Centering has no impact on standard errors and correlation coefficients. The correlation coefficients are within firm correlations. Given our use of a fixed effects model, we calculated correlations after subtracting for each variable the mean value of the respective firm from the value of the variable.

Table 2. Simple Regression – Economic retribution vs. manage, plan & evaluate

Model	Sum Squares	df	Mean Squares	F	Sig.
Regression	0,092	4	0,023	0,10	0,9826
Residual	114,54	495	0,231394		
Total (Corr.)	114,632	499			

The table above (see Table 2) describes the decomposition of the variance of the study data, which were carried out in two components, one component of Regression and another component behind the groups. In addition, it was observed that the significance  $F$  in this study was 0.09826, which corresponds to the quotient between the estimated of Residual and the estimated within the groups analyzed; since the  $P$  value of the significance  $F$  is greater than or equal to 0.05, therefore there is no statistically significant difference among the measures of the 5 study variables, this presented by a level of 95% confidence.

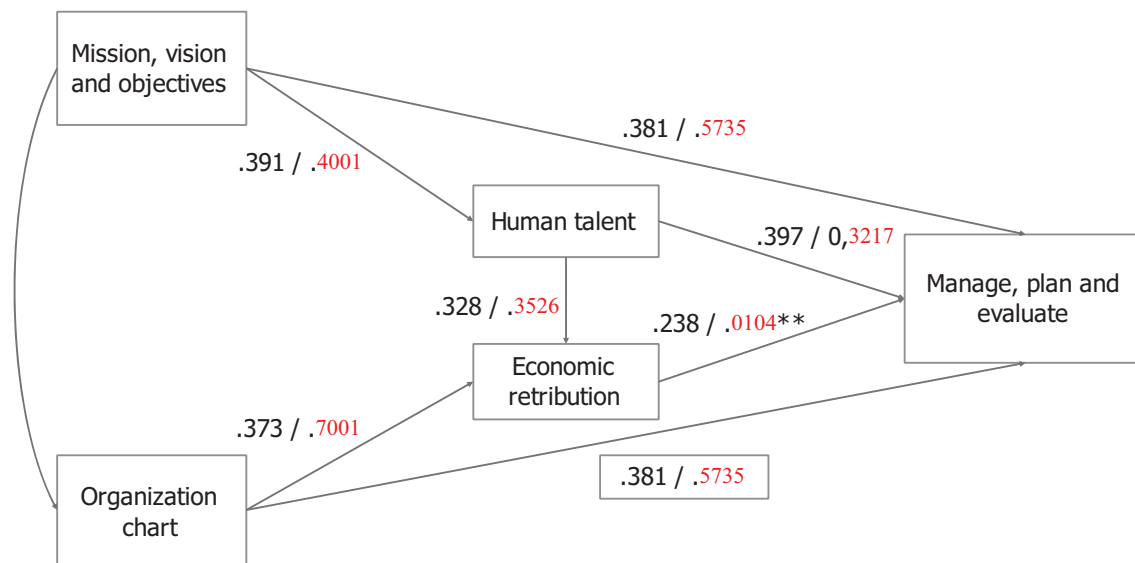


Figure 1. The mediation model of human talent – economic retribution between mission, vision and objective looking for maximize the internal firms' productivity. Unstandardized coefficients on the left and right to be competitive in the market. \*\*  $p < .05$ .

According to Figure 1, it is observed that the ANOVA analysis is  $P$  value greater than .05, which indicates that there is no statistically significant relationship between the analyzed variables such as mission, vision & objectives in relation to managing, plan and evaluate, although it has a confidence level of 95% which is usual for the study, in the same way, it was obtained in the other measurements, except the variables economic retribution and manage, plan & evaluate it does has a relationship statistically significant, given that the ANOVA analysis highlights a  $P$  value less than -.05 at a confidence level of 95%, which highlights that a dynamic economy has a growth commensurate with the level of internal administration and strategic planning of companies, promoting high business productivity. It is also noted that the variables studied have a weak correlation coefficient according to the relationship it has.

## 7. Conclusion

To finalize this research, it is worth noting that organizational communication is a key element for the effective development of the productive activities of any company, which is configured in a positive way if the different variables that significantly affect this are identified and analyzed. Aspect, establishing a communicational structure according to the needs and requirements of each organization. That is why communication is of great importance in companies, according to the empirical data thrown by the sample studied; therefore, the correlation provided an analysis in which the entrepreneurs are weak in decision making, as to generate a good working environment, perceived by the correlation analysis of  $P$  value, in which it is observed that the variables (economic retribution and manage, plan & evaluate) have a significant correlation at a statistical level, so, it means that employees require more communicative dynamics in the face of productivity needs, compared to variables that do not have a significant correlation in the study. However, it is necessary to bear in mind that communication helps the company to be more efficient and improve its performance.

As expressed in this research, communication is a component which facilitates business management to be carried out in a successful manner; and it is that the good management of this, helps to maintain the organization, that is to say, that the companies that wish to stand out in the businesses must have a protocol of communication like an exclusive subject, since according to the sample of the study threw data where permeates the need to manage an internal integration of companies, with the purpose of having teamwork, and this will contribute to increasing competitiveness.

Then, with the intention that organizational communication becomes more efficient, companies should seek to implement feedback of the information received, as well as an optimal use of communication resources, both internal and external to the organization, in order to achieve the strategic objectives proposed in the research, and these will be achieved by putting operational lines and the structural environment of the companies into action.



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# ‘Everything Collapses Once Again’: Depression, Anxiety, and Stress Among Close Relatives of Icelanders With SUD

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## Abstract

*Background:* This research explores the extent to which the use of alcohol or drugs by one member of a family affects the mental health and psychosocial state of other family members. Are Icelandic family members of substance abusers more likely to report increased depression, anxiety, and stress compared to the general population? Are there significant differences between family members, such as spouses, parents, adult children, and siblings? And do family members express their feelings and experience in a similar way?

*Methods:* To answer such questions, the Depression Anxiety Stress Scale (DASS) was used to measure those three negative mental states. In the quantitative phase, the study investigated the differences in the average reported responses on the DASS in families with a chemically dependent parent, sibling, spouse/partner, or child. For the qualitative phase of the research, sixteen in-depth interviews were conducted with relatives of individuals afflicted with Substance Use Disorder (SUD).

*Results:* Over 35% of the DASS respondents in all three subscales (depression, anxiety, stress) were found to have average, serious, or very serious depression, anxiety, and/or stress. The interviews revealed interesting differences among how the behaviour of the family member with SUD affected each kind of relative: parents, children, siblings, and spouses.

*Conclusion and Applications:* The results of this study can be used to improve and promote treatment for the whole family as a unit, as well as for individual family members, and can help social professionals to better understand the effects of substance dependence on families, family systems, and public health in general.

**Keywords:** Substance Use Disorder, depression, anxiety, stress, psychosocial, family member, family group therapy.

## 1. Introduction

The aim of this research is to measure the extent to which living with an individual afflicted by Substance Use Disorder (SUD) affects the mental health and psychosocial state of other family members, especially their depression, anxiety, and stress<sup>1</sup>. Questions addressed by this study include: Are family members of substance abusers in Iceland more likely to report increased depression, anxiety, and stress, compared to the general population? Are there significant differences in how family members are affected, depending on whether they are spouses, parents, adult children, or siblings of the substance abuser? And do those family members express their feelings and think about their experiences in similar ways?

Substance Use Disorder is a disease whose social costs are high. The negative effects of drug and alcohol abuse go well beyond the health and mental condition of the person who abuses, showing up as a degradation of the abuser’s immediate social environment (Meyers, Apodaca, Flicker & Slesnick, 2002), beginning with the family with whom the abuser resides. Conflicts can come about in relations within the family because of the stress that builds up due to the substance user’s chemical dependence (Hrafnadóttir & Ólafsdóttir, 2016; Ólafsdóttir & Hrafnadóttir, 2011). Research has shown a strong link between addiction and the disruption of family relationships, including severe mental, psychosocial, and physical effects on family members—effects described as depression, anxiety, and stress (Bortolon, Signor, Moreira, Figueiró, Benchaya, & Machado et al., 2016; Jhanjee, 2014; Lander, Howsare & Byrne, 2013). Depression affecting parents can contribute to the mental, physical, and social neglect of their children, further aggravating the family’s anxiety and stress (Hrafnadóttir et al., 2016, Ólafsdóttir et al., 2011; Denning 2010).

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Comparable studies have focused on those who are afflicted with SUD. This study's special contribution to international alcohol and drug research is to look beyond the abusers to the effects of addiction on their family members. The results can be used to better understand the effects of substance dependence on families in ways that improve and promote treatment for individual family members and for the family as a unit. For example, the depression suffered by a parent living with a partner afflicted with SUD can contribute to the mental, physical, and social neglect of the family's children, further aggravating the family's anxiety and stress (Hrafnisdóttir et al., 2016, Ólafsdóttir et al., 2011; Denning 2010).

This study shifts the focus of family substance abuse. It was popular in the latter part of the 20<sup>th</sup> century in family therapy (1960s-1980s) to focus on children, specifically the effects of parental substance abuse on the parent's children. In the mid-1980s, the focus shifted more towards the individual afflicted by SUD rather than on the family as a whole. Recently, the focus has again shifted, now more toward how individual family members are affected by the substance abuser's struggle with SUD (Orjasniemi & Kurvinen 2017; Roine & Ilva & Takala 2010; Itäpuisto 2005; 2001; Holmila & Kantola 2003). The present study follows that trend, enabling a clearer understanding of the effects of substance dependence on whole family units.

This study is the first SUD research to rely on the Depression, Anxiety and Stress Scale (DASS) survey tool to analyse the mental, emotional, and physical well-being of the family members who live with SUD, rather than the substance abuser. By using this proven tool to examine the negative effects related to living with SUD, the findings of the study can be applied directly to efforts to improve and promote treatment for the whole family. The quantitative assessment provided by that tool was supplemented by qualitative assessment via one-on-one interviews with participants. The responses of those close relatives of substance abusers give them a voice in the study's results, while enabling investigators more fully to appreciate how SUD at such close quarters can affect the mental, physical, and social aspects of their lives.

Further, this is one of a few studies to consider family dynamics related to substance abuse in Iceland. To date, little SUD research has been conducted done in Iceland that is comparable to research involving the other Nordic countries, the European Union, or the United States. This study both contributes to the literature and understanding of the mental well-being of family members living with SUD, and also contributes to the general understanding of substance abuse in Iceland. This study's statistical findings about alcohol consumption can provide some understanding of how Iceland compares to its Nordic cousins.

### **Background: Psychosocial Impacts of Substance Use Disorder on Couples**

A principal cause of excessive drinking is poor emotional health (Kenneth, Leonard & Eiden, 2007), often manifesting as depression, stress, and anxiety—mental states that adversely affect interpersonal relationships (Ólafsdóttir & Hrafnisdóttir, 2011; Denning, 2010). A person whose domestic partner is a substance abuser can experience breakdowns in communication, decreased intimacy, repressed psychosocial stress, emotional clashes, and even physical violence (Lander, Howsare & Byrne, 2013; Dawson, Grant, Chou & Stinson, 2007; Itäpuisto, 2005;2001).

Research has documented that couples are likely to separate in the early years of their relationship because of substance abuse by one or both partners. For example, a 2007 study by Kenneth, Leonard and Eiden collected data on nearly twelve thousand couples—specifically, 11,682 women at least eighteen years of age at the time of the study, each of whom was living with a partner who abused alcohol, addictive drugs, or both. The control group was composed of women who did not live with a substance-abusing family member. Each woman in both groups answered a self-assessment survey about her state of health in the twelve months previous to the study. The most significant finding was that women who live with substance-abusing partners tend to have much worse states of health, with more anxiety, stress, physical illness, and significant impairment of their overall quality of life as indicated by lower family incomes and more domestic abuse (Dawson, Grant, Chou & Stinson, 2007).

A study of a similar nature used data furnished by the National Epidemiologic Society on Alcohol and Related Conditions (NESARC) in the United States investigated the effects of one live-in partner's substance abuse on the mental and physical health of the other partner (Hasin, Stinson & Ogburn, 2007). Increased stress affects psychological health, and caregivers report feeling higher levels of anger (Blum & Sherman, 2010), depression, and anxiety (Blum & Sherman, 2010; Bowen & Riley, 2005). One counterintuitive finding of the Nord-Trøndelag Health Study (HUNT) was that while alcohol consumption increases spousal mental distress, such distress is not commonly correlated with proportionately greater alcohol consumption (Rognmo, Torvik, Ildstad & Tambs, 2013). This seems to suggest that the distress experienced by spouses results from alcohol abuse in general rather than from the quantity of alcohol being consumed.

At the same time, the relationships of couples who consume large amounts of alcohol do more often end in divorce. One research team found that high alcohol consumption not only increased the likelihood of divorce, but also impeded the mental and emotional healing process following the divorce (Rognmo, Torvik, Røysamb & Tambs, 2013). According to the World Health Organization (WHO), in general women develop clinical depression fifty percent more frequently

than men (WHO, n.d.).

### **Background: Psychosocial and Physical Effects Of Parental Substance Abuse on Children**

Previous studies have shown that the effects of substance abuse on a family depend partly on which family member is the abuser (Bortolon et al., 2016). Parents of teenagers often feel responsible when their teenager is a substance abuser, and as a result they may be in denial about that reality; or they may blame themselves and experience guilt, stress, anger, sadness, and a need to assist the youngster to overcome the addiction (Bortolon et al., 2016; Waldron, Kern-Jones, Turner, Peterson & Ozechowski, 2006).

At the same time, people who struggle with SUD as abusers because of depression are often parents or guardians of children who are themselves depressed. According to information from the U.S. Department of Health and Human Services (HHS), more than seven million American children live with parents who abuse alcohol, affecting about one in fifteen American households (U.S. Department of Health and Human Services [SAMHSA], 2012).

A healthy self-image and good self-esteem accompany interactions between family members characterized by trust and mutual respect. Children who grow up feeling close to parents who are worthy of their trust find it easier to trust others and to form close relationships in adulthood (Park, Crocker and Mickelson, 2004). But if a child grows up with a lack of trust and emotional intimacy with his/her caregivers – for example due to dependence on alcohol or drugs by one or more of those supposed caregivers – that experience can contribute to a sense of insecurity about relationships in adulthood that can interfere with the formation of positive relationships characterized by emotional intimacy. The result can be difficulties in trusting others and in feeling secure in relating to others, whether as a couple or a family (Johnson & Stone, 2009; Mikulincer and Shaver, 2007).

Studies have shown that adults in partnerships define intimacy and emotional attachment to one another by evaluating their partner's behaviour towards themselves. It has also been observed that a couple's shared belief that the two partners can resolve conflicts and disputes through negotiation bodes well for effective communication and contentment within the family. The relation between intimacy and communication in couples' relationships provides evidence of family contentment and cohesion (Dumont, Jenkins, Hinson & Sibcy, 2012). Conversely, studies have shown that if there is little trust or emotional intimacy in a couple's relationship, it is more likely that spouses and children in the family will experience anxiety and a lack of contentment with family life (Hrafnisdóttir & Ólafsdóttir, 2016; Dumont et al., 2012).

Substance abuse by parents related to their depression typically produces stressful family interactions with adverse psychosocial effects on children, who observe that parental conflicts, illness, and financial upsets cause the impoverished living conditions the family must endure (Orjasniemi & Kurvinen, 2017; Hrafnisdóttir & Ólafsdóttir, 2016; Sang, Cederbaum & Hurlburt, 2014). Children in such situations may find it more difficult to trust others and form healthy emotional connections (Lander, Howsare & Byrne, 2013; Solis, Shadur, Burns & Hussong, 2012; Champion et al., 2009). Children of substance abusers are at greater risk than other children for social and emotional conditions such as anxiety, anger, guilt, shame, and depression. Approximately twelve percent of children and teenagers in the U.S. fit the diagnosis criteria for depression, almost half of whom have a family history of depression (Mason, Haggerty, Fleming & Casey-Goldstein, 2012).

### **Background: Psychosocial and Physical Effects of Parental Substance Abuse on Adult Children and Siblings of Substance Abusers**

Research by Mason et al. (2012) and Wodarski (2010) implicates environmental factors as a probable contributor to SUD. Research in the U.S. by Johnson and Stone (2009) revealed the extent to which living with drug use as a child is correlated with an increased risk of substance abuse and clinical depression as an adult. For that study, data was collected on 9,346 individuals who had reported their medical histories in preparation for surgery related to various physical conditions. Those histories were reviewed all the way back to childhood to determine whether they were at greater risk than others of developing SUD or depression. About one-fifth of them had grown up with at least one parent who was a substance abuser or was clinically depressed, or both, and who consequently neglected or abused their children. As they grew into adulthood, those children were much more likely to develop SUD and/or depression (Johnson et al., 2009).

Reinforcing that finding, a Finnish study published in 2008 made use of data collected in the years 2000 and 2001 from a sample of young adults between the ages of eighteen and 29 (N = 1234) with a response rate of 65%, using both qualitative and quantitative methodologies. Its conclusion was that the social situation in which a child is raised influences the likelihood that in adulthood the child will be a consumer of addictive substances, and that the abuse of addictive substances tends to be worse when the parents are separated. Further, participants in the study believed that adverse circumstances of their upbringing had contributed to their having developed personality traits such as depression, social inactivity, and substance abuse. This and other research findings indicate that growing up with alcoholism and the neglect that accompanies it has strong and persistent adverse effects on children, including a greater tendency to abuse alcohol as

teenagers and adults (Kestilä et al., 2008).

Sibling relationships can also significantly affect socialization processes (Criss & Shaw, 2005). Healthy sibling relationships are correlated with better social skills, greater self-esteem, and greater facility in forming positive emotional attachments to others (Button & Gealt, 2010). On the other hand, growing up with a sibling who has shown at-risk behaviour such as drug abuse contributes to hostile interactions between siblings, such as verbal abuse or other aggressive behaviour. Children who are not substance abusers can develop lower self-esteem, anxiety, anger, shame and isolation from their association with substance-abusing siblings (McHale, Updegraff & Whiteman, 2012; Button & Gealt, 2010).

The genetic basis of a tendency toward substance abuse has also been substantiated by research conducted on human twins and non-human animals. If one or both parents abuses alcohol and/or is an abuser of addictive substances, the child is forty to sixty percent more likely to grow into being a substance abuser as an adult in life (Díaz-Anzaldúa, Díaz-Martínez & Díaz-Martínez, 2011). A research study based on clinical data from nearly twenty thousand individuals in Iceland who had been treated for addiction over the past three decades demonstrates a strong link between genetic heritage and risk of addictive substance dependence. The sons of substance abusers were most at risk at 78%, compared to 22% for daughters (Tyrfingsson et al., 2010).

## 2. Measurement

The Depression Anxiety Stress Scale is an instrument designed to measure depression, anxiety, and stress as three related mental states. It was first developed by Lovibond and Lovibond in Australia (Lovibond & Lovibond, 1995). Originally the DASS scales were developed to provide a self-assessment survey for research projects examining just two factors: depression and anxiety (Crawford & Henry, 2003). In the process of analysing those two factors in the pre-analysis of the questionnaire, it was noted that participants tended to respond with states that are not solely connected to depression and anxiety, such as annoyance, confusion, and impatience. To counteract that tendency, more questions were added to measure a third factor: stress (Ingimarsson, 2010). The DASS has been translated into numerous languages, and experimental applications have been made in many countries (Crawford & Henry, 2003).

Individuals taking the DASS are asked to respond to assertions about their behaviour and state of emotional health over the previous week, divided into three parts: the first 14 statements measure depression; the next 14 measure anxiety; and the final 14 measure stress, for a total of 42 statements. Possible answers are registered on a four-point Likert scale, in which 0 = not at all appropriate; 1 = appropriate sometimes; 2 = considerably appropriate; and 3 = mostly appropriate. The highest possible score for each of the three parts is 42 per subscale (14 statements times 3 points each). The lower the score, the less likely it is that the individual experiences the mental state associated with that part.

The Icelandic psychologist Pétur Tyrfingsson translated the DASS into the Icelandic language in 2007, and its experimental characteristics were researched by Ingimarsson (2010). Ingimarsson's research was based on responses to the DASS by 373 students at the University of Iceland along with other self-assessment surveys for comparison. This research determined that the experimental characteristics of the Icelandic edition of the DASS were in harmony with the conclusions of research conducted in other nations. Reliability according to Cronbach's alpha of the subscales was: depression  $\alpha = 0.92$ ; anxiety  $\alpha = 0.85$ ; and stress  $\alpha = 0.9$ .

Table 1. Normative data for the Icelandic DASS survey

	Depressio n	Anxiety	Stress
Normal	0-7	0-6	0-12
Mild	8-11	7-8	13-16
Average	12-21	9-14	17-21
Serious	22-26	15-18	22-25
Very serious	27-42	19-42	26-42

Table 1 shows the normative data for the Icelandic edition of the DASS survey (Ingimarsson, 2010).

All statistical processing was done using version 24 of SPSS, and descriptive statistics were used to describe all of the variables in the project, including background variables such as gender, age, income, and relationship status. For that

purpose, the responses were grouped into *parent*, *sibling*, *partner*, or *child* groups.

Descriptive statistics were used to designate data characteristics and participants' DASS scores. Means were compared using an independent T-test and one-way ANOVA. Bonferroni correction was used to identify where differences, if any, lay. The significance level for all statistical tests was set at  $p = .05$ .

### **Methodology and Significant Findings**

*Quantitative data:* This study consisted of two phases. In the first phase, the study employed quantitative techniques to investigate whether there is a difference in the average reported responses on the DASS in families with a chemically dependent parent, sibling, spouse/partner, or child. The instrument used for this phase was the Depression Anxiety Stress Scale (DASS), which is designed to detect and measure those three negative mental states and their relation to one another. It was administered to survey participants in a first day they were taking part in a four-week group therapy programme for relatives of family members afflicted by SUD (Substance Use Disorder). Analysis of the responses indicated that at least 36% of the respondents in all three subscales were measured as having average, serious, or very serious depression, anxiety, and/or stress. This is higher than in studies conducted in Iceland in which the DASS instrument has also been applied 'Health and well-being of Icelanders (HCI), 2009' (Guðlaugsson & Jónsson, 2012). At the same time, it made little difference to the family's well-being whether the family member affected by SUD was a parent, child, sibling, or spouse. This is interesting regarding to the research Dawson *et al*, (2007), where the result shown that women who live with a substance-abusing spouse or partner tend to have much worse states of health, with more anxiety, stress, and physical illness, along with substantial impairment of their overall quality of life as measured by lower family incomes and greater degrees of domestic abuse.

*Qualitative data:* The qualitative second phase was carried out in the spring and summer of 2016, after the results of the quantitative component became available. The researcher gathered descriptive data in the form of verbal descriptions from family members (sources) who have a substance-dependent user of alcohol or drugs, along with descriptions of observable responses. In this research to collecting the data snowball methods was used, which is where research participants recruit other participants for a study (Neuman, 2014; Padgett, 2008). For this phase, in-depth interviews focusing on the experiences of adult children of substance abusers were conducted with relatives of individuals afflicted by SUD who were not in family group therapy at the time of the interview. A total of sixteen relatives of substance abusers were interviewed: four spouses, four adult children, four parents, and four siblings; each of the groups of four consisted of two males and two females. All sixteen interviewees were selected because they were from families with one or more substance-dependent users, and because they were not substance-dependent users themselves or had been in a recovery last five years.

The interviews took place in the participants' homes or in the researcher's office, and the duration was on average about fifty minutes. The interviews were open-ended, semi-structured (Kvale, 1996), and based on an interview guide. The interview questions were about participants' experiences and the impact their relative's substance use had on their everyday lives, especially regarding psychosocial effects (depression, anxiety, stress). The questions were designed to encourage interviewees to express their feelings in ways that would help reveal differences in the experiences of these four groups. All interviews were digitally recorded, transcribed, and analyzed with systematic text condensation (a descriptive method for thematic cross-case analysis of diverse types of qualitative data; Malterud, 2012).

At the present time, few studies of family and substance abuse have been conducted in Iceland. Not only will this study contribute to the literature and understanding of the mental and physical conditions of family members living with SUD, but it will also contribute to the understanding of substance abuse in Icelandic families overall.

### **Ethics and Limitations of This Study**

In all research, there are limits to the tools used. In this case, the data size is relatively small ( $n=143$ ), which may not reflect the experiences of all individuals who have family members afflicted with SUD. Nonetheless, the findings can provide an indication of the mental health effects experienced by this sub-group within society.

From an ethics perspective, none of the participants were currently in therapy for their own SUD, and none were under the age of 18. The survey was anonymous, and all documents were properly destroyed at the conclusion of the evaluation. The identifying information was encrypted so the data could not be traced to the participants of the study and was deleted after processing and analysis. The Icelandic National Bioethics Committee and the Research Committee of the Icelandic National Centre for Addiction Treatment (SÁÁ) each granted permission for this project.

There are two limitations to the qualitative phase of the study: first, the relatively small number of people interviewed ( $n=16$ ); and second, the same researcher carried out all of the interviews, analyses, and interpretation of the data. Participants in the qualitative phase were offered the option of one therapy session with the professional free of charge. Since all of the participants in the quantitative phase of the study were already enrolled in a therapy group, they were not



offered additional therapy.

### 3. Results

To examine whether an individual's substance use disorder (SUD) influenced the mental or emotional states of other family members, especially with respect to depression, anxiety, and stress, participants for this study to collecting the data purposive methods were used. To participate, an individual had to be: 1) over 18 years old when taking the questionnaire; 2) a member of a family with a history of SUD (as a child, spouse, parent, or sibling of an individual with SUD); and 3) a participant of a specific family group therapy programme. The DASS survey was administered on the first day of a four-week family group therapy programme at the Icelandic National Centre for Addiction Treatment (SÁÁ) held from August 2015 to April 2016. The data group consisted of 143 individuals: 32 men (22%) and 111 women (78%). Unlike the low response rates typical in such research, on this occasion the response rate was one hundred percent, presumably because the data was drawn from people who had elected to devote time and attention to the well-being of their families by participating in family group therapy, and also partly because of the active presence of the lead researcher.

The average age of the participants was 44.5 years of age; the youngest was 19 and the oldest was 70. They were divided into five age groups and spread approximately equally: 18 to 29 years (17%); 30 to 39 (19%); 40 to 49 (17%); 50 to 59 (27%); and 60 and older (20%). Most participants, 82%, were living with a partner and children; the remaining 18% were single or separated. Women were distributed fairly equally among the age groups (17% to 24%). Most of the men were in the 50-59 age group (38%), while the fewest men were found in the 30-39 age group (9%).

Thirty participants reported that they are adult children of a parent with SUD, 47 are a spouse, 56 are parents of a child with SUD and 10 are siblings. Each participant was asked why he or she had applied for the family group therapy programme; the responses indicated that half of the men applied because a child was consuming addictive substances, and the other half because of a parent or partner doing the same. A similar number of women (36%) applied because of a child's drug use, or a partner's. Only 9% of participants, all women, applied for the programme because of a sibling's drug use.

The level of education among the participants was spread rather equally: most (41%) had completed a university-level education, 27.5% had finished upper secondary school, and 31.5% primary school. When the participants were grouped by income, the largest group (37%) had monthly incomes between 250,000 to 500,000 ISK (about \$2,250 to \$4,500 USD); 29% had a monthly income of less than 250,000 ISK; and 34% had a total income of more than 500,000 ISK per month. According to the independent governmental agency Statistics Iceland, the average monthly income of the working population of Iceland was 555,000 ISK (Statistics Iceland, n.d.a.). Figures for the average income of the 2014 research sample proportionately mirror the income of the participants in this research.

When participants were grouped by employment, 72% were employed full time, 16% part-time, 4% unemployed, and 8% disabled. According to research conducted by Statistics Iceland in April 2016, 84% of individuals between the ages of 16 and 74 were participating in the job market, and of those 5% were unemployed. Based on that research, employment and unemployment figures also mirror the employment of participants in this research (Statistics Iceland, n.d.b.).

Table 2 shows that more than 18% of participants fulfilled the diagnostic criteria for serious or very serious anxiety. The depression numbers tell a similar story, with 18% of participants reaching the same diagnostic threshold. It is of particular concern that 28% of participants experienced serious or very serious stress. Even worse, 36% or more in all three subscales were measured as having average, serious, or very serious depression, anxiety, and/or stress.

Table 2. Breakdown of participants according to the (Icelandic) diagnostic criteria.

	<u>Anxiety</u>		<u>Depression</u>		<u>Stress</u>	
	N	%	N	%	N	%
Normal	76	53	58	41	63	44
Mild	15	11	20	14	21	15
Average	26	18	40	28	18	13
Serious	7	5	10	7	19	13
Very serious	19	13	15	10	22	15
	143	100	143	100	143	100

Table 3. Descriptive statistics for the DASS subscales for the whole and according to gender.

	Number	Mean	Median	Standard Deviation	Lowest value	Highest value	<i>P</i>
<u>Depression</u>							
Men	32	12.2	12.5	9.3	0	30	0.891
Women	111	11.9	9.0	10.1	0	42	
Total	143	12.0	10.0	9.9	0	42	
<u>Anxiety</u>							
Men	32	6.8	2.5	8.9	0	34	0.333
Women	111	8.5	6.0	8.8	0	42	
Total	143	8.1	6.0	8.9	0	42	
<u>Stress</u>							
Men	32	13.8	12.5	9.5	0	36	0.302
Women	111	15.8	15.0	9.4	0	40	
Total	143	15.3	15.0	9.4	0	40	

Table 3 shows no significant difference between the genders and their responses to the DASS subscales.

Table 4. Results on the DASS subscales according to SUD-affected family member.

	Mean	Median	Std. Deviation	95% Interval Lower bound	Confidence Upper bound	N
<u>Depression</u>						
Parent	11.6	10.5	9.2	8.7	15.0	30
Partner	12.4	11.0	9.6	9.6	15.2	47
Child	12.4	10.0	10.7	9.5	15.2	56
Sibling	9.3	5.5	9.9	2.2	16.4	10
Total	12.0	10.0	9.9	10.4	13.6	143
<u>Anxiety</u>						
Parent	8.8	7.0	8.6	5.6	12.0	30
Partner	8.9	8.0	8.4	6.5	11.4	47
Child	7.8	4.0	9.9	5.1	10.4	56
Sibling	4.1	3.0	3.5	1.6	6.6	10
Total	8.1	6.0	8.8	6.7	9.6	143

<u>Stress</u>						
Parent	14.9	12.0	10.3	11.0	18.7	30
Partner	17.3	16.0	9.5	14.6	20.1	47
Child	14.3	13.5	9.0	11.9	16.7	56
Sibling	13.2	11.0	8.4	7.2	19.2	10
Total	15.3	15.0	9.4	13.8	16.9	143

Table 4 presents the results for the DASS subscales based on which family member is reported to have had SUD. It shows that the groups are nearly equal, with no significant differences measured between them: depression ( $F(3, 139) = 0.313, p = .816$ ); anxiety ( $F(3, 139) = 0.906, p = .440$ ); stress ( $F(3, 139) = 1.155, p = .329$ ).

The DASS scale has been used in the general population study 'Health and well-being of Icelanders (HCI), 2009', for which questionnaires were sent out to a random sample of 5,294 Icelanders aged 18-79 years. The response rate was over 77.3% (Guðlaugsson & Jónsson, 2012).

When the results of the present study are compared to the findings of that survey, a large difference can be noted between the groups in all of the subscales: anxiety ( $t(3890) = -16.25, p < .001$ ); depression ( $t(3845) = -16.66, p < .001$ ); and stress ( $t(3858) = -22.43, p < .001$ ). The participants in the family group therapy programme scored much higher on all three scales, suggesting that the participants were worse off mentally or psycho-socially than the participants in the study HCI, 2009 (see Table 5).

Table 5. Results of the participants in the research compared to the survey HCI, 2009.

	<u>Anxiety</u>		<u>Depression</u>		<u>Stress</u>	
	HCI %	Group %	HCI %	Group %	HCI %	Group %
Normal	91.1	53.1	84	40.6	91.8	44.1
Mild	2.9	10.5	7.7	14	4.4	14.7
Average	3.7	18.2	6	28	1.8	12.6
Serious	1	4.9	1.1	7	1.1	13.3
Very serious	1.3	13.3	1.2	10.5	0.9	15.4
Total	100	100	100	100	100	100

Table 5 shows that the participants were worse off mentally/psychosocially than those in the follow-up survey HCI (2009). No significant difference is evident between the genders and their responses to the DASS subscales.

### Qualitative Phase of the Study

The participants in the qualitative phase of the study were chosen with purposive sampling, in which participants were selected only if they were related to an individual afflicted with SUD, in groups of four spouses, four adult children, four parents, and four siblings. Each group included two men and two women. All participants were between nineteen to sixty-five years of age (inclusive). The following shows the breakdown for each group of four, regarding relationships and SUD involvement.

In the group of **spouses** of individuals with SUD, three of the participants had been together for more than fifteen years. One woman was in her second relationship, and both her ex-partner and the partner with whom she is now living have a drinking problem. Three of the participants have more than two children, and one has no children. All but one of the participants were from families with no involvement with SUD; the one who did, grew up with an alcoholic father. All of them came from big families. Three of them are educated, in the labor market, and one is disabled and employment.

In the group of **adult children** of parent(s) with SUD, three of them had grown up with their mother's SUD and one with a father who had a drinking problem. Two had grown up with both biological parents, and the other two only with their mother. Three of the participants had struggled with SUD themselves. All the participants had siblings, either older or younger or both, all of them had experienced at least one intimate relationship, and three had a spouse. Two of the

participants had one child, one had two children, and one had no children. Two of them are educated and all are of them in the labor market.

In the group of **siblings** of individuals with SUD, three of the participants had one younger sibling with SUD, while one of the brothers had two younger brothers with SUD. Three of them had not grown up with SUD, but one had grown up with his father's drinking problem. All of them currently live with their own families (with their spouse and children), and all of them are educated and in the labor market.

In the group of **parents** of children with SUD, all four participants had one child with SUD. One of the children was his father's only child, while three of the parents had more than two children, and in each case the child with SUD was the oldest. All of the parents had been struggling with their children with SUD for more than five years. Two of the participants had been in relationships with the biological parents of these children with SUD, and two had lived with their partners for more than ten years. All of them were educated and in the labor market.

Together these participants reflect the purpose of the second part of the study: to give the family members of substance users a voice from a different point of view, whether they were spouses/partners, adult children, siblings, or parents of individuals with SUD. By doing so, the hope is to gain a deeper understanding of the human experience of depression, anxiety and stress behind the figures of the quantitative part of the study. The participants' responses revealed significant differences between the experience of family members and how they express those differences depending on whether they are spouses, parents, adult children, or siblings.

The responses revealed that all but two of the interviewees were feeling anxious and depressed and had sought professional help at some time in their lives. Ten of the sixteen had taken drugs prescribed by a physician to reduce the anxiety and depression. All but six reported that they had experienced high levels of stress in their daily lives related to the relative with SUD, such as trying to locate them, thinking about where they were, and trying to call or hear from them. This required them to take time from their work or other activities and other family members, increasing their stress and their feelings of failing as family members.

The six participants who reported that they were not suffering anxiety or stress were all four participants in the group of siblings with SUD, plus one with a parent with SUD and one from the group who had children with SUD. They did not link feelings of stress to the family member with SUD. As one of the interviewer in the group of siblings said:

... Sometimes I do feel depressed, and sometimes I find it very difficult to get things done, especially if it is something very important, for example, something in my work...which could be causing anxiety...you know, a lot of responsibility...the workload, you know. But I cannot link it to a lot of stress or anxiety, because when I am stressed out I act out more by yelling at my loved ones and nagging them. And I certainly don't link it to my brother, whom I really try not to think about and try to avoid as much as I can ...

One in the group of parents expressed the same issue in a different way:

...I have often felt depressed, but I cannot say that I am anxious. I can tell you that if my daughter is in rehab, which has happened many times, I feel much better because I always get this f\*\*\*ing hope that now things will be better...but as soon as she starts using again, everything collapses once again and then what I feel is sorrow and guilt, not stress...I don't have the energy for stress, I think...

These two quotations express four different feelings for two different groups, but both quotations are from family members of individuals with SUD. The siblings expressed aggression and rage, whereas the parents expressed sadness and guilt.

The following three quotations express the experience of depression, anxiety, and stress from three of the four groups: spouses/partners, parents of children with SUD, and adult children of parents with SUD.

Spouses/partners:

...I feel depressed and anxious all the time, and I take medicine prescribed by my physician. I take sleeping pills as well; if I don't take it before I go to bed, I don't sleep and the next day is ruined. I try to keep our marriage problems from consuming our children and family life; I'm constantly trying to pretend that everything is fine, I keep the house clean, I make sure that the kids are doing their homework and going to school...and I am working in my own job...I'm sometimes so stressed out that I almost don't remember my own name. Then there is my husband, who is drunk almost every night and every weekend, behaving like a child; I feel sorry for him and often ashamed of him, too. I just wish that things had not gone this way...

Parents:

...my physician diagnosed me with depression and anxiety; in the early stages of my child's at-risk behaviour, I couldn't sleep, I worried a lot and had lot of anxiety, so my ability to concentrate was affected...I had to take sick leave at work.

Now, after years of battle with my son's substance abuse, I am more frozen emotionally, I think. Today I would identify my feelings as fear, hopelessness, sadness, anxiety...and I am afraid that one day I will get the phone call from the police telling me that my son is dead. On a bad day, when I am freaking out because of these worries and fears, I get so stressed out that it is just overwhelming; I just try to be alone, otherwise I know I could start arguing with people and so on, just to relieve the stress...I don't blame myself anymore; I did the best I could as a parent and I still do...

Adult children:

...I remember when I was stealing toilet paper, soap, and other things that could be taken from school because we could not afford to buy it, because all the money my mother received went to her drugs and alcohol...I was so ashamed for her and for myself that I tried to hide my situation from my friends, and never spoke to them about my family... For example, during holidays I don't think I ever felt the same excitement and the same joy as other people talk about, only anxiety and stress and lot of depression...even though there is nothing in my life to worry about right now. I can feel how it has impacted my wife. I don't understand my own feelings, and I don't trust myself or her to talk about this or about my feelings... She is constantly asking me if there is something wrong, and then I get more stressed and annoyed, and all of a sudden, we start arguing ...

These three responses express the experience of depression, anxiety, and stress among six different relatives of individuals with SUD, from three of the four groups. The spouse expresses that she felt sorry for her spouse and felt ashamed for herself. The parent expresses fear, hopelessness, and sadness. The adult child expressed shame, a lack of happiness and joy, and a lack of trust.

#### 4. Discussion

The participants in the primary (quantitative) phase of this research were 143 individuals taking part in a family therapy group run by SÁÁ. The participants' reaction to every subscale in the DASS showed that at least 36% had average, serious, or very serious depression, anxiety, or stress. More precisely, over 18% of the participants fulfilled the diagnostic criteria for serious or very serious anxiety, and the same was true for depression (17.5%) and stress (28.7%).

The difference between the genders concerning depression, anxiety, or stress was insignificant. This is surprising, given that as a general rule women develop clinical depression 50% more frequently than men (World Health Organization [WHO], n.d.).

The responses of participants, all of whom are Icelanders, when compared to the general population study 'Health and Well-being of Icelanders, 2009' (Guðlaugsson & Jónsson, 2012) confirms previous research indicating that people who are relatives of individuals with SUD are worse off mentally and psychosocially than those who are not. This was evident in the much higher scores of participants for every DASS subscale compared to the statistics in 'Health and Well-Being of Icelanders'. Those higher scores also support the findings of earlier research by Hrafnisdóttir & Ólafsdóttir, 2016, Lander et al., 2013, Denning, 2010, Dawson et al., 2007, and others that the behaviour of an individual with SUD tends to degrade the mental well-being of other family members sharing the same residential situation.

Perhaps surprisingly, when the participants' responses to the subscales were examined in relation to which family member is the SUD abuser, there were no significant differences between the groups, even though other research has shown that individuals who grow up with parents with SUD tend to have a worse state of mental health compared to those who have not faced that challenge (Orjasniemi & Kurvinen 2017; Hrafnisdóttir & Ólafsdóttir, 2016; Lander, Howsare & Byrne, 2013; Solis, Shadur, Burns & Hussong, 2012).

In the second (qualitative) phase of this research involving sixteen in-depth interviews, the following results emerged.

Twelve of the sixteen interviewees felt anxious and depressed, and had sought professional help sometimes in their lives. Ten of the sixteen had taken medicine prescribed by their physicians at some point in their lives and reported that they had felt high levels of stress in their daily lives because of their relationship to a relative with SUD. This tends to raise their stress levels, causing them to take time off from work or from relating to other family members, contributing to their sense of failing in their lives. These expressions of the experience of living with relatives with SUD support the findings of the quantitative phase of this study indicating that all participants have experience depression, anxiety, and stress in their lives, and that most had taken prescription medicine at some point in their lives.

Among the most interesting findings is how differently the groups expressed their feelings, based on the nature of their relationship to the family member with SUD. The siblings expressed aggression and rage; the spouses/partners expressed that they felt ashamed of and sympathetic toward their spouses; the parent expressed fear, hopelessness, sadness, and guilt; and the adult children of SUD expressed shame, lack of happiness and joy, and lack of trust. These results confirm previous research indicating that an individual's involvement with Substance Use Disorder adversely impacts other family members' state of health, which over time can lead to mental and physical disorders. Also confirmed is research showing that sharing a home with an individual who abuses substances tends to increase the likelihood of such mental and

physical disorders (Lander, Howsare & Byrne, 2013; Denning, 2010; Dawson, Grant, Chou & Stinson, 2007; Itäpuisto, 2005;2001).

The results also make it clear that growing up with a parent or another family member who has SUD is a very significant risk factor. In their adult years individuals who have faced that challenge are much more likely to develop SUD or depression (or both) themselves, which has been confirmed by research conducted in the United States (Johnson et al., 2009). In the interweave part of the research, in the group of adult children who had grown up with one or both parents with SUD, three out of the four participants had struggled with SUD themselves. This comports with the Johnson and Stone research (2009) and comparable research conducted in Finland, where it was found that SUD in the midst of a child's upbringing predisposes the child to abusive consumption of drugs and/or alcohol, both in the teen years and later as an adult (Kestilä et al., 2008).

## 5. Conclusion: Applications

In general, the results of this study can be used to improve and promote treatment for the whole family, taken as a unit, as well as for individual family members, and can help social professionals to better understand the effects of substance dependence on families, family systems, and public health in general.

The ability to apply the findings reported here is limited by the relatively small data size of the quantitative phase, which in turn limits the ability to extrapolate that most people who have lived with a family member affected by SUD will be found to suffer from depression, anxiety, and/or stress. Yet the data size does appear to be sufficiently large and well-defined to support the conclusion that the risk of being so affected is measurably greater in such families, given that the comparisons of participants' DASS responses are developed in statistically valid ways.

The mean scores in the tables above for each of the three DASS subscales indicate that the participants affected by SUD did in fact report greater depression, anxiety, and stress compared to the results of the general population study 'Health and Well-being of Icelanders'. Further research on the influence of growing up with a parent who has SUD, following studies by Tyrffingsson et al. (2010), Johnson and Stone (2009), Kestilä et al. (2008) and Itäpuisto (2005;2001) could reveal in greater detail how an upbringing associated with SUD can lead to depression in the younger years and to excessive consumption of alcohol and or other drugs in the adult years. Such additional research could be especially valuable when it comes to measuring and managing national health programmes and developing preventive measures.

The results of this study suggest a more immediate recommendation: *administering the DASS survey routinely to participants in the family group therapy programme could be done to more accurately measure that programme's effectiveness.* Doing so both at the beginning and at the end of the programme could help determine the degree to which that treatment can reduce depression, anxiety, and stress. Such a systematic evaluation could be a significant step toward an improved state of health and increased quality of life for many.

An especially interesting follow-up to this study would be to examine the relatives with SUD, using the same procedures developed for this study, to learn how they express their experiences and feelings. (By using the same procedures, the ability to compare results would be enhanced.) Learning the ways in which the relationship between the relative with SUD and the parents, children, siblings, or spouses are parallel in both directions, especially regarding negative feelings, could lead to more individualized family therapy that would support the recovery of both for the substance abuser and the family as whole.

Further research is needed on the effects of growing up in Iceland with a parent who has SUD, considering the discrepancy found in this study and others (Tyrffingsson et al. 2010; Kestilä et al., 2008). Such additional research could sharpen our understanding of the Icelandic experience and could help us understand whether an upbringing associated with SUD is correlated with depression among siblings and children in their younger years, and with consumption of alcohol and other drugs in their adult years. Such additional research could be especially valuable in efforts to measure and manage national health and to develop preventive measures.

This study's most important finding, by far, is that all family members tend to suffer when one family member is afflicted by SUD. It imperative that clinicians appreciate the need to treat the family as a whole, and to begin to do so as early as possible. To do so not only benefits the family member who suffers from SUD but can also serve as a preventative measure for the next generation.

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# Income Distribution and Human Trafficking Outflows

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## Abstract

This study seeks to close the gap between the theoretical rationale for the role of income inequality in human trafficking and lack of empirical evidence supporting this relationship. It is argued that differences in income, especially the income of the poorest in the population, is a significant push factor encouraging individuals to undertake risky migration. Nonetheless, the Gini coefficient, which is typically used in human trafficking research, does not accurately capture the theoretical rationale for why difference in population income, especially the income of the poorest in the population, should matter. A different metric for measuring income inequality – one that is tied to the theoretical underpinnings -- is introduced. Empirical evidence supporting the role that income plays on the poorest in the population on human trafficking outflows is offered. Specifically, as the poorest in the population become marginally better off, there is an increase in human trafficking outflows at the country level.

**Keywords:** human trafficking, income inequality, push factors, human trafficking outflows

## 1. Introduction

Human trafficking is a heinous crime in which men, women, and children are purchased like commodities and forced into such atrocities as prostitution, organized begging, domestic servitude, pornography, bonded or forced labor, and other gross assaults on their civil and personal freedoms such as organ harvesting (Agbu, 2003; Studnicka, 2010; U.S. Department of State). Traffickers typically prey on vulnerable populations such as children, young women, single mothers and the impoverished. The crime tends to initiate when these vulnerable individuals seek work and an improved economic status and, through a variety of deceptive ploys, traffickers promise these individuals respectable work and a better life elsewhere. Once ensnared and relocated, traffickers confiscate their identification and the victims come to the sad realization that they have been tricked into miserable conditions (Adepoju, 2005; Gajic-Veljanoski & Stewart, 2007). Often facing language barriers and without identification, an understanding of the crime, or their legal rights (if any), victims are dependent on their traffickers or to the person(s) to whom they were sold. Considering victims originate from vulnerable populations, when they are placed in even direr situations these individuals can be easily controlled through violence, coercion and threats (Sigmon, 2008; Bales, Trodd, & Williamson, 2009).

Despite the dreadful nature of the crime, human trafficking is growing at an alarming rate and, in the next ten years, it is predicted to surpass both drug and arms trafficking to become the largest form of criminal activity in incidence (Dijk and Mierlo, 2014; United Nations; Winterdyk & Reichel, 2010; Wheaton et al., 2010). The current prevalence rates are staggering as the United Nations Office on Drugs and Crime (UNODC) conservatively estimates that at any one time there are 2.5 million people living as human trafficking victims (Potrafke, 2013). The growth of the crime and the incident rates can be explained, at least in part, by the profitability of the crime. The UNODC reports that human trafficking generates as much as 36 billion dollars in annual profit for criminals and the United Nations classifies human trafficking as the world's third most profitable crime (Potrafke, 2013; Winterdyk & Reichel, 2010; Fichtelberg, 2008).

In a special event held at the headquarters of the United Nations in July 2014, the president of the General Assembly stated that human trafficking has 'no place in the modern world'. At this same event the president of the Economic and Social Council stated that a better understanding of the crime is needed; in short, in order to fight the crime, greater knowledge of the driving and facilitating factors is needed. To this end, the focus of this study is to further explore the role of income inequality and poverty as driving factors in human trafficking. While past research has made strong arguments for the relevance of income distribution as a trafficking determinant, this relationship has largely not been established empirically. It is argued here that differences in population incomes do matter, but not in the way it has been described and measured in previous research regarding human trafficking. Specifically, the Gini coefficient, which is typically used in

human trafficking research, does not accurately capture the theoretical rationale for why differences in income, especially the income of the poorest in the population, should be a significant driver of human trafficking. A background on human trafficking research and a theoretical justification for the hypotheses follows.

## **2. Human Trafficking Outflows and Income Inequality**

### *2.1 Overview of Human Trafficking*

In the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children (2000), human trafficking is defined as, “the recruitment, transportation, transfer, harbouring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation.” More broadly, Bales et al. (2009, pgs. 39-40) describe human trafficking as “...the crime of carrying someone into slavery by force or by fraud”. It is important to note that human trafficking does not require the transport of a person across international borders and the crime can be committed intrastate. Further, human trafficking is a crime regardless of whether or not the person goes willingly with the trafficker (Bales et al., 2009). The willingness or desire of an individual to migrate is critical in human smuggling, which can lead to human trafficking. Human smuggling differs from human trafficking in that smuggling requires the transport of a person across international borders and persons who wish to be smuggled typically pay the smuggler for the service. Nonetheless, smuggling can morph into human trafficking once the person has been relocated. If the relationship with the smuggler ends once the person reaches their destination this is considered human smuggling; however, if the smuggler entraps the person in the destination country and forces them into labor, prostitution, or other atrocities, this is considered human trafficking (Bales et al., 2009).

Cho (2015) states human trafficking research is still in its infancy; however, the body of literature exploring the root causes and drivers of human trafficking is growing. The literature has broadly categorized these factors as supply side, or ‘push’ factors, demand side or ‘pull’ factors and as facilitating factors. In regards to the push or supply factors, past research has found countries that suffer from poverty, crime, corruption, unstable institutions, and/or are plagued with conflict and upheaval tend to be the greatest source of human trafficking victims (Agbu, 2003; Bales, 2007; Cho, 2015; Rao & Presenti, 2012; Surtees, 2008). These countries are often referred to as ‘origin’ countries as individuals seek to migrate out of these areas in search of a better life and in the process fall victim to human traffickers. In reference to pull or demand factors, wealth is primary determinant as wealthier countries tend to have a greater demand for low-skilled work and the means to pay the traffickers. Wealthier countries tend to be considered the ‘destination’ countries for most of the human trafficking victims (Cho, 2015). Finally, the presence of corruption and organized crime are facilitating factors as organized criminals tend to have established networks that often utilize corrupt officials. These established networks can assist traffickers in both the identification and relocation of victims.

### *2.2 Income Inequality as a Push Factor*

Income inequality has also been emphasized in the literature as an important push or supply factor inspiring people to search for a better life. The theoretical argument is that when stark differences in income exist, the difference can not only make the poorest resentful of their circumstances, but also raise their expectations regarding better opportunities elsewhere (Cho, 2015; Jac-Kucharski, 2012; Mo, 2014). In other words, awareness that others have a considerably greater standard of living can be a motivating factor to migrate in search of a better life.

While past research has made strong arguments for the relevance of income distribution as a push factor, these results have not been established empirically. Specifically, using the UNODC (2006) measures of the outflow of human trafficking victims at the country level, Cho (2015) finds that economic inequality, as measured by the Gini index, does not have a significant impact on the outflow of human trafficking. Cho’s (2015) results suggest that countries with greater income inequality, as measured by the Gini coefficient, are no more likely to be the source or originating country from which individuals seek to leave than countries with greater income equality. It is important to note that empirical studies often use the Gini coefficient developed by Corrado Gini in 1912, which measures the income distribution across countries as a measure of income inequality. Nonetheless, while the Gini coefficient is widely used and recognized as reliable measure of income inequality, it alone does not capture theoretical rationale for why differences in income levels encourage the poorer group to migrate in search of a better life.

Mo (2014) articulates this critical distinction by stating that it is not absolute poverty that is a root cause of trafficking, rather it is the perceived relative deprivation that explains the desire to seek a better life elsewhere and endure the associated risks of migration. In other words, it is the awareness that others are better off and that improved conditions do exist that drive self-betterment and risk-taking behaviors. Using a controlled survey conducted in trafficking-prone areas in Nepal, Mo (2014) finds that perceived relative deprivation, or the feeling that an individual’s wealth is below a point of reference, increases the risks an individual will take to achieve positive economic outcomes. Mo (2014) offers

empirical evidence at both the survey, micro-level and at a macro-level in Nepal that greater relative deprivation significantly increases trafficking incidences. It is important to note that the sense that one's wealth falls below a point of reference, or the perceived relative deprivation, is formed through comparisons of the lives of others. Pulling from social comparison theory, equity theory, and relative deprivation theory, Mo (2014, p. 5) states that, "...people do not simply evaluate the absolute value of their income, performance, achievements, etc., but that these evaluations are heavily influenced by comparisons with others." This suggests two crucial pieces in the relationship between income inequality and human trafficking outflows. First, differences in income must exist and, secondly, those differences must be known by the poor group such that relative comparisons can be made.

The first implication that differences in income must exist, reinforces the argument that income inequality in a country should be a determinant of human trafficking outflow. The second implication that the differences in incomes must be known by the poorest group, suggests that income inequality in and of itself is not sufficient to capture the motivation for the poorest to seek a better life elsewhere. The shortcoming of the Gini coefficient in this context is that it is a broad measure of income inequality that does not necessarily capture these two conditions. It is argued here that this is why income inequality, as measured by Gini, often fails to be significant in empirical analyses exploring the push factors of human trafficking. Inequality measures the dispersal of income in a society; however, a low level of inequality in a poor country suggests that everyone in the society earns a meager income. In this case, all citizens all earn approximately the same low wages and are not necessarily aware that others enjoy a higher incomes and an improved standard of living elsewhere. As Mo (2014) describes, if an individual's reference group is impoverished, the individual's 'aspirations window' is closed as their status is equal to their comparison group(s). Further, high levels of income inequality implies that a small number of individuals earn most of the country's income; however, this suggests two different scenarios for a wealthy versus a poor country in reference to society's overall well-being.

It is suggested here that the percentage of income attributed to the lowest ten percentile of the population will more effectively capture the 'aspirations window' as Mo (2014) describes. Using this measure will predict the effect on human trafficking outflows as the lowest ten percentile experiences marginal increases in income. It is argued that as the poorest become marginally better off, human trafficking outflows will increase for three reasons. First, as discussed above, individuals must be aware that others are relatively better off in order to develop a perception of relative deprivation. When the poorest experience marginal increases in income, there is an increased opportunity for this group to gain a greater awareness and knowledge about the world outside of their immediate, abject surroundings. Depending on living conditions, a marginal increase in income could raise an awareness or connection to the outside world through acquiring technology (radio, television, internet connection, etc.) or a means of travel other than by foot. Second, as the poorest become more connected and aware of world outside of their immediate surroundings, they are more likely to be preyed upon by human traffickers. Human traffickers employ a variety of deceptive ploys to trick potential victims into believing that there are opportunities for respectable work and a better life elsewhere. Several of these ploys require potential victims to have access to the internet as traffickers contact and lure their victims through social networking and internet advertisements (Dixon, 2013). Thus, with greater connectivity, victims can be targeted and shown images of appealing destinations and environments, when in reality they are being deceived of traffickers' true intent. Finally, as Black et al. (2006) discuss, as the poorest experience increases in wealth, migration increases as the cost to do so falls. Thus, an increase in income also enhances the ability for an individual to pay a smuggler to migrate. Recalling that human smuggling can morph into human trafficking once the destination location is reached, the ability to pay smugglers is yet another means for human trafficking outflows to increase.

In sum, it is argued that differences in population incomes do matter, but the Gini coefficient does not accurately capture the theoretical rationale for why differences in income, especially the income of the poorest in the population, should be a significant driver of human trafficking. It is hypothesized that the percentage of income in the poorest percentiles is a significant determinant of human trafficking outflows as it captures the theoretical underpinnings of the drivers of human trafficking. Thus, the hypothesis is stated:

*H1: All else equal, as those in the lowest 10<sup>th</sup> percentile in income become marginally better off, there will be an increase in human trafficking outflows.*

### **3. Data**

It is widely acknowledged that obtaining reliable, representative data on human trafficking is notoriously difficult (Aronowitz, 2009; Cho, 2015; Crane, 2013; Gajic-Veljanoski and Stewart, 2007; Mahmoud and Trebesch, 2009). Human trafficking is an underground, criminal activity, and as with most crimes, the criminals attempt to hide their activities. As a further complication, human trafficking victims are often unable to report the crime as they are typically physically constrained, face language barriers, and/or lack information about the crime and their legal rights. Thus, obtaining reliable data on human trafficking is remarkably difficult and any measure of human trafficking should be considered an estimate.

The UNODC (2006) offers one of the only measures of human trafficking. Specifically, the UNODC provides an incident reporting index that grades countries on both the level of human trafficking outflow, or the degree to which a country can be considered a country of origin, and the level of inflow, or the degree to which a country can be considered a destination country. Countries are scored on a scale of one to five, where five indicates the highest degree of human trafficking in/outflows. To score the countries, the UNODC uses aggregated incidences codes in international reports and media over the period 1996 to 2003. Given the focus on the role of income inequality as a push factor to human trafficking, the UNODC (2006) human trafficking outflow by country is used to proxy the level of human trafficking supply, or the degree to which a country can be considered an origin country. The UNODC (2006) provides scaled, outflow data for 127 countries.

Data available through the World Bank is used to measure the percentage of income going to lowest ten percent of the population. Further, other control variables available through the World Bank are included in the regression models. Specifically, measures of GDP per capita, labor force participation rates, adolescent fertility rates, the proportion of urban population, and male and female unemployment rates were incorporated. Cho (2015) and others have used these control variables in empirical analyses exploring the drivers of human trafficking. Table 1, in Appendix A, provides the summary statistics for each of the variables included in the analysis.

#### 4. Empirical Model and Results

As described above, the UNODC (2006) scores countries on a one to five scale. Countries with a score of one represent a ‘Very Low’ level of human trafficking outflow. A score of two represents a ‘Low’ level of human trafficking outflow, a score of three a ‘Medium’ level, a score of four a ‘High’ level, and a score of five represents a ‘Very High’ level of human trafficking outflow. Given the discrete and ordered nature of the outflow data, an ordered probit model is selected to test the above hypotheses. Model 1 is defined as:

$$y_i^* = \mu_i + \beta \text{Lowest10} + Z_i' \gamma + \varepsilon_i \quad (1)$$

Where  $y_i^*$  is the UNODC’s scaled incident reporting index for human trafficking origin countries (denoted by  $i$ ), *Lowest10* is the percentage of income going to the lowest ten percent of the population,  $Z'$  is a vector of the control variables that are added step-wise,  $\mu_i$  denotes the unobservable characteristics, and  $\varepsilon_i$  is the error term that is considered to be uncorrelated with the regressors. As a robustness check, Model 2 replaces *Lowest10* with the *Lowest20*, the percentage of income going to the lowest 20 percent of the population, to test if this result holds beyond the extreme low end of the income spectrum. Model 2 is defined as:

$$y_i^* = \mu_i + \beta_i \text{Lowest20} + Z_i' \gamma + \varepsilon_i \quad (2)$$

##### 4.1 Analysis Results

The analysis results, specifically the coefficient estimates, are presented in Tables 2 and 3 in Appendix B. As shown in Table 2, the results for Model 1 reveal a positive and significant coefficient on the *Lowest10* in all seven regressions, indicating that as the poorest ten percent become slightly better off, trafficking outflows increase. Further, as shown in Table 3, the results for Model 2 indicate a significant and positive coefficient on *Lowest20* in six of the seven regressions. These results support H1.

#### 5. Conclusion

Human trafficking is heinous crime that is growing at an alarming rate. As the president of the Economic and Social Council recently stated, a better understanding of the crime is needed in order to fight it. Developing this understanding is challenging as human trafficking is by its nature a complex crime that intertwines multiple push, pull, and facilitating factors and often involves other crimes such as illegal migration. Adding to the challenges is the difficulty of obtaining reliable and representative human trafficking data. Although Cho (2015) notes that human trafficking research is in its infancy, it is growing and researchers are identifying the multitude of factors that play a role in the crime.

In this vein, this study seeks to close the gap between the theoretical rationale for the role of income inequality in human trafficking and lack of empirical evidence supporting this relationship. It is argued that difference in income, especially the incomes of the poorest, do matter; however, it is not simply the dispersal of income in a society that serves as the driver. Specifically, significant differences in income must exist and the less fortunate group must be aware that such contrasts exist. It is the awareness that others are relatively better off that creates the perception of relative deprivation. It is this perception that can encourage individuals to partake in more risk-taking behaviors such as migration (Mo, 2014). Through a series of ordered probit regression models, empirical evidence is offered to support these claims.

The results presented here have relevant policy implications. In their efforts to fight human trafficking and educate potential victims, international organizations and aid workers should place a greater emphasis on areas in which there are contrasts in income, and especially those areas in which the poorest are becoming marginally better off. The

empirical results indicate that as the poorest become marginally better off there is an increase in human trafficking outflow. It is hypothesized that as the poor make some economic gains, these gains could be used to acquire technology and/or means of travel that can connect them to the world outside of their immediate, impoverished surroundings. It is through these connections that an awareness of a better life elsewhere can be formed and these connections enhance the chance of being targeted and deceived by a trafficker. Further, marginal economic gains also increase the ability of these individuals to pay smugglers and, in the process of migration, become human trafficking victims.

While this study offers evidence to explain the discrepancy between the theoretical rationale for the role of income inequality in human trafficking and lack of empirical evidence, it should be noted that there are limitations to these findings. As noted, obtaining reliable, representative data on human trafficking is notoriously difficult. While the UNODC (2006) offers a measure of country-level human trafficking outflows that is based on aggregated incidences codes from international reports and media over (approximately) a seven year period of time, it must be acknowledged that any measure of human trafficking should be considered an estimate of a true, but unknown value. Given the clandestine nature of the crime, human trafficking is exceptionally difficult to quantify and the results presented here should be considered in this light.

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## Appendix A

### Descriptive Statistics

Table 1. Descriptive statistics

Description	Variable Name	Obs	Mean	Std. Dev	Minimum	Maximum
UNODC Outflow Index	unodc_orig	105	3.095238	1.087727	1	5
Percentage of Income going to Lowest 10 percent	lowest10	105	2.472381	.8957695	.5	4.4
Percentage of Income going to Lowest 20 percent	lowest20	105	6.280952	1.897929	2	10.3
Real GDP per Capita	GDPPC	105	4561.804	7648.381	197.0667	44892.78
Labor Force Participation Rate	LF Part	105	65.20299	10.00523	44.42857	88.95714
Adolescent Fertility Rate	AF Rate	105	76.55622	51.98774	6.638743	218.8607
Proportion of Population living in Urban Areas	P Urban	105	47.25441	20.36127	8.254429	92.00971
Male Unemployment Rate	Male U	105	8.921224	5.934939	.8142857	32.64286
Female Unemployment Rate	Fem U	105	11.10884	7.758583	.4	40.75714

## Appendix B

### Estimated Regression Results

Table 2. Model 1 estimated ordered probit results

<i>Dependent Variable: Human Trafficking Outflows</i>							
Lowest 10							
Coefficient	0.7023**	0.6963**	0.0684**	0.5798**	0.7671**	0.5420**	0.5185**
Std. Error	0.2050	0.2060	0.2062	0.2114	0.2322	0.2201	0.2269
p-value	0.001	0.001	0.001	0.006	0.001	0.014	0.022
GDPPC							
Coefficient		-0.00004*	-0.00005**	-0.00007**	-0.0001**	-0.00007*	-0.00008**
Std. Error		0.00002	0.002	0.00003	0.00003	0.00003	0.00003
p-value		0.064	0.049	0.006	0.001	0.005	0.001
LF Part							
Coefficient			-0.0132	0.0093	0.0273	0.0045	-0.0027
Std. Error			0.0176	0.0198	0.0219	0.0211	0.0214
p-value			0.451	0.639	0.211	0.830	0.901
AF Rate							
Coefficient				-0.0110*	-0.0092*	-0.0116**	-0.0106**
Std. Error				0.0042	0.0043	0.0043	0.0043
p-value				0.009	0.033	0.007	0.015
P Urban							
Coefficient					0.0265*		
Std. Error					0.0136		
p-value					0.05		
Male U							
Coefficient						-0.0054	0.2181**
Std. Error						0.0326	0.0725
p-value						0.869	0.003
Female U							
Coefficient							-0.1935**
Std. Error							0.0559
p-value							0.001
$\mu_1$							
Coefficient	-0.9216	-1.1865	-2.1101	-1.9534	0.8746	-2.4752	-3.3526
Std. Error	0.5827	0.6093	1.3722	1.3939	1.9990	1.7375	1.7718
$\mu_2$							
Coefficient	0.7639	0.5565	-0.3619	-0.1739	2.6762	-0.7345	-1.4621
Std. Error	0.5227	0.5367	1.3326	1.3547	1.9848	1.7031	1.7279
$\mu_3$							
Coefficient	2.4081	2.2288	1.3141	1.5891	4.4817	1.060	0.4748
Std. Error	0.5714	0.589	1.3432	1.3694	2.0163	1.7036	1.7270
$\mu_4$							



Coefficient	4.0513	3.8751	2.9650	3.3243	6.2816	2.8022	2.3207
Std. Error	0.6608	0.6692	1.3762	1.4111	2.0742	1.7329	1.7531
Likelihood Ratio	12.29	15.53	16.10	23.16	27.02	23.57	36.12
p-value	0.0005	0.0004	0.0011	0.0001	0.0001	0.003	0.000
Pseudo R <sup>2</sup>	0.0393	0.0497	0.0515	0.0741	0.0865	0.0762	0.1162
n	106	106	106	106	106	105	105

\*\*\*Significant at 99%    \*\*Significant at 95%    \*Significant at 90%

Table 3. Model 2 estimated ordered probit results

<i>Dependent Variable: Human Trafficking Outflows</i>							
Lowest 20							
Coefficient	0.3527***	0.36644***	0.3576***	0.3106**	0.3932***	0.2969**	0.2798**
Std. Error	0.0975	0.9821	0.0986	0.10067	0.1095	0.1046	0.1077
p-value	0.000	0.000	0.000	0.002	0.000	0.005	0.009
GDPPC							
Coefficient		-0.00005**	-0.00005**	-0.0007**	-0.0001**	-0.00008**	-0.0009**
Std. Error		0.00002	0.00002	0.0003	0.00003	0.00003	0.00003
p-value		0.003	0.027	0.004	0.001	0.003	0.001
LF Part							
Coefficient			-0.0109	0.0110	0.0260	0.0067	-0.0004
Std. Error			0.0177	0.0198	0.0220	0.0212	0.0214
p-value			0.538	0.580	0.178	0.750	0.984
AF Rate							
Coefficient				-0.0108**	-0.0091**	-0.0113**	-0.0104**
Std. Error				0.0042	0.0043	0.0043	0.0043
p-value				0.010	0.035	0.008	0.016
P Urban							
Coefficient					0.0265**		
Std. Error					0.0134		
p-value					0.048		
Male U							
Coefficient						-0.0025	0.2161**
Std. Error						0.03248	0.0722
p-value						0.938	0.003
Female U							

Coefficient								-0.1899**
Std. Error								0.0559
p-value								0.001
$\mu_1$								
Coefficient	-0.4645	-0.68890	-1.4646	-1.3629	1.5417	-1.8081	-2.7384	
Std. Error	0.6635	0.6806	1.4320	1.4518	2.0591	1.7975	1.8344	
$\mu_2$								
Coefficient	1.2292	1.0739	0.30228	0.4322	3.3618	-0.0526	-0.8338	
Std. Error	0.6176	0.6237	1.3977	1.4177	2.0492	1.7673	1.7952	
$\mu_3$								
Coefficient	2.8915	2.7766	2.0069	2.2216	5.1934	1.7679	1.1254	
Std. Error	0.6720	0.6767	1.4166	1.4401	2.0855	1.7754	1.8023	
$\mu_4$								
Coefficient	4.5479	4.4416	3.6753	3.9757	7.0128	3.530	2.9893	
Std. Error	0.7579	0.7626	1.4532	1.4854	2.1460	1.809	1.8327	
<i>Likelihood Ratio</i>	13.77	18.09	18.47	25.28	29.24	25.58	37.72	
<i>p-value</i>	0.0002	0.0001	0.0004	0.0000	0.0000	0.0001	0.0000	
<i>Pseudo R<sup>2</sup></i>	0.0440	0.0579	0.0591	0.0809	0.0936	0.0830	0.1219	
<i>n</i>	106	106	106	106	106	105	105	

\*\*\*Significant at 99%

\*\*Significant at 95%

\*Significant at 90%

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# Participation of Prison Inmates in Vocational Skills Acquisition Programmes for Self-Reliance and Sustainable Economic Growth in Sokoto State, Nigeria

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## Abstract

The study focused on assessing the extent of participation of prison inmates in vocational skills acquisition programmes in Sokoto State. The main objective of the study was to assess the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in Sokoto State. One research question and one null hypothesis guided the study. A survey research design was adopted for the study. The population of the study was 1226 respondents at the time of the study. The sample size of the study was 351 comprising all the 85 prison officials and 266 convicted prisoners of the Sokoto central prison deliberately selected for the study. The instrument used for data collection was self-structured questionnaire tagged "Questionnaire on the participation of prison inmates in vocational skills acquisition programmes (QPPIVSAP). The instrument was subjected to face validation by three experts. The reliability coefficient for the instrument was 0.80. The data collected was analysed using descriptive statistics of mean and standard deviation, while the null hypothesis was tested using t-test at the probability of 0.05 level of significance. The findings of the study revealed that VSA programmes for prison inmates were only found available in Sokoto Central Prison and there were prison inmates trainees in the prison. The findings further revealed that the trainees participated in the available VSA programmes to a high extent in the study area. Based on these findings, the study recommended among others that the Nigerian Prisons Service (NPS) should extend the VSA programmes to other convict and satellite's prisons for inmates' self-reliance and sustainable economic growth of the state and the country at large. The NPS should introduce more vocational trades that are not available in the prisons. Such as electrical and electronics repairs, graphic arts, shoe making and automobile mechanic skills acquisition programmes while the prison inmates should be encouraged to patronize the programmes for their self-reliance and sustainable economic growth of the society.

**Keywords:** Vocational Skill Acquisition Programmes, Prison inmates, Economic Growth

## 1. Introduction

The Nigerian Prisons Service (NPS) is constitutionally responsible for ensuring the safe custody of offenders as well as their reformation, rehabilitation and re-integration. Dambazau (2007) noted that the rationale for imprisonment is evident in decree No. 9 of 1972 which assigned the prisons with the responsibility among others to teach and train the prisoners to become useful and law abiding citizens on discharge. These responsibilities are discharged through carefully designed and well-articulated administrative, reformatory and rehabilitative programmes aimed at inculcating discipline, respect for law and order, and the dignity of honest labour (Igbo, 2007). The offender, in this wise, is prepared to become not only law abiding but also useful to both himself and the society at the expiration of his sentence. The Rule 71 (3) of the United Nations' Standard Minimum Rules for the Treatment of Prisoners (UNSMRFTP) stated that "sufficient work of a useful nature shall be provided to keep prisoners actively employed for a normal working day" (Tenibaije, 2010). Despite the UNSMRFTP, Nigeria still remains among the nations of the world that are rated with high rates of crime, poverty, unemployment, and recidivism among ex-prisoners (Abba and Mbagwu, 2016).

There are several obstacles that prison inmates may face upon their release from prison, including the prospect of unemployment. A lower level of educational attainment and a lack of vocational skills can hinder efforts to find a job and make a decent wage among prisoners upon their release from prison. According to Abba (2016), the major factors associated with offending and recidivism among ex-prisoners in Sokoto State are poor employment prospects, weak skills

and low education levels among others. Discharged prisoners in Sokoto State are unemployed and sometimes stigmatized and treated as social pariahs. These social problems among ex-prisoners and rejection against them by the society, sometimes forces them back to crime and lead to their recidivism. Prison inmate in question can be conceptualized as adult person kept in a conformed institution such as prison or a mental hospital. It is another name given to a prisoner or an offender or violator of law. In the words of Abba (2016), prison inmate can be seen as a person who is kept in a confined place known as the prison, as an accused or convicted of violating the criminal law. Hence, in the context of this study, prison inmate can be seen as a person legally confined in an institution designed to securely house and rehabilitate people who are convicted of crime or on awaiting trial. These individuals known as prisoners or inmates are kept in continuous custody on a short or long-term basis. Individuals who commit the most heinous crime are sent to prison for more years, the more serious the offence, the longer the prison term imposed. For Davis, Jennifer and Robert (2014), they believed that providing vocational skills training to prison inmates while they are in prison can help them overcome these challenges by fostering the skills needed to find employment and enhance economic development in a society.

From the foregoing, vocational skills acquisition programmes could be regarded as the aspect of education that gives the recipients an opportunity to acquire practical skills as well as some basic knowledge which fits the individual for gainful employment in a recognised occupation as semi-skilled worker, technician or sub-professional. According to Onweonye, Obinne and Odu (2013), vocational training in prison is considered essential for the achievement of the purpose of reformation, rehabilitation and reintegration of discharged prisoners. Reformation and rehabilitation are the current issues that are central to modern penal-thinking and practices and have been adopted and implemented in some Nigerian prisons using vocational training.

Vocational training can be described as any form of educational activity whose primary purpose is to prepare beneficiaries to acquire skills for gainful self-employment, self-sufficiency and poverty alleviation. Vocational training in the word of Olaitan (2008) is a form of education that primarily concerns the development of occupational skills needed by an individual as a preparation for work. Vocational training according to Davis et al (2014), can be offered in various trade industries, including barbering, building maintenance, carpentry, electrical trades, painting, plumbing, horticulture, custodial maintenance, upholstery, auto detailing, masonry, welding, and heating, ventilation, and air conditioning. The type of vocational skills acquisition programmes available in a prison will depend on inmates' interests, availability of teaching staff, and funding. It is worth mentioning that the available VST programmes in most Nigerian Prisons according to Talba (2015) include agro-based skills acquisition, carpentry and joinery work, dress making, hair dressing, knitting, laundry and dry cleaning services, metalwork, soap and pomade making skills acquisition programmes. This is to enable prison inmates acquire skills especially in the area of arts and craft and to become self-reliant after their jail term and to keep them away from re-entry into prison in the near future.

The primary goal of vocational skills acquisition programme in prisons is to help offenders develop marketable job skills upon release to the community. Certificates or college credit can be earned for some vocational programmes in prisons. Hence, for this study, vocational skills training programme is any form of educational programme whose primary purpose is to prepare prison inmates for employment in recognized occupations after their jail term.

The prison in question has been a subject of debate among various scholars in the social science discipline. The concept has been treated from various perspectives, which include structural and functional dimensions. For instance, Abba and Mbagwu (2016) described a prison as a physical structure in a geographical location where a number of people living under highly specialized condition adjust to the alternatives presented to them by the unique kind of social environment. Similarly, Ogwuoke and Ameh (2014) conceived prison as a place where people are highly secluded from the rest of the world with entirely new order of control. The above conceptualizations as advanced by scholars are limited towards an understanding that a prison is a physical environment, and could be described geographically or spatially. Quite different from the physical conception, there are other schools of thought that are based on function, framework and label. From the functional perspective, a prison is perceived as a place to punish offenders, where criminals that are removed from the society are dumped to protect the society from further criminal activities of the offenders: and a place to rehabilitate, and teach offenders to be law abiding and productive after their release.

Prisons are also perceived as a total institution, from the perspective of framework, Okunola (2008) and Goffman (2006) variously defined the concept in this manner. Prison is an institution or a walled place unlike free environment or community that houses those who are socially rejected, insane or mentally retarded. Goffman (2006) on the other hand conceptualized total institution as where there is a basic split between a large class of individuals who are restricted to contact with outside world and stereotypical behavioral pattern where social mobility is restricted. Yet from the labelling point of view, the prison is a place for vagrants, who may pose actual danger to social life in the larger society, which pre-supposes that every person in the prison is a vagrant and irresponsible person. Meanwhile, Ogwokhademhe, Bolusteve and Adebayo (2014) defined prison as a place delineated and declared by the law of the state to ensure restraint and custody of individuals accused or convicted of violating the criminal laws of the state.

Economic growth has been called "the science of how people make a living." According to Adewole (2012), economics is a study of man in the ordinary business of life. It enquires how he gets his income and how he uses it. While economic growth can be defined as continual changing of situation involving both multipliers and accelerators (Onisanwa, 2014). According to Rutherford (2002), economic growth is the growth in the total output of an economy often measured by an increase in the real gross net product (GNP) and caused by an increase in the supply of factors of production or their productivity. This is the rate at which a country's national income grows, usually shown as an increase in GDP or GNP or an increase in per capital income.

### *1.1 Statement of the Problem*

It is evident from the background that reformation and rehabilitation are the current issues central to modern penal-thinking. For the purpose of actualizing the objectives of the NPS in terms of rehabilitation of prison inmates, VSA programmes were established in some Nigerian Prisons. Considering the fact that literature shows that there are VSA programmes available for the rehabilitation of prison inmates in some Nigerian prisons SokotoState inclusive as well as the country's current struggle for actualising its economic growth goal, actualising this target goal requires participation of every citizen prison inmates inclusive in the State and the country at large. Regrettably, despite the existence of the VSA programmes, the rate of crimes and recidivism among ex-prisoners is on the increase in the State. Sadly, there is presently inadequate information on the extent to which prison inmates participate in VSA programmes in SokotoState. Hence, the need for this study which seeks to assess the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. Any attempt to assess the extent of participation of prison inmates in VSA programmes must require gathering of information using various methods to systematically identify the areas and the level of participation of prison inmates in VSA programmes in the State. Thus, this study will provide information on the extent of participation of prison inmates in VSA programmes for self-reliance and sustainable economic growth in SokotoState, Nigeria.

### *1.2 Review of Materials Related to this Study*

Asokhia and Osumah (2013) carried out a study titled "assessment of rehabilitation services in Nigerian Prisons in Edo State". The study adopted a descriptive survey research design. The population of the study consisted of 731 prison inmates in the six prisons of the State. Using stratified random sampling technique, a total of 147 respondents were selected as a sample for the study. The instrument for data collection was a checklist titled "adopted rehabilitation services in Nigerian Prisons in Edo State (ARSNPESC)". The research data were analysed using simple percentage. Some of the major findings of the study revealed among others that adult prisoners participated in adult and remedial educational programmes and educational development project in the six prisons of the study area.

The study is related to this present study as they are both concerned with rehabilitation of inmates. However, both studies differ as Asokhia and Osumah study was on the assessment of rehabilitation services in Nigerian Prisons in Edo State and the programmes available in the prisons; while the present study assessed the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState, Nigeria.

Abba (2016) carried out a study titled "Rehabilitation of Prison inmates through Vocational Skills Acquisition programmes as Perceived by Prison officials in the North-West States, Nigeria". Descriptive survey design was adopted for the study. The population of the study was 1,592 prison officials. The researchers used deliberate sampling technique to determine the sample size of 351 respondents. A 40 items questionnaire was the instrument used to elicit information from the respondents. The data were analysed using mean and standard deviation. Some of the major findings were that: prison inmates participated in VSA programmes and the programmes have enhanced socio-economic well-being of the inmates to a high extent in the study area. The study is related to the present study because both studies focused on vocational skills acquisition programmes for rehabilitation of inmates but differed from the former which assessed the rehabilitation of prison inmates through vocational skills acquisition programmes as perceived by prison officials in the North-West States, Nigeria while the present study was cantered on assessing the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState, Nigeria. Omoni (2009) carried out a study titled "An Assessment of the Qualitative Education for Prisoners in Delta State, Nigeria". Descriptive survey design was adopted for the study. The population of the study consisted of all the 310 prison staff in the five prisons in Delta State: Agbor, Kwale, Ogwashi-Uku, Sapele and Warri, and 166 academic staff of the College of Education, Agbor making total of 476 respondents. The researchers used stratified random sampling technique to determine the sample size of 300 respondents for the study. The instrument for data collection for the study was a self-structured questionnaire, whereas the data was analysed using simple percentages and chi-square ( $\chi^2$ ). The findings of the study revealed among others that there is no significant difference in the opinion between prison staff and academic staff of the College of Education, Agbor, on the adequacy of prisoners' vocational and formal education programmes. The findings also showed that the two groups agreed that prisoners need vocational and formal education. The study is related

to this present study because both studies focused on educational programmes for rehabilitation of prison inmates but differed from the former which assessed the qualitative education for prisoners in Delta State, Nigeria while the present study was centered on assessing the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState, Nigeria.

Finally, Akpunne (2014) carried out a study on Access to Basic Needs as Correlate of Desire to Participate in Rehabilitation Programmes among Inmates of Nigerian Prisons. The study adopted a descriptive survey research design. The population of the study consisted of 631 prison inmates of Kirikiri medium security prison, Lagos State, Nigeria. The researcher used purposive sampling technique to determine the sample size of 230 respondents for the study. The instrument for data collection was a self-structured questionnaire titled “Questionnaire on Desire to Participate in Rehabilitation Test (QDPRT)”. The data were analysed using inferential and descriptive statistics. The findings of the study showed that there is no correlation between quality and quantity of feeding and desire of inmates’ to participate in rehabilitation programmes. There is a significant positive correlation between sanitary conditions and desire to participate in rehabilitation programmes among inmates of Nigerian prisons. Both studies are related in analytical tool used but differed in scope and the area of study.

### *1.3 Purpose of the Study*

The general purpose of the study was to examine the participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. Specifically, the study sought to:

Ascertain the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState, Nigeria.

### *1.4 Research Question*

One research question guided the study: To what extent have prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState?

### *1.5 Hypothesis*

One null hypothesis was formulated for the study and tested at 0.05 level of significance:

$H_{01}$ : There is no significant difference between the mean ratings of the prison officials and Prison inmates on the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and economic growth in SokotoState.

## **2. Research Method**

The study adopted descriptive survey research design. Descriptive survey research design according to Nworgu, (2015), aims at studying a group of people or items by collecting and analysing data from a sample of the same group or items considered to be a representative of the entire population. This design is considered appropriate for this study because it helped in eliciting information from the respondents on the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. The study was conducted in the SokotoState command of the Nigerian Prisons Service. The population of the study was all the 1,226 respondents, comprising 727 Awaiting Trial Prisoners (ATPs), 286 Convicted Prisoners (CPs) and 213 Prison Officials (POs) of the five prisons in SokotoState at the time of the study. The rationale behind choosing Sokoto central prison was because, out of the whole available prisons in the State, VSA programmes for rehabilitation of prison inmates were only found in Sokoto central prison. However, even in the selected prison, the VSA programmes were majorly designed for convict prisoners. Therefore, the researchers deliberately used all the 266 CPs and 85 POs found available in the Sokoto central prison as the sample size of the study. This is also for the fact that the population is a manageable size to be used as a sample for the study.

The research instrument used for data collection was a self-structured questionnaire developed by the researchers titled, “Questionnaire on the participation of prison inmates in vocational skills acquisition programmes (QPAPVSAP)”. The use of self-structured questionnaire was considered necessary for the collection of data for the study. Because Nworgu (2015) noted that in structured questionnaire, the respondent is restricted to some response options. A question is asked and some response options are supplied. From these, the respondent is expected to pick any one that best suits his/her response. The responses of the respondents in the questionnaire were used to address the research question and hypothesis that guided the study. A - 4 points rating scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) was used for addressing the research question. The instrument was face validated by three experts: two of the experts were from the department of Science and Vocational Education, Usmanu Danfodiyo University, Sokoto, and one from the department of Adult Education and Extra-Mural studies, University of Nigeria, Nsukka. The instrument consists of eight items based on the research question and hypothesis.

The reliability of the instrument was ascertained through a trial test method. Thirty (30) copies of the research instrument were administered on 15 prison officials and 15 convicted prisoners of Katsina Central Prison, Katsina State who share the same characteristics with those in the study area but were not used for the study. Cronbach Alfa was used to ascertain the internal consistency of the questionnaire items. The overall reliability index was 0.85 which was deemed high enough for the study. For the purpose of data collection for the study, a quantitative method of field survey was used in this study by the researchers. This was done with the aid of two research assistants from the prison officials and two from the prison inmates of the Sokoto central prison, making total of four research assistants for the study. The entire instruments was administered to the respondents and collected the same day and a hundred percent (100%) rate of return was recorded.

The research question was analysed using mean and standard deviation. The mean benchmark for answering the research question was 2.5 criterion mean. This means that any item with a mean score of 2.5 and above was accepted while a mean score below 2.5 was unaccepted. T-test statistics was used to test the null hypothesis at 0.05 level of significance. In testing the null hypotheses, the probability associated with the t-value was used for taking decision. When the associated probability value is greater than 0.05 level of significance, the researchers accept the null hypothesis. Whereas when the associated probability value is less than 0.05 level of significance, the researchers reject the null hypothesis.

## Results

Table 1. Prison Locations and Population of the Study

S/No	Prison Location	Number of Total Awaiting Trial A.T.P.		Number of Total Convicted Prisoners (CP)		Total C.P.	No. of Prison Officials Males	No. of Prison Officials (Females)	Total Prison Officials (POs)	Total Respondents	
		Males	Females	Males	Females						
1.	Sokoto Central Prison	502	66	568	240	26	266	75	10	85	919
2.	Bissalam Prison Farm	-	-	-	65	-	65	35	-	35	100
3.	Gwadabawa Satellite Prison	32	10	42	-	-	-	26	04	30	72
4.	Tambawal Satellite Prison	26	06	32	-	-	-	30	04	34	66
5.	Wurno Satellite Prison	32	08	40	-	-	-	27	02	29	69
Grand Total	5	637	90	727	260	26	286	191	20	213	1226

Source: Federal Ministry of Interior. (2017).

Table 1 shows the total number of convicts' prisons, awaiting trial, convicted prison inmate and prison officials that were used for the study. The table also indicated that Sokoto Central Prison has 568 ATPs, 266 CPs and 85 POs; Bissalam Prison Farm has 65 CPs and 35 POs; Gwadabawa Satellite Prison has 42 ATPs and 30 POs. Tambawal Satellite Prison has 32 ATPs and 34 POs; While Wurno Satellite Prison has 40 ATPs and 29 Pos respectively.

Table 2. Mean rating and standard deviation showing the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in Sokoto State.

N = 351

S/No	Item	$\bar{x}$	S D	Dec.
1	Agro-based skills training	2.53	0.91	HE
2	Carpentry and joinery work skills training	2.68	0.85	HE
3	Dress making (tailoring) skills training	3.23	0.75	HE
4	Hair dressing skills training	2.66	0.87	HE
5	Knitting skills training	2.56	0.93	HE
6	Laundry and dry cleaning services skills training	3.32	0.74	HE
7	Metalwork skills training	3.05	0.74	HE
8	Soap and pomade making skills training	2.68	0.84	HE
<b>Grand Mean and Standard Deviation</b>		<b>2.84</b>	<b>0.35</b>	HE

Key: HE= High Extent and N = Number of Respondents

Table 2 above present the views of respondents on the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in Sokoto State. From the results all the respondents on items 1- 8 have mean ratings above the criterion level of 2.50 with their corresponding numerical values of standard deviations, and grand mean of 2.84 and SD of 0.35. Since the mean ratings are above the criterion level of 2.50 for accepting an item, this confirms that the respondents agreed to a high extent that the prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in Sokoto State.



Table 3. T-test analysis of the prison officials and inmates on the extent of participation of prison inmates in vocational skills acquisition programmes for self – reliance and sustainable economic growth.

S/N	Item Statement	Respondent s	Prisoners = 266, Prison Officials = 85																																																																																																	
			$\bar{x}$	SD	t-cal	Df	Sig	Dec																																																																																												
1	Agro-based skills training	Prisoners	2.56	0.90	1.20	349	0.23	NS																																																																																												
		Officials	2.42	0.94					2	Carpentry and joinery work skills training	Prisoners	2.66	0.91	-1.37	349	0.17	NS	Officials	2.80	0.87	3	Dress making (tailoring) skills training	Prisoners	3.22	0.76	-0.68	349	0.49	NS	Officials	3.28	0.75	4	Hair dressing skills training	Prisoners	2.64	0.86	-0.86	349	0.39	NS	Officials	2.73	0.92	5	Knitting skills training	Prisoners	2.33	0.86	-9.15	349	0.00	S	Officials	3.28	0.77	6	Laundry and dry cleaning services skills training	Prisoners	3.30	0.75	-0.99	349	0.32	NS	Officials	3.39	0.69	7	Metalwork skills training	Prisoners	3.00	0.72	-2.34	349	0.02	S	Officials	3.21	0.79	8	Soap and pomade making skills training	Prisoners	2.68	0.86	-0.02	349	0.99	NS	Officials	2.68	0.80	<b>Grand Mean and Standard Deviation</b>		Prisoners	2.79	0.35	<b>-4.22</b>	349	<b>0.00</b>
2	Carpentry and joinery work skills training	Prisoners	2.66	0.91	-1.37	349	0.17	NS																																																																																												
		Officials	2.80	0.87					3	Dress making (tailoring) skills training	Prisoners	3.22	0.76	-0.68	349	0.49	NS	Officials	3.28	0.75	4	Hair dressing skills training	Prisoners	2.64	0.86	-0.86	349	0.39	NS	Officials	2.73	0.92	5	Knitting skills training	Prisoners	2.33	0.86	-9.15	349	0.00	S	Officials	3.28	0.77	6	Laundry and dry cleaning services skills training	Prisoners	3.30	0.75	-0.99	349	0.32	NS	Officials	3.39	0.69	7	Metalwork skills training	Prisoners	3.00	0.72	-2.34	349	0.02	S	Officials	3.21	0.79	8	Soap and pomade making skills training	Prisoners	2.68	0.86	-0.02	349	0.99	NS	Officials	2.68	0.80	<b>Grand Mean and Standard Deviation</b>		Prisoners	2.79	0.35	<b>-4.22</b>	349	<b>0.00</b>				Officials	2.90	0.32						
3	Dress making (tailoring) skills training	Prisoners	3.22	0.76	-0.68	349	0.49	NS																																																																																												
		Officials	3.28	0.75					4	Hair dressing skills training	Prisoners	2.64	0.86	-0.86	349	0.39	NS	Officials	2.73	0.92	5	Knitting skills training	Prisoners	2.33	0.86	-9.15	349	0.00	S	Officials	3.28	0.77	6	Laundry and dry cleaning services skills training	Prisoners	3.30	0.75	-0.99	349	0.32	NS	Officials	3.39	0.69	7	Metalwork skills training	Prisoners	3.00	0.72	-2.34	349	0.02	S	Officials	3.21	0.79	8	Soap and pomade making skills training	Prisoners	2.68	0.86	-0.02	349	0.99	NS	Officials	2.68	0.80	<b>Grand Mean and Standard Deviation</b>		Prisoners	2.79	0.35	<b>-4.22</b>	349	<b>0.00</b>				Officials	2.90	0.32																		
4	Hair dressing skills training	Prisoners	2.64	0.86	-0.86	349	0.39	NS																																																																																												
		Officials	2.73	0.92					5	Knitting skills training	Prisoners	2.33	0.86	-9.15	349	0.00	S	Officials	3.28	0.77	6	Laundry and dry cleaning services skills training	Prisoners	3.30	0.75	-0.99	349	0.32	NS	Officials	3.39	0.69	7	Metalwork skills training	Prisoners	3.00	0.72	-2.34	349	0.02	S	Officials	3.21	0.79	8	Soap and pomade making skills training	Prisoners	2.68	0.86	-0.02	349	0.99	NS	Officials	2.68	0.80	<b>Grand Mean and Standard Deviation</b>		Prisoners	2.79	0.35	<b>-4.22</b>	349	<b>0.00</b>				Officials	2.90	0.32																														
5	Knitting skills training	Prisoners	2.33	0.86	-9.15	349	0.00	S																																																																																												
		Officials	3.28	0.77					6	Laundry and dry cleaning services skills training	Prisoners	3.30	0.75	-0.99	349	0.32	NS	Officials	3.39	0.69	7	Metalwork skills training	Prisoners	3.00	0.72	-2.34	349	0.02	S	Officials	3.21	0.79	8	Soap and pomade making skills training	Prisoners	2.68	0.86	-0.02	349	0.99	NS	Officials	2.68	0.80	<b>Grand Mean and Standard Deviation</b>		Prisoners	2.79	0.35	<b>-4.22</b>	349	<b>0.00</b>				Officials	2.90	0.32																																										
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		Officials	2.90	0.32																																																																																																

**Key:** N = Number of respondents,  $\bar{x}$  = mean, SD = Standard Deviation, t-cal = t calculated

df = Degree of freedom, Dec. = Decision, NS= No Significant difference and S= Significant difference.

Table 3 above shows that the t-values of 1.20, --1.37, -0.68, -0.86, -9.15, -0.99, -2.34 and -0.02 with associated probabilities of 0.23, 0.17, 0.49, 0.39, 0.00, 0.32, 0.02 and 0.99 respectively were obtained. Items 1, 2, 3, 4, 6, and 8 shows that there is no significant difference in the mean responses of the respondents on the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. This is because their probability values were greater than 0.05 level of significance. On the other hand, items 5 and 7 shows that there is significant difference between the mean ratings of the prison inmates and officials on the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. This is because their probability values were less than 0.05 level of significance. The overall cluster t-value of -4.22 with a degree of freedom of 349 and a probability value of 0.00 was also obtained, the null hypothesis was rejected. Thus, there is significant difference between the mean ratings of the prison inmates and officials on the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState.

### 3. Discussion of the Findings

Findings revealed that the respondents unanimously agreed to a high extent that prison inmates participated in agro-based skills acquisition programme; carpentry and joinery work; dress making (tailoring); hair dressing; knitting; laundry and dry cleaning services; metalwork and soap and pomade making skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. This is in line with Asokhia and Agbonlue (2013) who affirmed that adult and remedial educational programmes and educational development project are available in some Nigerian prisons. Corroborating with the authors views, Hassan and Oloyede (2011) noted that there is low participation of prison inmates in vocational skills acquisition programmes in Nigerian prisons. The result among others indicated that most of the prison inmates in SokotoState have realized the importance of vocational training, hence their effective participation, bearing in mind that vocational training in prison is not a must for inmates but optional. This finding is in line with

Onweonye, Obinne and Odu (2013) who succinctly observed that participation of prison inmates in vocational skills acquisition programmes in prison influences them to realise for themselves the importance of work, which can help them to re-enter society after being released. Supporting the above view, Abba (2016) believed that prison inmates prefer attending to vocational education programmes than adult literacy programmes in Nigerian prisons. This view is also in agreement with Agbakwuru and Godfrey (2016) who stated that prison inmates prefer most attending to vocational education programmes than adult literacy programmes in Nigerian prisons.

The findings also revealed that there was significant difference between the mean ratings of prison inmates and prison officials on the extent of participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. This implies that the null hypothesis which stated that there is no significant difference between the mean ratings of adult prisoners and prison officials on the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState was rejected. This agrees with Abba and Mbagwu (2016), who testified that prison inmates participated in vocational skills acquisition programmes in Nigerian prisons. It is also in agreement with Abba (2016) who aptly revealed that prison inmates participate in vocational skills acquisition programmes for their rehabilitation in some Nigerian prisons. Therefore, it is believed that Mastery of these identified vocational trade skills would help the prisoners to be rehabilitated and as well become self-employed after their jail term, thereby preventing them from going back into crime as a result of lack of vocational skills. This may in turn lead them to contribute their own quota towards economic growth of the State and the society at large. Mere determination of prison inmates to be law-abiding citizens on discharge without the acquisition of the needed skills by prison inmates may not yield any fruit.

#### **4. Conclusion**

The study examined the extent to which prison inmates participated in vocational skills acquisition programmes for self-reliance and sustainable economic growth in SokotoState. The sustainable participation of prison inmates in vocational skills acquisition programmes for self-reliance and sustainable economic growth require motivation to the clients. The findings revealed that prison inmates participated in vocational skills acquisition programmes to a high extent for self-reliance and sustainable economic growth in SokotoState. Prison inmates have been identified as inevitable segment of the society that need not be left behind in the current Nigeria's struggle for sustainable economic growth. Any stigmatization against prison inmates by other members of the society as disadvantage group, being problems instead of viewing them as resources, could lead to their low participation in VSA programmes for self-reliance and sustainable economic growth of the society. However, if inmates participate and acquire vocational skills, they can re-enter society as self-reliant citizens. This will enable them contribute their own quota towards sustainable economic growth of the state and the country at large. Based on these findings, the researchers made the following recommendations that:

- (1)The Nigerian Prisons Service (NPS) should extend the VSA programmes to other convict and satellite's prisons for self-reliance and sustainable economic growth.
- (2) More qualified vocational instructors in various trades should be recruited into Nigeria Prisons Service (NPS) for the training of prisoners in the State and the country at large;
- (3) The NPS should introduce more vocational trades that are not available in the prisons. Such as electrical and electronics repairs, graphic arts, shoe making and automobile mechanic skills acquisition programmes while the prison inmates should be encouraged to patronize the programmes for their self-reliance and sustainable economic growth of the society.

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# The Relationship Between Parenting Styles and Behavioral Disorders in LD Children

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## Abstract

This study has been conducted with the objective of evaluating the role of parenting styles in prediction of behavioral disorders in children with Learning Disability (LD). This study is a descriptive work conducted using correlation methods in kind of prediction model and statistical population in this study consists of children with learning disability (LD) referring to Educational and Rehabilitation Centers for Specific Learning Disorders of Tehran during academic year 2014-15. Using purposeful and voluntary sampling method, 130 people were selected as sample size. Data collection instrument in this study includes Bumerind parenting style questionnaire and Child Behavior Checklist for ages 6-18 Achenbach system of empirically based assessment (CBCL). Data analysis was done using Pearson correlation and multivariate regression using SPSS. The results obtained from the study showed that there is no significant correlation between authoritarian and authoritative parenting style and any components of behavioral disorders of LD children and only permissive parenting style has negative and significant correlation with externalized disorders of LD children.

**Keywords:** behavioral problems of LD children, parenting styles

## 1. Introduction

Specific Learning Disorder is one of the most common disorders among children. The disorder with spread of 3-14% in world level (American Psychiatric Association, 2013; Jacobsen et al, 2005 and Dowker, 2005) and spread of 8.18% in Iran (Behrad, 2005) has possessed highest rate of disorders in children with specific needs (Asghari Nekah, 2012).

According to Diagnostic and Statistical Manual of Mental Disorders 5<sup>th</sup> Edition (DSM-5), the neural-evolutional disorder with biological origin is an intangible disability causing some abnormalities in cognitive and psychological level. it can not only leave negative effects on status of children in cognitive and psychological level and not only can have significant and wide effects on status of children in sensitive ages of growth, but also it can affect performance of these children to the end of their life in different fields such as educational, social, behavioral, occupational and psychological dimensions. Comorbidity of the disorder with other disabling conditions such as behavioral disorders has been cleared over the decade (Paul and Fine, 2014; American Psychiatric Association, 2013; Freilich & Schechtman, 2010; McNamara, 2010; Pennington, 2009; Crastnopol, 2009). 30-50% of these children suffer from behavioral disorders in one of the 3 forms including general behavioral disorders, externalizing disorders like attention deficit hyperactivity disorder (ADHD) and internalizing disorders like anxiety (Halahan et al, 2005; quoted from Alizadeh et al, 2012; Auerbach et al, 2008; Sharma, 2004; Greman 2001, quoted from Baezzat and Rahat, 2007). The outcomes and complications of comorbid behavioral disorders with learning disorder can cause abundant preventive problems in all dimensions of personal and social life of child, family and friends and the society, where the child lives, and this can increase probability of mental and behavioral diseases in adulthood (American Psychiatric Association, 2013; Pandina et al, 2007; Miller et al, 2006). Even with presence of concerning complications of behavioral disorders, along with learning disorder encompassing all dimensions of life from childhood to adulthood, there are limited information in field of various factor affecting growth, spread and continuity of behavioral disorders of these children, especially family and parenting factors (Eslamieh, 2008).

## 2. Literature Review

Specific learning disorder is one of the independent issues of specific education with legal position based on state and federal regulations of the US and similar regulations in other countries like Iran. In the latest definition of learning disorder presented in 2004, the disorder is defined as deficit and dysfunction in one or more basic psychological processes related to understanding and using oral or written language, which is appeared in form of disability in listening, thinking, reading, writing, spelling or mathematical calculations. It may happen along with other disabling conditions such as lack of learning opportunities, mental retardation, sensory disabilities and behavioral disorders, but it is not caused by these conditions (Halahan et al, 2005; quoted from Alizadeh et al, 2012; and National Center for Children with Learning Disabilities, 2011). One component observed in this definition and majority of definitions is the comorbidity of the disorder with other disabling conditions; meaning that LD children may suffer from one or more other disorders in addition to LD. Some of the disorders may be caused by the disorder and some of them can be cause and effective factors and some other may be caused by environmental stressful factors. Almost any kind of disorder may happen along with learning disability; although the most common disorder is behavioral disorder (Halahan et al, 2005; quoted from Alizadeh et al, 2012; Wang, 2012). According to relevant literature, more than 30-50% of children with LD suffer from behavioral disorders (Halahan et al, 2005; quoted from Alizadeh et al, 2012; Takaloi, 2011 and Keshavarzi Valian and Keshavarzi Arshadi, 2010). Some studies have shown that learning disorders are evident in 71% of children with ADHD and in 18-19% of children with depression and anxiety (Greman, 2001, quoted from Baezzat and Rahat, 2007).

Achenbach has classified behavioral disorders of children in 3 groups of internalizing disorders, externalizing disorders and general disorders. Internalized disorders, also called hidden diseases, are uncompromising behavioral patterns bothering the child more than bothering people around the child. The main core of these disorders is the mood or emotion disorder and covers wide range of diagnostic system disorders based on DSM including anxiety, depression, physical complaint, active effort for isolation and avoiding social activities. The spread of these disorders in childhood is estimated in about 10-20% of them and the behavioral problems could be evident since the age 8 (Kessler et al, 2005; Costello et al, 2003). The disorders are not transient and short-term and the continuous process of the problems can have long-term effects on behavioral activity, physical and cognitive and emotional reactions of children (Moradi and Rezaei, 2013). Externalizing disorders are behaviors directed in external aspect of child. The disorders are tangible easily from outside and are known as disruptive behaviors. In DSM-5, they can special diagnostic criteria like hyperactivity, conduct disorder, aggression, antisocial and law-breaking behavior and impulsions. The disorders are created to some extent as a result of low control or self-regulation in improper and maladaptive way. Although the two groups of disorders are apparently independent, some children may show both kind of maladaptive behaviors (Ganji, 2013) and the last group as general behavioral disorder include indices of internalizing and externalizing problems, attention deficit, thinking, social and other disorders. Both kinds of internalizing and externalizing behavioral disorders and general disorders are evident in LD children (Auerbach et al, 2008; Sideridis, 2007 and Halahan et al, 2005 quoted from Alizadeh et al, 2012). The comorbid behavioral disorders may be appeared because of problems such as stress due to educational failure, some cognitive disorders, behavior of parents against the disorder (Ganji, 2013) parenting styles and personality of parents (Sheikhi et al, 2015; Khanjani and Hodavand, 2013; Donatelli et al, 2010 and Lorber & Egeland, 2009)

## 3. Methodology

### Method and Research Plan:

This study is in kind of descriptive research conducted using correlation method in kind of prediction model.

### Statistical population:

Statistical population in this study consists of parents and female and male primary school students in age range of 6-12 years old referring to Educational and Rehabilitation Centers for Specific Learning Disorders (learning disorders) in Tehran. After primary specialized examinations and evaluations, the students were diagnosed as children with learning disorders.

### Sample and Sampling Method

For purpose of data collection, purposeful and voluntary sampling is used.

The desired sample consists of 130<sup>1</sup> students educating in primary schools of cities around Tehran in age range of 6-12 years old. The students referred to Educational and Rehabilitation Centers Specific Learning Disorders of Tehran and were diagnosed as children with LD and 65 students out of them were boys and 65 students were girls.

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<sup>1</sup> Statistical sample consists of 150 students with LD. After distribution and collection of questionnaires, 20 questionnaires were excluded because of insufficient reliability and 130 questionnaires were used.

### **Inclusion Criteria**

To have criteria of LD in DSM

To have average IQ

Passing the steps of diagnostic evaluation and specialized identification in centers with transient LD diagnosis

To be in age range of 6-12 years old

Living with biological mother

Presence of both parents in family

### **4. Measurement Instruments**

#### **Bumerind Parenting Style Questionnaire:**

The questionnaire designed by Bumerind in 1972 contained 48 items at the first; although ultimately, 30 items were considered in final scale. The questionnaire contains 30 items. 10 items are related to permissive parenting style, 10 items are related to authoritative style and 10 items are related to authoritarian parenting style. The responding pattern of these items is based on 5-point Likert scale including totally agree, agree, almost disagree, disagree and totally disagree. In addition to responding pattern, scoring the items in Bumerind questionnaire is also based on Likert scale and through summation of relevant items of each style, 3 independent scores are obtained (Kraskian, 2013).

#### **Child Behavior Checklist for Ages 6-18 Achenbach System of Empirically Based Assessment (CBCL)**

The instrument in this study for data collection in field of internalizing and externalizing behavioral disorders is the Child Behavior Checklist (CBCL) of Achenbach System of Empirically Based Assessment (ASEBA). The age forms of the assessment system have been provided by Thomas Achenbach in 1978 and have been revised several times to so far. The assessment system includes 3 forms: Child Behavior Checklist (CBCL), Teacher Report Form (TRF) and Youth Self Report (YSR) form. In this study, the results obtained from implementing the CBCL are reported (Minaei, 2005).

Achenbach, Dimensi and Rescorla (2001) have used items with high consistency with DSM-IV diagnostic categories according to psychologists and psychiatrists and have determined some scales to point CBCL (child form), YSR (self-report) and TRF (teacher report form). DSM-based scales in 3 forms are exactly same: emotional disorders, anxiety disorders, ADHD, conduct disorders, coping behavior disorders and physical disabilities.

According to the investigations of Achenbach and Rascorla (2001) on scales based on individual experiences, they could divide the scales to 3 indices: internalizing disorders (problems, which are basically inside the person) covering 3 syndrome scales of anxiety/depression, isolation/depression and physical complaint. Second index called externalizing index (problems needing conflict with others and expectations of others from child) encompasses two scales of symptoms of law-breaking behavior and aggressive behavior. The third and last index presents general problems (including indices of internalized and externalized disorders, attention deficit, thinking and social disorders). In this study, the third index (general problems) is considered.

The checklist should be fulfilled by parents or someone who is caregiver of child and the person behaving with child in quasi-family environments and person who knows child very well based on status of child in last 6 months. In this scale, some scales are regulated based on DSM. Achenbach and Rascorla (2001) have conducted a confirmatory analysis on relevant questions of emotional-behavioral disorders of each form and called them empirically-based scales. Empirically-based scales of CBCL include anxiety/depression, isolation/depression, physical complaints, and social disorders, thinking disorders, attention disorders, law-breaking behavior and aggression.

In this form, the respondent ranks emotional, behavioral and social problems of child. Number of items contained in this checklist is 113 items and the respondents rank child's status during last 6 months in forms of false, sometimes true or absolutely or mostly true. From summation of scores of aggressive behaviors and law-breaking behaviors, the overall score of externalizing problems could be obtained (ibid).

For purpose of normalization of Achenbach empirically-based assessment in Iran, Minaei (2005) implemented the checklist using multi-stage sampling on 1438 people (689 girls and 749 boys) based on educational grade from 3 zones of North, Center and South of Tehran and some clients of psychiatric unit of hospital after taking required consistencies in terms of language, culture and society.

#### **Data analysis**

In this section, after data collection, sample is described using descriptive statistics including number, mean value and standard deviation (SD).

Table 1. central statistical indices, distribution and relative distribution indices of parenting style components

Variable	Mean	SD	Skewness	Kurtosis	Min	Max
Permissive	16.02	5.88	0.111	0.497	1	35
Authoritative	17.13	6.75	0.168	-0.384	0	34
Authoritarian	31.25	5.41	-1.219	2.550	11	40

In table 1, statistical indices of parenting styles including mean value, SD, min and max values and skewness and kurtosis are distribution of values are reported. As it is obvious, kurtosis coefficient of authoritative parenting style values shows that distribution of these values is shorter than normal distribution and kurtosis coefficient of permissive and authoritarian parenting styles shows that the distribution of these values is longer than normal distribution. Skewness coefficient of permissive and authoritative parenting style values shows that the values are right skewed and the skewness coefficient of authoritarian parenting style shows that distribution of these values is left skewed.

The results obtained from Kolmogorov-Smirnov test showed that permissive and authoritative parenting styles have normal distribution (sig=0.320; sig=0.448); although authoritarian parenting style has not normal distribution (sig=0.000).

Table 2. central statistical indices, distribution and relative distribution of behavioral disorder components

Variable	Mean	SD	Skewness	Kurtosis	Min	Max
General disorders	55.72	24.93	0.850	1.55	1	146
Internalizing disorders	41.10	18.19	0.963	0.961	1	109
Externalizing disorders	45	9.29	0.640	0.030	0	45

In table 2, statistical indices of behavioral disorder components including mean value, SD and min and max value, skewness and kurtosis of distribution of values are reported. As it is observable, kurtosis coefficient of all components shows that distribution of these values is longer than normal distribution. Skewness coefficient of all components shows that distribution of these values is right skewed.

The results obtained from Kolmogorov-Smirnov test showed that general disorders have normal distribution (sig=0.057); although internalizing and externalizing disorders have not normal distribution (sig=0.000; sig=0.001).

Pearson Correlation test is used in this study and the results are presented in table 3.

Table 3. Pearson correlation between authoritarian parenting style and behavioral disorder in LD children

Variables	Number	Correlation	Sig
Authoritarian parenting style and general disorders	130	-0.042	0.319
Authoritarian parenting style and internalizing disorders	130	-0.023	0.399
Authoritarian parenting style and externalizing disorders	130	-0.051	0.283

The results in table 3 show that there is no significant correlation between authoritarian parenting style and no component of behavioral disorder in LD children. Hence, hypothesis 1 is not confirmed.

## 5. Conclusion

The results obtained from the study showed that there is no significant correlation between authoritative parenting style and no one component of behavioral disorder of LD children. The result is in consistence with findings of Sheikhi et al (2015) showing that there is no significant correlation between authoritative style and behavioral disorders of children and with findings of Shiverz et al (2010) in the study on determining internalizing and externalizing behavioral disorders in early school year and showing that there is no significant correlation between authoritative parenting style and internalizing behavioral disorders in studied units. However, the result is not in consistence with findings of majority of works in literature, since the studies conducted by Hemmati and Alamdarloo (2014), Rinaldi and Howe (2012) and Lee (2010) showed positive and significant correlation between authoritative parenting style and social and behavioral

disorders and aggression and have mentioned that this style can be significant predictor of internalizing and externalizing behavioral disorders in studied population.

Authoritative parents cause isolation and rejection of child. They have many expectations from children and show rare emotions to their children. These parents find no necessity to give a reason for their orders and give limited independence to their children and emphasize unconditional obedience and respect. Children of these parents have low independence, social skills and self-confidence. The training pattern is correlated to appearance of symptoms of depression, anxiety, antisocial behaviors, delinquency and conduct disorder (Diaz et al, 2005). The results obtained from testing the hypothesis is are in conflict with all existing discriminations and the reason could be attributed to cultural differences and different social effects out of home, especially relevant factors of school such as inadequate educational programs, inappropriate expectation in conflict with child's ability, strengthening unfavorable behavior, inconsistency in management of behavior and inappropriate patterns, which have been able to minimize effects of parenting style.

Another result obtained from this study showed that authoritarian parenting style is correlated to no component of behavioral disorder in LD children; meaning that the authoritarian parenting style can predict no component of behavioral disorders in LD children. The result is in consistence with no work in the literature. This is because; Sheikhi et al (2015) in their study on relationship between parenting styles and behavioral disorders of children showed that authoritarian parenting style is in significant and reverse statistical correlation with internalizing and externalizing problems. Also, Hemmati Alamdarloo et al (2014) found in their study that authoritarian style is negative and significant predictor of behavioral disorders such as fear, antisocial behavior and aggressiveness in children. The results obtained by Cohen et al (2009) also showed that authoritarian parenting style is negative and significant predictor of behavioral disorders in children.

In majority of relevant works of relationship between parenting styles and behavioral disorders in children, reverse correlation between authoritarian style and behavioral disorders in children is referred. Authoritarian parenting style is a logical method, in which rights of children and parents are respected; parents have reasonable expectations from children and determine transparent behavioral rules for them. At the same time that they show their kindness and intimacy to children, these parents support the constructive behaviors of children and show dissatisfaction in response to bad behaviors of child. These parents encourage their children to be independent and have open and flexible system for interactive relations with their children; consider their desires and ask about their opinions. The expectations of authoritarian parents are in consistency with ability of their children. Hence, they persuade their children that they are competent and can be successful in affairs and such behavior can cause independent behavior and increased level of self-respect in children and can protect them against behavioral disorders and children trained with such style usually take benefit of higher mental growth, social growth and educational achievement and social acceptability compared to others (Sheikhi et al, 2015; Hemmati Alamdarloo et al, 2014; Huver et al, 2010; Oliver et al, 2009).

Finally, the present study showed that among parenting styles, permissive style is significant predictor of externalizing disorders of LD children, so that the more permissive the parents behave in regard with training children, the more the probability of emergence of externalizing behavioral problems like aggressiveness and antisocial behaviors is reduced. Behavior of permissive parents is a combination of low intimacy and lack of enough control on behaviors of children. These parents have high responsiveness to their children; although they have no special expectations from them and are focused on the desires of their children and support them anywhere and under any conditions. Moreover, in field of the behavior of children, they are never challenged on behalf of their parents. It is expected that children trained under this style are mostly permissive, disobedience, overwhelming and rebellious and with least self-control ability, independence, self-regulation and responsiveness (Rinaldi and Howe, 2012).

The results of this study are in consistence with findings of no work in literature. In regard with discrimination of these findings, it seems that due to current cultural and social conditions facing increasing growth in terms of mass media, especially new information technologies such as computers, internet and various computer games and virtual and android networks; the parenting styles have been affected and the impact of these styles on children have been minimized and this can make children expose to lots of behavioral disorders. Moreover, in regard with explanation of the results of this study, heritage, family conditions, cultural, mental and social conditions dominated on life of children and components of school environment like teacher and friends could be referred as factors minimizing effects of parenting styles. On the other hand, comorbid behavioral disorders with LD can be caused by this disorder (LD); meaning that LD and its consequences in children can make them talented to catch behavioral disorders. This is because; repetitive failures and lack of advancement and gaining success in academic field can lead to formation of negative self-concept in children and can make them talented for social problems, depression, anxiety and so on. Moreover, these children encounter deficits and problems in field of understanding and interpreting social signs, emotions and feelings of others because of deficit in cognitive skills and basic psychological skills like executive functions, memory, attention, understanding and inference. This can cause many problems for these children in communicative, behavioral and social fields (Kafi et al, 2013).



Biological factors (heritance) and nature of children as underlying factors in formation of personality and advent of behavioral disorders in children can be also effective in field of minimizing effect of parenting styles (Hiramura et al, 2010).

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# Technical and Economical Evaluation of a Fresh-Water Production from Zero-Wastewater Reverse Osmosis System: A Feasibility Study in Jordan

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## Abstract

Jordan endures a shortage of fresh drinking water. Thus, there is a wide use of reverse osmosis (RO) units at homes and industrial zones. Zero wastewater, which is a modified reverse osmosis system, is developed and evaluated to overcome the problem of limited water. In Jordan, for example, Petra Company for Water Treatment Systems was established to mass-produce the newly modified RO units. In this study, a feasibility study is conducted to evaluate the technical and economical aspects of mass production of the new RO systems. With increasing future demand for fresh water, it is expected that the introduction of the new system to regional countries would save huge amounts of water. Additionally, good economical impacts will be achieved as a net profit to the newly established company. This expected extra profit would be set the base for further development to the modified RO system, such as introducing a compact multistage filtration unit. Results of the feasibility study showed a huge amount of water saving per annum estimated by 4.5 million cubic meter. In addition, a half million of Jordanian Dinar (JD) of a net annual profit attained at the current demand of RO units in Jordan.

**Keywords:** Reverse osmosis, Zero wastewater, Control unit, Jordan

## 1. Introduction

Jordan is a country with limited water resources, and it is classified as the poorest country in the region with water resources, because most of its territories are located in dry areas or semi-arid. In addition to the scarcity of annual rainfall in Jordan. Where the average rainfall in good seasons about 8.5 billion cubic meters; of which 92% evaporate, the remaining is up to 900 million cubic meters, part of which is moving to natural feeding of underground water and 600 million cubic meters left annually to flow across the plains and valleys (Ministry of Water and Irrigation, Jordan, website, 2018). Jordan large deficit of water exceeds 500 million cubic meters per annum and accompanied by an increase in water needs annually by an average of 4-6% (Qasim et al., 2016). Causes of this increase are related to the increase in population, economy, agricultural and commercial growth, which has put extra pressure on the demand of the needed fresh water supply. In addition, Jordan is currently hosting a huge number of refugees, which leads to additional increase of water needs. By March 2017, and according to the Jordanian government's published figures, there are about 1.3 million Syrian refugees in Jordan accumulating about 20% of the Jordanian population (Ghazal, M. 2017). Increasing refugee number will definitely increase the need of water or at least a better utilization of water filtration process. This limitation of water resources has forced the Jordanian government to consider this problem as a first priority, especially when the number of refugees that Jordan host increases.

Recently, reverse osmosis technology has been the most commercially applied systems in several countries for producing fresh water because of its improved performance (Chaoa & Liangb. 2008). In addition, reverse osmosis desalination units are preferred choice to be used in homes and industry. Membrane fouling and high operating cost in terms of reject water rate raise more uncertainties of its wide range usages at homes and industrial settings. Due to shortage of water resources for domestic use, saving the rejected saline water that is rejected from RO systems has become an essential concern worldwide (Middle East Desalination Research Centre. 2009).

Several studies have focused on water quality for drinking water using chemical absorbents to treat the saline water (Zaleschi et al., 2013, Khana et al., 2013, Fanga & Duranceau, 2013). The effect of seawater temperature and seasonal changes on seawater desalination using RO membrane systems examined by several studies (Sassi & Mujtaba, 2012, Young et al., 2010). Avlonitis studied the cost of cubic meter of fresh water that is produced by small-size RO desalination plants in remote parts of Greek islands for a period of three years, his study aimed to improve productivity

using data acquisition and automation approach in remote area. Avlonitis concluded that in remote areas running low-cost RO plants improves work force productivity (Avlonitis, 2002). Middle East Desalination Research Center (MEDRC) funded a research project in the Middle East and North Africa (MENA) regions to develop zero-waste small RO units by utilizing the use of water softeners to remove salts from municipal water systems before distribution municipal water to homes. The objective was to make the RO units that are used at homes to operate more effectively (Middle East Desalination Research Centre. 2009). As can be seen, most of the research performed to optimize the RO system looked on the performance of the individual aspects of the system to enhance the quality of the produced water (Zhang et al., 2011, Mostafa & El-Aassar, 2013).

Fresh water demand has expanded rapidly in the last decades. In addition to the Middle East region, the Arabian Gulf Region that is close to Jordan has the greatest potential for RO system use. Both, the rapid growth in population and the shortage of drinking water resources at the Arabian Gulf region make this region of great potential market for new desalination equipment. In addition, the countries around the Mediterranean Sea will experience the largest growth rate in population, which leads to extra demand on fresh water (Fritzmann et al., 2007, Kolodziejcki & Gasson, 2005). Jordan and Arabian Gulf region countries suffer from a high water stress index (higher than 40%) (Al-haj Alia et al., 2013). In these countries desalination production from RO system exceeds 11% (Lauren et al., 2009). Typical RO systems installed at homes have very high rejection rate – water wasted to drain. This results in huge amount of wasted water.

A new modified reverse osmosis (RO) water treatment system with 100% water recovery is needed very urgently to serve the deteriorating water situation in Jordan and neighboring countries. One of these systems is produced by Petra for Water Treatment Systems Company that is located in Jordan. The new system was developed in response to the necessities of finding solutions to contribute rationalization in consumption of water and to alleviate the problem of water shortage that is suffered by many countries worldwide, particularly Jordan (Qasim et al., 2016).

This paper presents a feasibility study of producing a low recovery rate of RO system by developing a newly modified RO system built at Petra for Water Treatment Systems Company in Jordan (Ghazal, M. 2017). This feasibility study is presented to evaluate the technical and economical aspects of mass production of the new system. In addition, the issue of modifying the existing old systems at homes by adding feeder and discharge unit, as shown in Figure 1, to utilize the use of the rejected water, while maintaining the allowable limits of Total Dissolved Solids (TDS) and water quality adequate for domestic use. This paper proves that when the new feeder and discharge unit added to an existing RO system or a new system that is used, the quality of the produced fresh drinking water does not change and remains in the acceptable specifications. In addition, the cleaning water after mixing with the rejected saline water still within specified acceptable limits of less than 500TDS.

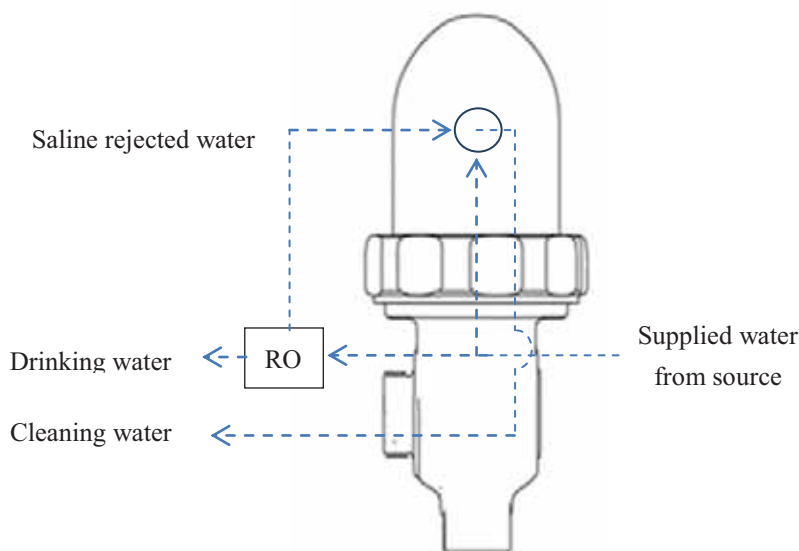


Figure 1. The main components of the feeder and discharge unit. Showing the upper mixing and the lower feeder units connected to the existing RO system.

## 2. Implementation the New RO System

The new and modified RO system is shown in Figure 2. Initially, the RO system is viewed as a traditional RO system as shown in Figure 2 (A); the additional components added to the traditional system are shown in Figure 2 (B), these components include a feeder and discharge unit, low-pressure valve, filter for dirty water treatment and salt water tank. The purpose of this modification is to reuse the rejected saline water, with 100% water recovery. The technical operation of the system and testing the new system performance at various locations were described in details in our previous study to calculate the overall efficiency (Ghazal, M. 2017). The quality of the drinking water and the mixed cleaning water matches the acceptable limits of less than 500TDS, as listed by the American and Jordanian standards, and the produced mixed water for cleaning is safe to use (American Public Health Association, 1999).

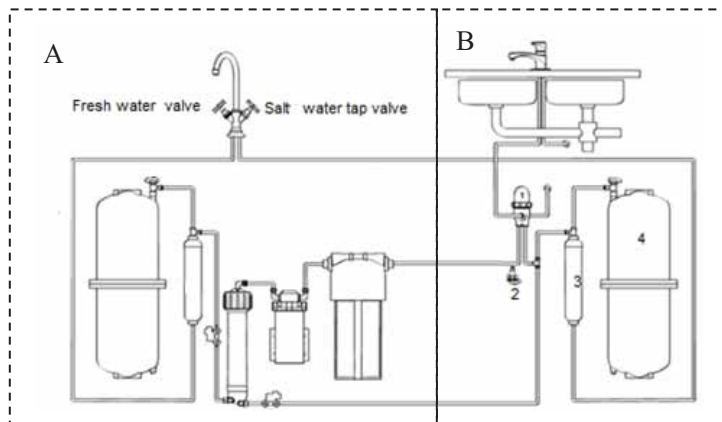


Figure 2. New RO system. (A) Components found in traditional RO system and (B) The additional component added. Numbers shown the Figure are 1. Feeder and discharge unit 2. Low-pressure valve. 3. Filter for dirty water treatment. 4. Salt water tank.

## 3. History of RO Systems in Jordan

The main two sources of fresh drinking water in Jordan are bottled water and RO systems installed in homes. It is estimated that about 125,000 RO systems are currently installed in Jordanian homes based on sales' figures that are estimated by 25,000/year (Al-Jayyousi & Mohsen, 2001). When using a traditional RO system, five liters of wasted water are consumed for drainage purpose to produce only one liter of fresh water, approximately. Because the average family daily consumption of fresh water is about 20 liters, the wasted water from RO systems that are already installed in Jordan, is about 12,500,000 liters/day, which is equivalent to 4.5 million cubic meter a year (Ministry of Water and Irrigation, Jordan, 2009). These figures are alarming since Jordan has a Water stress index above 100% according to Fritzmann (Fritzmann et al., 2007). In addition, this figure of wasted water to drain could be increased dramatically taking into account the RO systems installed in industrial factories and companies in Jordan that sell bottled waters.

### 3.1 Cost of Wasted Water from Installed RO Systems in Jordan

The cost of water supplied to household is subjected to “Tariff upward” scale as set by the government as shown in Table 1 (Ministry of Water and Irrigation, Jordan, website, 2018). To estimate the cost of the wasted water from the currently installed RO systems in Jordan, in Jordanian Dinar (JD), based on the tariff supplied by the Jordanian government and considering the average of all slices tariffs, the average cost of the water bill is about 75 JD. A total of 212,359 JD water quarter bills for homes using RO systems studied. For those bills, in each billing quarter the cost of the wasted water from RO system reached JD 15.5 million each year. These figures signify the importance of the all-new system, which built by Petra for Water Treatment Systems Company in Jordan. Table 1 shows some samples of how water bills are calculated, detailed and the complete tariff rates are available in ministry of water and irrigation website (Ministry of Water and Irrigation, Jordan, website, 2018).

Table 1. Water and wastewater tariff for quarterly bills for residential consumption only

Consum. (m <sup>3</sup> )	Price / m <sup>3</sup>		Constant value	Bill value with Waste Water (JD)	Bill value without Waste Water (JD)	Reduction % in Waste Water
	Water	Waste Water				
20	0.145	0.045	3.65	11.25	10.47	6.93
40	0.5	0.29	1.65	19.1	16.44	13.93
60	0.935	0.57	0.0	39.19	29.05	25.87
80	1.15	0.795	0.0	74.81	51.47	31.20
100	1.61	0.925	0.0	119.61	79.07	33.89
120	1.61	0.925	0.0	170.3	111.27	34.66

## 4. Cost Calculations

Annual cost calculations are based on several stages of the new RO system production. These stages include: (1) Spare parts needed for production, (2) Production of plastic components such as fresh and saline water tanks, (3) Assembly of subsystem and complete units, (4) Testing equipment and (5) Storage and shipments of final products

### 4.1 Cost of Wasted Water from Installed RO Systems in Jordan

The estimated production costs are divided into four main categories as shown in Table 2. Detailed studies were conducted to calculate the estimated cost of each category based on the production of 5,000 new RO systems and 30,000 feeder and discharge units annually. Table 2 shows the annual estimated production cost for each production cost category. As shown in Table 2, raw materials used in production occupied the highest annual estimated cost followed by the manufacturing expenses, workers' wage and then depreciations. The total annual cost was calculated to be 1,294,328 JD.

Table 2. Annual production cost

Main Categories	Annual Cost (JD)
Raw materials used in production	925,592
Workers' wages	157,800
Manufacturing expenses	170,818
Depreciations	39,818
Total	1,294,328

Table 3 provides a summary for the annual estimated depreciations for the applicable categories related to the new RO system production. The categories that can be depreciated are the building, furniture, machines, transportation media (i.e. pallet jacks, vehicles and delivery trucks), insurance and license. According to the data shown in Table 3, the initial costs and lifespans for all categories related to the production were determined based on a detailed market study. Annual depreciation of each category was also calculated by dividing the initial cost by the lifespan (for each category). For example, the building initial cost was 130,000 JD and its life that was estimated by 20 years; then the depreciation of

the building was calculated by dividing the cost value by the lifespan (i.e.  $130,000/20=6500$  JD). Based on Table 3, the total annual depreciation of this project was 39,261 JD.

Table 3. Annual fixed cost depreciations

Main Categories	Cost (JD)	Lifespan (Years)	Annual Depreciations (JD)
Building	130,000	20	6,500
Furniture	25,800	10	2,500
Machines	238,420	10	23,842
Transportation media	60,000	10	6,000
Insurances and license	6,776	20	339
Total			39,181

#### 4.2 Net Income

Table 4 provides a summary for calculating the new RO system net annual income. The annual revenue for the new RO system was estimated by 2,359,524 JD (based on the production of 5,000 new RO systems and 30,000 feeder and discharge units, annually). The total annual production cost was 1,294,328 JD. Detailed calculations of the production cost are shown in Table 4. The annual operation profit was calculated by subtracting the annual production cost from the total annual revenue, which resulted in having a total annual revenue 1,065,196 JD. Now, there is a running cost associated to the project including to cost of general and administrative expenses, marketing, licenses and consultation fees, sales' expenses and consumables. The total annual running cost was 480,628 JD as shown in Table 4. At the end, the annual running cost were subtracted from the operation profit to have the net annual income of 584,568 JD. This net annual income indicates a successful project.

Table 4. Net annual income

Main Categories	Money in one year (JD)
Total revenue from sale	2,359,524
Production cost	-1,294,328
Operation profit	1,065,196
Running cost subcategories (subtracted from operation profits)	
Subcategories of Running Costs	-203,574
Marketing	-151,558
Licenses and consultation fees	-6,776
Sales' expenses	-86,562
Consumables	-32,158
Total (Running cost)	-480,628
Net Income	584,568

#### 4.3 Net Profit Margin and Return on Investment

Two important indicators measure the success or the failure of feasibility studies. These are the net profit margin and the payback period indicators. To validate the proposed feasibility study of "Petra Company for Water Treatment Systems" both the net profit margin and the payback period were calculated. The net profit margin was calculated by dividing the net income by total sales revenue; based on the data shown in Tables 2 and 4, the net profit margin was equal to  $(584,568/2,359,524= 24.75\%)$ . The payback period of the project was calculated by dividing the initial investment by the cash inflow per period. This means that the payback period for this project will be  $1,294,328 / 584,568=2.29$  years. The values of both indicators are promising and encouraging and could attract local investors easily.

## 5. Discussion and Conclusions

The new modified RO system, which targeted domestic use at homes, showed significant water savings without reducing the quality of drinking water by using the reject water for cleaning purpose. Currently, the use of RO systems in both homes and industry in Jordan is in an increasing manner. This is because the quality and the quantity of the supplied water by government in Jordan are not promising for any possible improvement in the near future. Consequently, mass production of the new units is vital because the water saving Jordan is important and because the region needs. The feasibility study conducted in this paper concludes that the production of new RO units by Petra Company for Water Treatment Systems could be highly feasible. This is because of the fact that the new design of RO system built by the company in Jordan is registered in twelve countries for intellectual property rights. In addition, this system introduced to the regional countries such as the Arabian Gulf countries since these countries are also facing the same water shortages as in Jordan. The high profit margin and the short payback period of this project will attract investors as well as government support. This study can be extended in future to study different alternatives for producing fresh drinking water and compare them with the proposed new RO system that is studied here.

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# The Soul's Need to Connect with God through the Language of Art: Analysis from an Islamic Perspective

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## Abstract

Human beings express their emotions through the language of art; it is therefore both the spirit of progress and one of the most important means of developing emotions. Consequently, those who cannot make use of this means are incomplete in their maturation. Ideas and other products of the imagination can be given tangible form with the magical key of art. By means of art, humanity can exceed the limits of the earth and reach feelings beyond time and space. Beauty in the realm of existence can be recognized through art. Moreover, the great abilities inherent in human nature can be understood and witnessed in works of art. However, from an Islamic point of view, there are some restrictions on certain fields such as sculpture and painting. It is therefore imperative to analyse the notion of art in Islam and its philosophy and then reflect upon the need of the spirit to connect to God through the language of art while meeting some religious obstacles on the way.

**Keywords:** Islamic art, art from Islamic perspective, connecting God through art, soul's language in art, expression of beauty in art

## 1. Introduction

### *1.1 The Notion of Art from an Islamic Perspective*

Human beings express their emotions through the language of art; it is therefore both the spirit of progress and one of the most important means of developing emotions. Those who cannot make use of this means are incomplete in their maturation. Ideas and other products of the imagination can be given tangible form with the magical key of art. By means of art, humanity can exceed the limits of the earth and express spiritual feelings beyond time and space. Beauty in the realm of existence can be recognized with art. Moreover, the great abilities inherent in human nature can be understood and witnessed in works of art.

As a global phenomenon, art manifests the power and potential of the human soul. It is by means of art that the most profound emotions and thoughts, the most striking observations and discoveries, and the most heart-felt desires have been preserved as if recorded on a tape and gained eternity (Gülen, 2012. p. 66). The works of artists represent beauty in tangible form. For example, the mosques and minarets point to the metaphysical realm.

People manifest their knowledge through the language of art and one may argue that without art, a person may be considered a corpse. Even if one does not discover the universal in art he/she can still perceive the classical ideal of beauty (Necipoglu, 1995). Beauty receives its value from art and thereby through art, iron can become more valuable than gold. Humanity finds its real value in art and people attain to perfection by means of it. According to Islamic thought, all the fine arts are eternal gifts from blessed souls to humanity (Gülen, 2012. p. 67). Hence, the nature of the human spirit is complex and likewise so is its art. It is like the living image of what Plato has in mind for art in a theocratic state (Tate, 1932). Art symbolizes in physical form the transcending aspect of the soul.

The vision of Islamic art is unique and strongly related to the Islamic belief system just as Christian art is related to its own culture and religion (Graba, 1987. pp. 43-71). Nevertheless, it is illogical to claim that there are no commonalities between Islamic and other art traditions (Agaoglu, 1954). Islamic art is the expression of a whole culture, intimately intertwined with religious, theological, and legal commitments (Madden, 1975). The spiritual dimension of Islam is exhibited in the works of Muslim artists (Al Faruqi, 1984). Although three-dimensional sculpture or large-scale oil painting is not seen much in Islamic art one can see miniatures, vegetal ornaments, arabesque surface patterns, and complex geometrical designs (Gocer, 1999). Contemporary scholar Seyyed Hossein Nasr states that whether in the great courtyard of the Delhi Mosque or the Qarawiyyin in Fez, one feels oneself within the same artistic and spiritual universe

despite all the local variations in material, structural techniques, and the like (Nasr, 1987).

### *1.2 How Islamic Art Reveals Itself*

Islamic architecture reveals two types of building: first the memorial buildings, such as tombs, tomb towers, and minarets; second, the open-court buildings of the mosques and madrasas (Diez, 1938). The designs and intricate patterns carved in the marbles of mosques symbolize the complex nature of spirit. The interior designs in the mosques allude to the principle that God is beyond time and space but is also, on the contrary, simultaneously present everywhere and at all times (Kühnel, 1966. p. 25).

In Islamic art, literature is important (Arkoun, 1961) and with it, people express their ideas, worldviews and cultures. Understanding a nation is heavily related to understanding its literature. The power of a nation is directly proportional to the power and richness of its language and thought (Gülen, 2010. p. 17). With the magical effect of words, poets and writers attain immortality. Literature transforms language into a lovable form through the dimensions of eloquence and clarity. Experts in literature can recognize the beauty in verbal expressions. With their expertise, they easily convey their thoughts to people and excite their hearts with effective speech. Although they use fewer words their meaning is very rich for they explain their thoughts with similes, metaphors and allusions.

God gave human beings the ability to speak regarding the human essence, the entire cosmos, and the truth beyond material existence before sending them to the dimension of external existence. This is reflected in the Qur'an: The All-Merciful. He has taught the Qur'an. He has created the human. He has taught him speech (Qur'an, 55:1-4 interpreted by Unal, 2007). God taught Adam the names, all of them (Qur'an, 2:31 interpreted by Unal, 2007). According to these verses, speech was the first drop of ink that flowed from the pen of Divine Power to give life to non-existence (Gülen, 2010. p. 1). In the magical realm of words, a spirit discovers the mysterious relation between God and itself. Humankind is elevated to the rank of vicegerency and the addressee of God with the power of language in spite of the fact that they are created from a clay mixture of the dust and water of the earth (Qur'an, 2:31 interpreted by Unal, 2007).

Poetry is another venue through which the human spirit connects itself to the metaphysical dimension of this world and God. Poetry is the artistic expression of the universe's hidden beauty and symmetry, and the heart-ravishing, joyous view of existence by sensitive, inspired souls (Gülen, 2012. p. 68). In Islamic art, whether the case may be poetry or any other medium, the mind is directed toward the divine (Eaton, 1987. pp. 358-377). So, poetry is another field in which the artist is in contact with the transcendent. For contemporary scholar Fethullah Gülen, poetry is the voice, wording, and expression of the truth and essence of humankind, their love, excitement, trouble, grief, and joys, the expression of their sensing and evaluation of existence and the beyond, through the tongue of feelings and emotions in an open or hidden way (Gülen, 2012. p. 39).

From the Islamic approach, poets use their hearts as inkpots and spirit as ink, and write the meaning of the connection between the human soul and God. It can be argued that the aniconism of Islamic art is most likely due to the fact that the spiritual world is best reflected in the sensible world through geometry and rhythm (Critchlow, 1976). The inner dimensions of the spirit are manifested in the lines of poems. The soul explains its anger, lust, tranquility and other spiritual states with the language of poetry. Although poetry is shaped according to specific beliefs, cultures, and styles of thought it is also an expression of the transcendence of the human spirit. When thoughts growing in the heart put on the wings of imagination, they begin to force open the doors of infinity (Gülen, 2012. p. 69). According to the notion of Islamic art, if poetry has no connection with God, it is considered barren while with divine inspirations it attains infinite beauty.

Calligraphy—the only universally agreed upon Islamic artistic genre—is another field of Islamic art in which talented artists find the presence of God in their artistic writings. It is a commonly employed decoration in all Islamic art (Hill & Grabar, 1964. p. 80). Islamic calligraphers adorn books, the walls and domes of mosques, the sides of minbars etc. with their stylized and often repetitive writings. Islamic calligraphy combines verticality and horizontality in a proportionate mixture of static and flowing figures, and by means of rotation and repetition the calligrapher connects him/herself to God, because geometrical shapes invite the human soul to the pure reality behind this physical world. Calligraphy derives its prestige from the Qur'an and the Arabic script is used to symbolize the contemplation of divine beauty (Carl, 2003. p. 186).

### *1.3 Expression of the Divine*

In Islamic art, geometry and exact proportion are a direct expression of the divine and mathematics is the key to understand the structure of the cosmos (Al Faqih, 1970). For Muslim artists, repetitive patterns, exactness of proportion, and symmetry are representations of God's perfect beauty (Michon, 1985). The motifs in decoration are geometrical patterns where the interlaced line is continuous, having been given no beginning or end by the artist. The line symbolizes God's infinity, oneness and transcendence. The infinite pattern was introduced into Islamic art by the Fatimid dynasty in

Egypt (Grube, 1967. pp. 68-69).

The most original Islamic contribution to art, geometrical design, arabesque, and patterned surface art often consist in the complex design of an interlocking system of rotating polygons and stars within circles (Gocer, 1999). The circle is the basis of all geometrical shapes and with the sense of rhythm these shapes symbolize the divine presence. In the Muslim view of life, everything is seen symmetrically, linearly, and cyclically; therefore, the art of theatre or drama did not take place in Islamic art (Al Faruqi, 1970).

In Islamic architecture, the traditional hemispheric mosque domes and cylindrical minarets indicate the importance of the geometrical approach. Similarly, in decorative art the repeated geometrical, floral, and vegetal patterns form the famous arabesques which are closely associated with the Islamic culture. Every part of an arabesque is subordinated to the pattern which exhibits the universal character of the God; everything in the universe worships Him.

Islamic art does not make any distinction between fine arts and crafts and art is thus the talent for making things beautiful whether the work of art is a poem, a painting, a rug, a mihrab (a place which imam stays while leading the prayers), or a mosque (Madden, 1975). In Islamic art there is no distinction between fine arts and decorative arts for decoration is fundamental to all art (Coomaraswamy, 1956. p. 19).

Islamic art opposes the notion of the museum for the works of art because artworks are not separated from everyday affairs but rather are part of everyday life in Muslim communities (Burckhardt, 1954). For example, the Blue Mosque, one of the best works of Islamic art is a place where Muslims connect themselves to God five times in a day. The works of art are not made to be exhibited in museums but instead to be used in the daily lives of Muslims. Although Muslims might be interested to see historical art works, however they do not confuse knowledge about art, with what art is about (Coomaraswamy, 1956. p. 79).

## **2. Beauty and Its Expression with Art**

Beauty is a phenomenon which is hard to describe but easy to recognize. The human soul is excited when witnessing beauty because every beautiful object is a reflection of Divine Beauty. Anything that incites appreciation, love, and astonishment is a reflection of Divine Beauty (Gülen, 2010. p. 23). According to Plato, beauty and goodness are divine and all human endeavor (including artistic creation) must imitate the divine (Gocer, 1999). It can be argued that the Platonic influence on Islamic thought is not limited only to political philosophy but also the notion of art (Nasr, 1964. pp. 7-19).

In Islamic thought, everything is surrounded by infinite beauty. The source of beauty is faith and with this perspective Muslims conceive of everything beautiful. For them, the soul connects itself to God through the beauty in faith and attains worldly and heavenly happiness by being released from all worries. By breathing the air of beauty in their hearts, they strive to do righteous deeds in the hope that they will fulfil their spiritual desires. The universe, events, objects, and the human intellect are all manifestations of divine beauty according to the philosophy of Islamic art. All righteous acts and progress in the spiritual ranks of love is the desire of the spirit to connect with the divine.

According to Islam, beauty is a divine attribute of God and all created things in the universe are mirrors of God, reflecting His beauty as much as their potential allows. The sun spreads its mercy on each and every thing without distinction and moonlight touches hearts with its softness and beauty (Gülen, 2010, p. 24). The deeply complex relationship between cosmology and theology effected the notion of art in Islam.

From ancient times, sages in every culture and civilization expressed their vision of the sacred through art and Muslim artists did not hesitate to benefit from such richness (Nasr, 1964. p. 47). Therefore, Islamic art includes nonreligious elements with the participation of non-Muslims. It is necessary to make a distinction between religious art and Islamic art. Religious art is used for sacred purposes which contain religious themes such as religious books with miniature illustrations, finely calligraphed Qur'ans, ornate lamps, carpets in the mosque and the architecture of the mosque itself while Islamic art refers all the works of art that have been produced by anyone in Islamic culture. For example, paintings cannot be considered as sacred art for they have no function in religious practice.

### *2.1 Art is a Universal Language*

Art is a universal language and human beings express themselves through it. Muslim scholars benefitted from other cultures in music, literature and architecture (Peters, 1979. pp. 29-31). Beauty has both ethical and aesthetic connotations in Greek philosophy as it does in Islamic art. From the Islamic viewpoint, all the voices of the birds, sheep, forests, and mountains make up a harmonious song, feeding human souls with the most peaceful of rhythms (Gülen, 2010, p. 24). For Ibn 'Arabi, humankind is a replica of the universe in microcosmic form and the human spirit is therefore a key to solve the riddle of creation (Ibn Arabi, 1992. 2/121).

Beauty is a form of intelligence which interprets the real meaning of existence. The beauty in the human spirit reflects

everything as a mirror, revealing the beauty of the most beautiful (God). Sometimes, a good poem, a legend, a well-told story, or music that is meant to touch our human sensibilities, that wafts harmony into our soul, can draw us to spiritual beauty and make us hear the beauty of some other abode (Gülen, 2010. p. 25). For Plato beauty and goodness are manifest in the visible realm precisely because the world is fashioned by God, who created it beautifully like himself (Grube, 1980. pp. 150-178).

In Islamic thought, every beauty of this world fades away. In order that the human soul should not succumb to despair and to be able to enjoy infinite beauty, it is necessary for it to connect itself to eternal Beauty. Although the eyes can see physical beauties the soul can sense the abstract beauty that fills hearts with the love of God.

Islamic arts incorporate various techniques in order to describe the mortality of everything other than God. Solid walls are made to appear ephemeral by the use of plaster and tile decoration, while vaults and arches have their functions masked by floral and calligraphic ornament (Madden, 1975). Parallel to this understanding, Plato disapproves of certain forms of art, being worried that such art forms may be morally useless because they delight in feeding and drawing on the baser part of human beings, specifically the part that lacks in reason and is fond of crude emotions (Plato, 1997).

When beauty and love become intertwined, the soul, with its unique ability to see, feel, and hear, senses the Real Source in everything that it meets (Gülen, 2010. p. 26). Through His art, God presents His Beauty to humanity in order to make Himself known and be loved by them. The art of God in the universe is a perfect example for human beings to imitate. However, only those who are aware of their spirit can appreciate such beauty in the universe. If the spirit is connected to God, it will see His beauty reflected in the Moon, the sunset, the twinkling stars and the colorful forms of nature. For Plato, divine beauty is revealed especially in the shapes of the circle and triangle; therefore, the world, celestial stars, and human heads are all round (Gocer, 1999).

### *2.2 The Universe is an Exhibition of the Divine*

The universe is an exhibition of the divine art and all things in their enchanting harmony, fascinating order and dazzling beauty invite human souls to connect with God. The aesthetic dimension has a deep significance in Islamic art for God is the source of all kinds of beauty. The Prophet said, God is Beautiful, He loves beauty (Muslim, 1996. The Book of Miscellany 1). For the souls that connect themselves through art, the universe becomes a poem to be composed with the most immense sensations. Those who perceive the universe as an exhibition of divine art can never grow tired of it, nor can the world ever become exhausted as a perpetual source of wonder, remarks and stories (Gülen, 2010. p. 29).

God stated in the Qur'an; Say: If all the sea were ink to write my Lord's words (the acts, decrees, and manifestations of all His Names and Attributes), the sea would indeed be exhausted before my Lord's words would be exhausted, even if We were to bring the like of it in addition to it (Qur'an, 18:109. Interpreted by Unal, 2007).

The beauty in the exhibition of divine art from the macrocosm to the inner dimension of human nature awakens artistic spirits to beautiful melodies originating in the love of Truth. They use the language of art to appreciate divine beauty while also trying to imitate its qualities as far as their capacity permits. They try to sense the presence of God in their humble works and utilize all their artistic capacity to feel the immense blessings of the One who is most merciful. While making their own art, they recognize the deepness of beauty in the divine art. They use their limited capacity as a key to unlock the inexhaustible treasury of God. Through reflection on divine art, they try to improve their artistic capacity and take an active role in the maturation process of this world. According to the Andalusian Sufi mystic and philosopher Ibn 'Arābī (d. 1240), the divine art can be reflected best in mankind, for God designed the universe artistically with all His names and attributes, and these also worked on humankind and therefore God presented His divine art both in the macrocosm of the universe and the microcosm of humanity (Ibn Arabi, 1997. p. 472).

Every artist wants to present his/her art so the audiences can appreciate his/her talent. For example, a talented sculptor who gives meaning and life to hard marbles or bronze wants to show his talent through his art. Similarly, a person who is talented in painting wants to exhibit his/her art to show their artistic talent in this field. If artists do not express themselves through the language of art, their talents cannot be known and be appreciated. However, Plato argues that since art essentially fails to recreate the true condition of the real thing, it must be purified of all of its excess and vainglory (Peters, 1979. pp. 29-31).

Since the talents required to make art are given by God and artists represent God in their capacity, their works have received respect in Islamic thought. For example, when 'Umar, the second Caliph of Islam went to Jerusalem a priest invited him to perform the daily prayers in a historical church, but he refused the offer. This was because 'Umar thought that if he had prayed in the church, later generations of Muslims might attempt to change the church into mosque (Arnold, 2001. p. 94).

According to natural disposition, every talent possessed by an artist desires to manifest itself in the physical realm. Similarly, just as God wants to present His names, attributes and essential qualities through divine art, so His beauty can

be recognized. Through examining His divine art, the human spirit understands His beauty, mercy, knowledge, artistic skills and many more attributes. If God did not present His divine art in such tangible forms humankind would not know Him and consequently could not be connected to Him. In order to introduce Himself to His servants, God created the universe artistically and invited human beings to reflect on it.

God created human beings on the account of His divine love; therefore, the human spirit seeks the owner of this love and tries to connect itself to Him. Hence, love is an inner identity of mankind and human art is an exhibition of such love in tangible form. With the eye of love, they see everything as signs, messages, and lights of different frequencies of divine manifestations.

In order to connect with God, whirling Dervishes imitate the circular movements of divine objects in the universe. They assume white garments and dance according to rhythmic juxtapositions and circling of the participants. With their concentric circles, they aim to reproduce the movements of the stars, so they can join the universal harmony of the cosmos (Nasr, pp. 1987. 281-284). Raising one hand up and lowering the other, they symbolize the generosity of God and the altruism of humanity; whatever they receive from God they pour (share) upon others.

From an Islamic perspective, the best artwork in the universe is humankind, for God created human beings with His hand on the ground of love. Parallel to this, the human spirit that recognizes such love wants to express it through works of art. Love is the spirit of art for it is a heavenly light that transcends the earth and the sky, east and west, and is beyond time and space. Love is the most truthful witness of being spaceless within space, and timeless within time (Gülen, 2010. p. 35).

### 3. Pictures and Sculptures in Islamic Art

The notion of art in Islam is strongly related to its theological belief system, therefore there is an inclination to reject certain kinds of art. This attitude is also grounded in the understanding that God is the supreme creator and no one can share His divine attributes regarding creating. The central message of the Qur'an is that of the absolute creativity of God (Nasr, pp. 1987. 312-318). God alone created the universe and fashioned it in the most beautiful form. Accordingly, God is he who makes excellent everything that he creates (Qur'an 32:7. Interpreted by Unal, 2007). Again, God is The Originator of the heavens and the earth with nothing before Him to imitate (Qur'an 6:101. Interpreted by Unal, 2007). People are reminded to be mindful of God's supreme artistry: Glorify the name of your Lord, the Most High, who creates and fashions in due proportions, and who determines (a particular life, nature, and goal for each creature), and guides it toward the fulfilment of that goal (Qur'an 87:1-3. Interpreted by Unal, 2007).

Islamic art is less inclined to paintings and sculptures to avoid the risk of engendering in the artist the false pride of having created something real and, in the observer, the false admiration for human creativity (Ettinghausen, 1944). Islam's attitude towards paintings and sculpture is related to its theological perspective on paganism and idol-worshipping and this attitude has been discussed by both orientalists and Muslim scholars on many occasions.

When Prophet Muhammad came with the divine message, idolatry was very common among the Arab tribes and they worshipped idols that were dedicated to luck, bravery and good fortune. Al-Lāt, al-'Uzza, and al-Manāt were the names of the greatest idols in Makkah. The idols had female names and were images or representations of some angels or angelic powers in the eyes of the polytheists. The polytheists regarded the angels as females or daughters of God. Hubal was the biggest idol and the most respected one by the Quraysh which was located around the Ka'ba (Dogan, 2014. pp. 3-4). Other than these idols there were many others as each tribe had their own idol to worship.

This pagan approach to religious art is expressed in the Qur'an:

They worship, apart from God, things or beings that can neither harm nor benefit them, and they say: 'These are our intercessors with God'. Say: 'Would you inform God of something in the heavens or the earth that He does not know? All-Glorified is He, and absolutely exalted above all that they associate with Him (Qur'an, 10:18. Interpreted by Unal, 2007).

#### 3.1 *Imitating the Divine Art*

Although emulation of divine beauty is impossible, artists can imitate the divine art in order to give a message about God's beauty for those who can comprehend its meaning. In Islamic thought, art is more abstract for the reason that pictorial icons may in many cases be less able to lift the mind above the limited and the historical environment to the One who is transcendent, beyond time and space. Therefore, Muslims artists try to connect themselves to God through the abstract motifs in their works, hoping to symbolize God with them. For example, the infinite pattern in an arabesque should be interpreted as symbolizing God's infinity and transcendence in an absolute sense (Al-Faruqi, 1970. p. 90).

In order to avoid anthropomorphic approaches, Muslim artists prefer abstract patterns, because God's nature is beyond human beings' power to know or portray. Because of the danger of idolatry, Muslims avoided paintings and sculpture in their arts in the early formation of Islam. However, the Umayyad and early 'Abbasid caliphs, the Fatimid, the Saljuqs, the

Atabeg of Iraq and Syria, and the Safavid of Persia permitted paintings and statues (Goetz, 1963).

In the orientalist mind, richness and progress in a civilization is represented by paintings and sculptures, therefore they have misconceptions regarding early classical Islamic art (Grabar, 1987. pp. 43-71). For them, the East is primitive for they have fewer sculptures or paintings compared with civilized societies. Although, Muslim artists produced many unique works such as Kusayr Amra (711-715 CE) and Kasr Hayru'l Gharbu (728 CE) in the early dates of Islam the Western scholars are inclined to see them as exceptional (Creswell, 2002. pp. 101-109).

According to Thomas Arnold, paintings and beautifully decorated sculptures were not seen in pre-Islamic times in the Arabian Peninsula. He argues that although Arabs worshipped idols they did not use decorative motifs to make them more artistic (Arnold, 1965. p. 1). However, contradicting this argument is the fact that when the Prophet conquered Makkah he found pictures of Abraham, Marry and Jesus in the Ka'ba, the most holy place of Islam (Bukhari, 1997. Prophets 8).

### 3.2 Negative Position against Sculpture and Paintings

In its early formation, Islam naturally took a position against sculpture and paintings for its followers had just rejected polytheistic thought and so it would have been easy for them to fall once again into idol worshipping. For example, the following prophetic statements should be understood in this way:

Angels (of mercy) do not enter a house that has a picture in it (Bukhari, 1997. Beginning of Creation 17).

The people who will receive the severest punishment from God will be the picture makers (Bukhari, 1997. Dress 89).

Aisha had a thick curtain (having pictures on it) and she screened the side of her house with it. The Prophet said to her, 'remove it from my sight, for its pictures are still coming to my mind in my prayers (Bukhari, 1997. Dress 93).

The makers of pictures (of living beings) will be punished on the Day of Resurrection, and it will be said to them, 'give life to what you have created (Bukhari, 1997. Marriage 76).

In all these prophetic traditions and sayings, we can see that the Prophet was worried that his followers might revert to idol worshipping, and therefore he used strong language in censuring anything that might remind them of the former pagan practices. It can be said that Islam never opposes any kind of art as long as people do not worship that artwork in itself.

The Islamic concern regarding paintings and statues is related and limited to the possible practice of worshipping them besides God. It is not wise to say that all kind of paintings and statues are prohibited in Islam. For example, the famous Ottoman Sultan Fatih Sultan Mehmed (1432-1481 CE) invited famous painters to his Palace and asked them to draw his picture. If painting was absolutely prohibited in Islam he would never have done this, nor would the clergy have allowed it. Similarly, Ottoman vizier Ibrahim Pasha (1666-1730 CE) placed three sculptures in front of his palace (Banarli, 1987). However, if a society is primitive in thought and its people are therefore liable to worship statues, then the art of sculpture is not permitted.

The story of Prophet Moses in the Qur'an in which he smashed the golden calf can be understood in this way:

The people of Moses, after he (had left them to meet with his Lord), adopted for worship a calf (in effigy, made) of their ornaments, which gave out a lowing sound. Did they not see that it neither spoke to them nor guided them to a way? They adopted it for worship and so became wrongdoers... when Moses returned to his people, full of wrath and sorrow, he said: 'Evil is the course you have followed after me! Have you forsaken your Lord's commandment so hastily to hasten your destruction?' (Qur'an, 7:148-150. Interpreted by Unal, 2007)

The Hebrew Bible clearly rejects idols and idol worshipping as does the Qur'an. Stories of prophets reveal that people are inclined to idol worshipping and there are abundant examples in this regard. This is the main reason why Islam kept images and statues outside of its sacred places. This is also a reason why Islamic art is the individuation of its metaphysical basis (Diez, 1938).

When examining the relevant verses of the Qur'an and prophetic traditions which strongly oppose idols and paganism, many scholars are inclined to understand Islam as having banned portraits of living creatures and statues. They argue that statues and images of living beings encourage people to the practice of idolatry. It is therefore equated with associating partners with God in His creativity. Opposed to this scholarly cliché, visual art—including paintings and statues— in Islamic history has a long and vigorous tradition. Although the Qur'an condemns idol worshippers it does not prohibit the visual arts.

Islamic art is a witness to the fact that Muslims often used images in a secular context. Such art includes paintings in royal palaces and book illustrations containing prophetic stories. However, places of worship are free from imitative imagery for their potential to distract souls from concentrating on worship and connecting with God. This is the main difference between Islamic, and Christian or more generally Western art. Nevertheless, there are some exceptions in which Muslims used images in the design of mosques. For example, the Umayyad mosque in Damascus, built in the eighth century, has

mosaic depictions of rivers and trees though it does not contain human or animal figures (Carl, 2003, p. 185).

The various aspects of Islamic art indicate the sense of beauty in Muslim societies which developed throughout the centuries. However, Wahhabi ideology—an extreme theological movement in Islam which emerged from Arabia in the nineteenth century—threatens this notion of art and sense of beauty. This movement wishes to prohibit all kinds of images, even going as far as to prohibit family albums. Although the advocates of this approach try to cover their extremism with an Islamic guise the majority of Muslims oppose their view. Such an extreme view yielded its bitter fruit in Afghanistan. The Taliban destroyed the colossal Buddhas of Bamiyan that had stood in Afghanistan since the time of Alexander (Carl, 2003). The Wahhabi ideology destroyed Ottoman-era tombs in Arabia and Ottoman mosques in Bosnia. They desire to ban all forms of beautiful manifestations in Islamic art—including geometric ornament, vegetal arabesque and calligraphy. With this attitude, they aim to disconnect the human soul which is connected to God through the language of art.

#### 4. Conclusion

Art is a universal language of love whether it is Islamic, Christian or Jewish. Art is an important source of power which can influence humanity positively. Art can connect people to each other regardless of their culture, nation and religious background as well as connecting the human spirit to God. In this regard, I humbly suggest that art should be used as part of interfaith dialogue activities as a major theme, so that participants can recognize their many commonalities among the world's different cultures and religions. In this way, humanity can experience real peace and love through the language of art.

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# The Frontiers and Place-Names of Kurdistan in the Ilkhanid Period

## Based on *Nuzhat al-Qulūb*

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### Abstract:

Based on Mustawfī's *Nuzhat al-Qulūb*, this study examines how Kurdistan became a distinct province and locates the boundaries and the cities during the Ilkhanids. Kurdistan was first separated from the Iraq-i 'Adjam during the period. Given the location of Kurdistan, and given the role of the province in historical events, historical understanding can increase if borders and cities of Kurdistan are definitely located, which is hard work since there is little information thereof, and since the names of such places are erroneously recorded in classical texts.

This study shows that Kurdistan became a distinct province after the Seljuqids due to its geography and after the domination of Īvih Turkmen. The province extended from Kangawar to Hulwan, and from the Karkhih River to the Little Zab River. This study determines the locations of towns listed by Mustawfī, as follows: Bahār, the provincial capital, was within the current Ilam province; Khuftiyān, Nīmrāh, Darband-i Tādj Khātūn, and Darband-i Zangī were within Sulaymāniyyih province in Iraq; Alānī, Drbīl (Dartang), Kirind, Khūshān, Māhidasht, Kirmanshah, Wisṭām, Sultanabad-i Chamchamal, Harsin, Kangawar, and Dinawar were within current Kirmanshahan; Alīshṭar was, and still is, within Luristan. Moreover, this study finds that the current Kurdistan in Iran had no urban center.

**Keywords:** Historical Geography, Ilkhanid, Kurdistan, Īvih Turkmen, Kirmanshahan, Bahār

### 1. Introduction

Kurdistan, as a province was located between Iraq and Central Iran, had a key role in historical events of Iran. Therefore, although, it is necessary that its geographical situation will be studied in order to understand its historical events, but there were no information this aim in the early Islamic Period. The early Muslim geographers regarded the whole Islamic territory as a single integrated land of al-Andalus (extending to Transoxiana), and Iran was considered to be a part of this vast territory. Therefore, these geographers have not mentioned Iranian provinces in detail. With the decline of Seljuqids, the rise of such ruling dynasties as the Atabegs of Azerbaijan, Fars, Lur, and the like, changed the administrative divisions of Iran, and the few existing geographers only repeated the reports of early geographers, with little, if any, considerable information on the contemporary geography.

In the 14<sup>th</sup> century (c.1339), Hamdullah Mustawfī wrote a geographical text which was entitled *Nuzhat al-Qulūb*. He explains the geography of Iran in details, and explains the geography of Iran in details the contemporary geography (not only repeats just the words of previous geographers, but also compares and contrasts various texts concerning the contemporary geography). Also, he gives some important information about the borders and the cities of provinces, since the writer as the state accountant had access to authentic records and documents. Therefore, he introduces some regions and provinces (like the Major Lur, the Minor Lur, and Kurdistan) in Iran as distinct provinces. These regions were known as Djibāl (=Iraq-i 'Adjam) in the past. Since the bureaucratic separation of the province initiated shortly before the Ilkhanid Period, one can consider the *Nuzhat al-Qulūb* as the only reliable and authentic text on the geography of Kurdistan.<sup>1</sup> Also, in the following centuries, the borders of the province had been changed. Therefore, nowadays, the name of Kurdistan refers to parts of Iran and Iraq, and some of Kurd people live in the regions that had located outside of Kurdistan borders in the Ilkhanid Period. Consequently, there are different claims from different groups in Iraq concerning the boundaries of Kurdistan. Therefore, it is important and necessary to conduct studies on the boundaries of this province since its separation from the Djibāl to clarify many facts and examine the claims on Kurdistan. During the Ilkhanid Period, the province has some places which some of them still exist and others have been destroyed, which the locations of some of them are unknown, and therefore, one can to locate them just through some researches.

### 1.1 Literature Review

Researchers of the medieval history have, particularly on the history of the Kurds, paid scant attention to the identification of the borders and places of toponyms in Kurdistan province in the Ilkhanid period. Based on the archaeological evidence and documents, Al-Taweel has examined the position of Shahrazur.<sup>ii</sup> Although he has described the position of Shahrazur in the Sassanid period very well, he has written very little about the city in the Ilkhanid period. Boris James has investigated the effect of rivalry between the Mamluks and Ilkhans on the ethnic identity and socio-economic situation of Kurds dwelling between their borders (and not just the province of Kurdistan).<sup>iii</sup> Asatrian has focused on the ethnic history, identity, religion, language, and literature of the Kurds.<sup>iv</sup> In one article, Minorsky has briefly investigated the political and economical situation of Kurdistan in the Ilkhanid period,<sup>v</sup> and in the other has managed to only determine the Mongolian toponyms surrounding Zrrinih-Rud and southern parts of Urmiyyih Lake.<sup>vi</sup> Therefore, Guy Le Strange is the most prominent researcher who has investigated the geography of Kurdistan. He translated the geographical part of the *Nuzhat al-Qulub*, and then, he compiled two remarkable books in this field. In these books, Guy Le Strange, by a close analysis of various geographical texts, tries to outline the borders, and to locate the cities, the towns, and the castles of Kurdistan.<sup>vii</sup> Since he just relied upon Mustawfi, and given that the names of towns had been erroneously recorded in the *Nuzhat al-Qulub*, there are some mistakes in Guy Le Strange's books. For example, he has taken the Bahār Castle, the capital of Kurdistan, for the town of Bahār in Hamadan.<sup>viii</sup> Unfortunately, this mistake has been repeated by other researchers like V. Minorsky, M. Qazvini, M. Rowshan, and 'A. Shamim.<sup>ix</sup> These writers have said that the Bahār of Hamadan was both a part of Kurdistan and the capital of Sulaymanshah of Īvih.<sup>x</sup>

The present study tries to discuss the developments of Kurdistan, and to answer the following questions: What places are covered by the word Kurdistan during the Ilkhanid Period? Where are the locations of towns and castles in this province?

## 2. Separation of the Kurdish Province from the Iraq-i 'Ajam

The Iraq-i 'Ajam was the name of the western and central Iran in the Pre-Mongol Period. This region stretched to Khwar-i Ray in the east, to the Tigris River in the west, to Khuzistan and Fars in the south, and to the Sefīdrūd River in the north. With the separation of Kurdistan, the Iraq-i 'Ajam was limited to the lands between the Sefīdrūd River and Yazd, and its Eastern border was limited to the Qūmis Desert, and its Western borders to Asadabad and Nihavand.<sup>xi</sup> According to the archaeological researches the Kurds have been living in western parts of Iran and northern regions of Iraq since the late second millennium BC; however, it was not until the advent of the past millennium that were these areas named by the term *Kurdistan* in the Armenian sources in their descriptions about the 11<sup>th</sup> and 12<sup>th</sup> centuries events.<sup>xii</sup> Later Mustawfi, and, following him, other writers have used Kurdistan as a distinct administrative- geographical term.

Although we do not exactly know when Kurdistan was divided off from the Iraq-i 'Ajam, Mustawfi is the first person who mentioned Kurdistan and the Iraq-i 'Ajam as two distinct provinces. Also, he associated Kurdistan with Sulaymanshah of Īvih. Therefore, Guy Le Strange, who erroneously identified Sulaymanshah of Īvih with Sulaymān Ibn Muḥammad the Seljuqid (1160-61), has determined that Kurdistan separated about the middle of the 12<sup>th</sup> century, as a result of misunderstanding of the Mustawfi's account. Consequently, he believes that Sultan Sandjar (1096-1157) has separated the Kurdistan, and appointed his nephew, Sulayman as governor of it.<sup>xiii</sup> This mistake has been repeated in the following researchs.<sup>xiv</sup> Based on Mustawfi's account, and given that Sulaymanshah of Īvih lived in the first half of the 13<sup>th</sup> century, one can conclude that Kurdistan was separated from the Iraq-i 'Ajam in the early 13<sup>th</sup> century, when the Seljuqids had been extincted. This might be explained by two factors:

- a. The geographical situation. The region that was later reputed as Kurdistan was a mountainous region, which rulers were not able to exercise their domination over the region since it was surrounded by mountains, and this allowed rebels to have a safe haven and therefore, it was a matter of concern for rulers.<sup>xv</sup> Thus, the central government of Iran allowed the semi-autonomous governments to exercise their full powers against the rebels. Among these local semi-autonomous governments before the Mongol invasion, one can mention the following: 'Ishanid, Barzikanid, and 'Annazid. The existence of such semi-autonomous governments for more than three centuries (i.e. 9<sup>th</sup> to 12<sup>th</sup>) paved the way for the separation of Kurdistan from the Iraq-i 'Ajam.
- b. The power gained by Turkmen chieftains. In the Seljuqid Period, a number of Turkmen entered Iran, and as it was their wont, they settled in mountainous areas, and they acted as the main supporters of Seljuqid government. The decline of Seljuqids paved the way for the Turkmen lords to come to power. Therefore, in the late of the 12<sup>th</sup> century, in spite of the apparent domination of the Seljuqs of Iraq on

the Iraq-i 'Adjam, several Turkmen tribes took powers in different parts of country.<sup>xvi</sup> Moreover, as a result of the political weakness of the Seljuqids, the Abbasid caliphs began to revive their material and spiritual strength by expelling the *Shihna* "military commander", appointed by Seljuqid Sultan in Baghdad after 1155.<sup>xvii</sup> This led to a confrontation between the Caliphate and the Sultanate, which continued after the Khwarizmshah's conquest of Hamadan in 1194.<sup>xviii</sup> Given the tense relations between Hamadan and Baghdad, the Īvih Turkmen tribes served as the borderlines for the other side, and no side was powerful enough to have the upper hand in the region, and therefore, there emerged some military moves on the parts of Īvih Turkmen in the forms of trespassing on urban areas, termed as "*Fitna wa fisād*" by some historians.<sup>xix</sup> Therefore, tensions between the Caliphate and the Sultanate paved the way for Sulaymanshah of Īvih to gain power in the Kurdish areas of Iraq-i 'Adjam, and in this way, the region became independent.

### 3. The boundaries of Kurdistan in the Ilkhanid Period

According to Mustawfī, Kurdistan was bound to the Iraq-i 'Arab in the west, to Azerbaijan and Diyarbakr in the north, to the Iraq-i 'Adjam in the east, and to Khuzistan in the south. However, he does not say where the borders of these provinces meet. According to him, Nihavand and Asadabad were the westernmost towns in the Iraq-i 'Adjam. He says that Kangawar marks the starting point of Kurdistan on the Sultaniyyih route to Baghdad, and elsewhere, he implies that Kangawar is near Nihavand. He regards the Minor Lur, consisting of Burūdjjird, Khorramabad, Seymarih, and Kūrsht (کورشت, or Kūhdasht?) as a component of the Iraq-i 'Adjam.<sup>xx</sup> This implies that the Seymarih River also was the south-eastern border of Kurdistan. Given that Mustawfī believes that Alīshar was a component of Kurdistan, and given the short distance between Khorramabad and Alīshar, it is difficult to outline the borders between Kurdistan and the Minor Lur.

Moreover, Mustawfī mentions that Kurdistan was a neighbour of Khuzistan, and he mentions Shūsh, Dizfūl, and Andīmishk as the cities of Khuzistan. Elsewhere, he says that the Bayāt River originates from Kurdistan.<sup>xxi</sup> Given that this river is now known as the Tīb (and it originates from the Kabīrkūh Mountain), it can be easily inferred that he regarded the Kabīrkūh Mountain as part of Kurdistan.<sup>xxii</sup> This shows that the mountainous region in W. Seymarih River (known as Ilam today) was a part of Kurdistan at that time. Therefore, one can conclude that the boundaries between Kurdistan and Khuzistan were the same boundaries of the present Ilam and Khuzistan.

As for the Western border of Kurdistan, Mustawfī says that Hulwan, Khanaqīn, Zangiabad and Qaṣr-i Shīrīn are parts of the Iraq-i 'Arab (and not parts of Kurdistan). In addition, he regards the narrow margin on the west slopes of the Zagros Mountains, including Bandanīdjīn (=Mandalīdjīn, Mandalīj, Mandalī), Bādrāyā, and Bāksāyā as parts of Iraq-i 'Arab.<sup>xxiii</sup> Therefore, the south western boundaries of Kurdistan could be the same as the Iran-Iraq frontier.

As for the northern border of Kurdistan, Mustawfī says that the Taghatū and Djaghatū Rivers (now Sīmīnih-rūd and Zarrīnih-rūd) originated from Kurdistan. In addition, he maintains that Kurdistan was a neighbour of Azerbaijan. According to him, Ushnawīyyih and Nīlān near the Taghatū and Djaghatū Rivers were the southernmost cities of the province.<sup>xxiv</sup> Therefore, the northern coast lands of the Little Zab River, consisting of the present Sardasht, Piranshahr, and Naqadīh were dependent on Ushnawīyyih. Consisting of impassable peaks such as Qandīl, this mountainous region was a single entity known as Salq in the early Islamic Period.<sup>xxv</sup> Therefore, it seems that the Kurdistan-Azerbaijan border at that time was the same as the present border between Kurdistan and two Azerbaijan provinces (i.e. West and East Azerbaijan).

In the northwest, Kurdistan was a neighbour of Diyarbakr. Seemingly, Maṣīl was the capital of Diyarbakr, and Arbīl was a part of it. Therefore, given that Daqūqā belonged to the Iraq-i 'Arab, and that Shahrazur belonged to Kurdistan, it is clear that the Little Zab River was served as the borderline between Kurdistan and Diyarbakr.<sup>xxvi</sup> Therefore, the lands of Diyālīh River basin (today, Sulaymaniyyih province in Iraq) belonged to Kurdistan. In this way, clearly, the Kurdistan of Ilkhanid Period consisted of the present provinces of Kirmanshahan, Ilam, Sulaymaniyyih, and parts of Luristan, in addition to the present-day Kurdistan.

### 4. The Mongol Conquest of Kurdistan

As noted above, Kurdistan has been separated by efforts of Sulaymanshah of Īvih in 1213 onwards. Seemingly, Sulaymanshah was subordinated to Jalal al-Din Khwarizmshah (1220-31) so long as he lived. Then, he was compliant toward caliphs.<sup>xxvii</sup> Although we do not know enough details about internal conditions of his territory and his relationship with sultans and caliphs, Kurdistan had a distinct identity under his government, and he paid a determined amount of

taxes (nearly 2 million dinars) to his lord (sultan or caliph).<sup>xxviii</sup> The Iraq-i 'Adjam was conquered by Mongols in 1220, but Kurdistan under Sulaymanshah resisted against Mongols, as the first formal Mongol army's advance into Kurdistan territory occurred in 1257, when Hulagu was marching to Baghdad. According to historians, Hulagu, who had to pass through Kurdistan to reach Baghdad, divided his army to 3 parts: 1. one part launched from Azerbaijan to Baghdad through Arbīl, Shahrazur, and Daqūqā. 2. Another part launched through Luristan, Girīt, and Bayāt to Baghdad. 3. The last part led by Hulagu set on Kirmanshah to Baghdad.<sup>xxix</sup>

Considerations on courses of these expeditions show that all of 3 parts of Mongol army passed through Kurdistan. We do not know enough how carried out these expeditions and how the local residents defended against them, but one can conclude that Mongols encountered many resistances in some parts of the province, since all of these 3 armies were not able to advanced at the same speed. And consequently, all of them did not reach together to Baghdad.<sup>xxx</sup> Also, it was prevalent among the Mongols that invited the people to subdue of them, and they massacred those who did not surrender to them.<sup>xxxi</sup> Therefore, it is clear that they faced some resistance in these parts, since the people of some parts of Kurdistan were massacred by Mongols.<sup>xxxii</sup> Anyhow, the Mongol army crushed under foot all across Kurdistan and dominated on it, but there are no records which describe in detail how the Mongols dominated on the province, and what happened to Kurdistan during the Period.

Mustawfī has given tax statistics of the province that show its taxation had decreased to 89.5 percent in the Ilkhanid Period in comparison with the time of Sulaymanshah.<sup>xxxiii</sup> Also, for their tense relations with Mamluks of Egypt, Ilkhans had to plyed between their capital in Azerbaijan and Zanjan to Baghdad. Since Kurdistan was located on the course of Ilkhans and their armies, it is clear that this province had been very important, even if there is no record of the events in relevant to the province.

## 5. Locations of Cities of Kurdistan

As noted above, Kurdistan consisted of all the area from the Karkhih River up to the Little Zab River. Therefore, the communication routes between central Iran and Iraq had to pass through the province. There were 3 highways in the province: a highway between Ctesiphon (later, Baghdad) and Azerbaijan, which passed through Shahrazur; a highway between Khorassan and Baghdad which passed through Kirmanshah, and another highway which passed from Shāpūrkh, āst to Māsbadhān and Bandanjīn.

This system of roads found a significant place in history since many towns were created on the side of these highways. Some of towns built in the early Islamic Period perished after the 10<sup>th</sup> century, and they were replaced by new towns in the Seljuqid Period on the basis of Mustawfī's list.<sup>xxxiv</sup> Since the Kurdistan of Ilkhanid Period is within 5 current Iranian and Iraqi provinces, one can divide the Kurdish possessions into four zones: The eastern part in the current Kurdistan of Iraq (i.e. Sulaymaniyyih province), the current Iranian provinces of Kirmanshahan, Ilam, and Kurdistan.

### 5.1 The Eastern Part in the Current Kurdistan of Iraq

The eastern part of Kurdistan of Iraq, known as Sulaymaniyyih today, consisted of the area between the valley of the Sīrwān and the Little Zab Rivers in the west slopes of Shāh-kūh (=Shāhū) and Māhrū Mountains. This region is known as Shahrazur in classical texts. Concerning the locations of cities in this area, there is little information in classical sources, except for Nīm az rāh (=Nīmrah, literally, half way) mentioned as the main town in the area. The name derives from the fact that it was halfway between Ctesiphon and Ādhargushnasb Fire Temple in Azerbaijan, near Zalam and Shimran Mountains.<sup>xxxv</sup> The Mongol conquest of Baghdad in 1257 resulted in the depopulation of Shahrazur (i.e. Nīmrah), and its inhabitants emigrated to Syria and Egypt.<sup>xxxvi</sup> Therefore, Post-Ilkhanid sources are silent about this place, and it is difficult today to locate the town.

Given that the Baghdad-Shahrazur way passed through Qaṣr-i Shīrīn, and given the distance between Baghdad and Nīmrah, and that between Nīmrah and Ādhargushnasb, Nīmrah can be located somewhere on the south-eastern plain of Shahrazur near Halabja. Guy Le Strange identifies Nīmrah with the ruins at Yasin Tappa,<sup>xxxvii</sup> but the Safavid sources maintain that the Gol 'anbar Castle was near Zalam and Shimran Mountains, and that it was the main town of Shahrazur.<sup>xxxviii</sup> The castle was probably the remains of Nīmrah, which was also called Khulmar by local residents,<sup>xxxix</sup> perhaps the same as the present Khurmāl on the west slopes of Shāhū Mountain.<sup>xl</sup> Therefore, in any case, Nīmrah was located near Halabja.

Abū Dulaf Khazradjī (ca. mid 10<sup>th</sup> century) has recorded other towns in this region, for example, Bbīr (ببیر), and Duzdān (دزدان).<sup>xli</sup> Moreover, geographers have reported prosperity, fertility, abundance of products, and high standards of living in regions where Kurds had the upper hands, although there were no government agencies there in the 10<sup>th</sup> century.<sup>xlii</sup> Mustawfī has not listed the names of Duzdān and Bbīr, but recent local sources have mentioned the name of a place called Dudān (دودان) [Rāwdān (راودان), Dāwrān (داوران), Rāwrān (راوران) are variant forms] on the westernmost slopes of Shāhū Mountain, which clearly seems to be the same as Duzdān (دزدان).<sup>xliii</sup> It follows that Duzdān was located on the

western slopes of Shāhū Mountain near the Sīrwān River.

However, Mustawfī has named several other places in this area. This shows that this area was more prosperous during the Seljuqid Period than before. Seemingly, this was related to this fact that because of the nature of their government, the Seljuqid Sultans and Ilkhans frequently had to move between Azerbaijan and Baghdad through this region. He mentions that Khuftiyān (خفتیان) is “A strong castle, standing on the bank of the Zab River, with some villages round and about it”. The editor of the book mentions six variant spellings of the castle (خفتیان، خفتیان، خفتیان، خفتیان، خفتیان، خفتیان), indicating the confusion in recording this name in historical texts.<sup>xliii</sup> Also, Ibn al-Athir refers to the castle as Khuftidhakān (خفتیدکان) near Arbīl, Shahrazur, and Darband-i Qarābulī.<sup>xliii</sup> Bidlisi (ca.1596), in turn, mentions the name of a place called Djghndgān (جغندگان) near Shahrazur.<sup>xliiii</sup> Seemingly, these two places are the same. Moreover, it can be inferred that without the consideration of dots in the two names, the spelling is the same in Arabic (خفتیدکان = خفتیدگان).

Some geographers believed that Khuftidhakān was the same as Khuftiyān, and that it consisted of two big castles near the Zab River. One of the castles was on the outskirts of Arbīl towards Marāghih, known as Khuftiyān al-Zarzārī, on a mountain overlooking a large river at the bottom. The other castle was in the south of Zab River on Arbīl-Shahrazur route, known as Khuftiyān-i Surkhāb, which was stronger and bigger than Khuftiyān al-Zarzārī.<sup>xliiii</sup> Also, ‘Umarī (d.1348) confirmed the existence of two castles by the names of Khuftiyān (Khuftiyān-i Abu ‘Ali, and Khuftiyān al-Zarzārī).<sup>xliiii</sup>

Clearly, therefore, there were two castles by the names of Khuftiyān, but given that the Little Zab River was the border between Kurdistan and Diyarbakr, only the Greater Khuftiyān was considered to be a part of Kurdistan in the Ilkhanid Period. This castle existed even in the 10<sup>th</sup> century, and it was known as Khuftiyān-i Surkhāb since it was under the command of Abu-l-Fawaris Surkhāb, one of the Banū ‘Annazid governors.<sup>xliiii</sup> Given that urban life was degenerated in this region during the Ilkhanid Period, this castle gained the highest importance in order to control the mountainous residents; but it had lost its importance due to removing the capital from Azerbaijan to Khorassan in the Timurid Period. Considering what was said above, and given that Khuftiyān was located on the banks of the Zab River, it is possible that the town called Qal‘a Chūlān today within the city of Sharbazher is the same as Khuftiyān, considering the fact that Qal‘a Chūlān is located today near the Qal‘a Chūlān River which is one of the tributaries of the Little Zab, and having in mind that the Kurdish name means "the Ruined Castle".

In addition, Mustawfī mentions two towns called Darband-i Tādj Khātūn and Darband-i Zangī. “Darband-i Tadj Khātūn was formerly a medium-sized town, but now a ruin. It was a most pleasant and excellent place”. He does not give any indication of its location. Also, “Darband-i Tāshī Khātūn”, however, is frequently referred to by ‘Alī of Yazd (d.1454), which was probably the same as Darband-i Tādj Khātūn.<sup>1</sup> Yazdi’s reports show that “Darband-i Tāshī Khātūn” was a town in Kurdistan, and that it was not far from Baghdad, and that the direct way from Baghdad to Azerbaijan passed through it. Guy LeStrange says that these two Darbands had stood on the western frontiers of Kurdistan (between Shahrazur and Hulwan) among the hills overlooking the plains of Mesopotamia.<sup>li</sup>

Moreover, the name of “Darband” indicates that these towns were on the western slopes of Zagrus Mountains [Darband means a valley with a river flowing between two mountains].<sup>liii</sup> This is confirmed by the great mountain chains of current Kurdistan province, from which rivers flow into the Mesopotamia. These rivers were the only points of penetration into the current Kurdistan and Azerbaijan, and because these rivers were narrow, they were referred to as Darband (in Arabic Bāb, or gate). Geographical surveys indicate that three great rivers flowed from the surrounding mountains to the Mesopotamia: 1. The Great Zab flowing from Eastern Anatolia to Diyarbakr. 2. The Little Zab flowing from the mountains of Northern current Kurdistan to the Mesopotamia after passing through the mountains.<sup>liii</sup> 3. The Sīrwān River flowing from the pass surrounding Asadabad to the Shahrazur, after passing through the Bamū and Shāhū Mountains.<sup>liii</sup>

Throughout the region, therefore, there were only three Darbands. One Darband was in the territory of Diyarbakr and had nothing to do with the Kurdistan of the Ilkhanid Period. There remains only two Darbands in the present discussion. Since Shahrazur Town has been referred to as Nīmrah, it is clear that there must have been a direct way between Ctesiphon (later, Baghdad) and Azerbaijan, which passed through Shahrazur,<sup>liii</sup> and since it was not possible to enter into the high mountains of current Kurdistan and Azerbaijan except through the above-mentioned Darbands, this way must have passed through one of the above Darbands. Given that the Little Zab River is definitely the path from Shahrazur to Azerbaijan, the Zab Valley must be considered the passage way. Its ancient name is not known, but it was called Bāb al-Salq in the early Islamic Period. Elsewhere, Mustawfī calls it Darband-i khalīfīh, which seems to derive from the fact that Ma‘mūn appropriated the areas around Sanandaj into the caliph court, and the fact that it was necessary to visit it only through the Bāb al-Salq.<sup>liii</sup>

Because of the nature of their government, the Seljuqid Sultans had to move between Tabriz and Baghdad, and they had to pass from the Darband known as the Darband-i Qarābulī.<sup>liii</sup> Therefore, it is clear that the Bāb al-Salq was renamed to Darband-i Qarābulī in the Seljuqid Period. It appears that the region experienced prosperity and development due to much traffic on this path in the Seljuqid Period, and it was necessary for the government to deploy security forces in order to

safeguard the passage way. Many travellers visited this Darband, and it was necessary to give services to them, and in this way, Darband turned into a full-fledged town with different walks of life from merchants to government officers.<sup>lviii</sup> Although this region has a flourishing trade in the late Ilkhanid Period,<sup>lix</sup> Mustawfī uses the past tense, which demonstrates that when he was writing his book, Darband-i Tādj Khātūn had lost its populous. Therefore, one can conclude that the town (i.e. Darband-i Qarābulī) was renamed to Darband-i Tādj Khātūn after the Seljuqid Period, and that its development decreased during the Ilkhanid period. This can be explained by the fact that the people dwelling on the Mountains settled in the town during the winter, as Yazdī has reported.<sup>lx</sup> Another factor which contributed to the decline of the town was that the Mongol invasion dealt a severe blow to the town.<sup>lxi</sup> Given that the Timurid kings relocated the capital from Tabriz to Samarqand (then, Herat), traffic in this town decreased severely, and consequently, this town lost its importance and disappeared in the 15<sup>th</sup> century. Based on what was said above, Darband-i Tādj Khātūn must have been located within Sharbazher, on the banks of the Qal‘a Chūlān River which is one of the tributaries of the Little Zab River.

The other city was Darband-i Zangī: “A small town, with a good and temperate climate, having abundant running waters, and numerous pasture-lands. The people, however, are robbers and highway men— an abominable folk”. He does not give any indication of its location. Considering what was said above, one can locate Darband-i Zangī somewhere in the Valley of Sīrwān River. During the following centuries, this valley was known as Darband-i Khān.<sup>lxii</sup> Some parts of the Valley of Sīrwān River are still known as Darband-i Zangī outside the Iranian border (as shown in the talks between the governor of Halabja and his counterpart in Javanrūd.<sup>lxiii</sup> Given the geographical location and Mustawfī’s description of the residents, it is likely that it is the same as Duzdān recorded by Abū Dulaf Khazradjī.

### 5.2 The Iranian Province of Kirmanshahan

The second and the most important urban center of Kurdistan was the region of the current Kirmanshahan, which had abundant water, fertile lands, and rich pastures, hence a dense population. It was regarded as the geographical heart of Kurdistan in the Ilkhanid Period since it acted as the communicating bridge for the other four parts of Kurdistan and since it was located on the communicating route between Khorassan and Baghdad. Therefore, it was possible for this region of Kurdistan to have flourishing cities, towns, and castles near each other, the most important of which had been formed on the sides of the communicating Baghdad-Khorassan highway. The present study focuses on these places in a geographical order from west to east.

Alānī was the first, as Mustawfī says: “Alānī is a moderate-sized market town. It has a fine climate, and running waters. Its crops are cereals, also there are excellent pasture-lands, and numerous good hunting-grounds”. Concerning the location of Alānī, Guy Le Strange says that no other geographers have mentioned it except for Mustawfī.<sup>lxiv</sup> Evidently, he is wrong because Bidlisi (ca.1596), in addition to Mustawfī, has mentioned Alānī.<sup>lxv</sup> What is now known as the city of Javanrūd receives its water from the fountainhead called Alānī’s Sarāb, indicating that Alānī was located somewhere near the present Javan rūd.<sup>lxvi</sup>

Dzbīl (دزبیل) is another place on Mustawfī’s list. “It is a medium-sized town, with an excellent climate and water”. He does not give any indication of its location. One can assume that the name is a variant of Dizfūl (or Dizpīl in the local vernacular). Given that Mustawfī elsewhere locates Dizfūl in the northern Khuzistan, he can not mean Dizfūl by Dzbīl.<sup>lxvii</sup> The recording of this name as Drnīl/Drbīl (درنیل/دربیل) in other versions of *Nuzhat al-Qulūb* confirms that this name has changed, and that the original name could be something else. Other sources do not report the existence of such a place in Kurdistan or in western Iran.

Moreover, consisting of several fortresses and castles, a region called Dartang (درتنگ) has been reported in the western areas of Iran.<sup>lxviii</sup> This name has been recorded as Deztang (دزتنگ) by Hafiz Abrū (d.1430).<sup>lxix</sup> Therefore, it is certain that this name has been distorted in different sources as a result of the mistakes of transcribers. Interesting to note, the basis of these names is the same in the Persian orthography (درسل), and the names can become different by adding or changing the position of dots or points on the letters. Therefore, the word Dzbil (دزبیل) can be read as Drbil (دربیل), Drnil (درنیل), and Drtnl (درنتل), and the word Dzbil (دزبیل) can be read as Dartang (درتنگ), Drtnk (درتنک), and Dztng (دزتنگ), depending on dots or points on different letters. Moreover, the letters G (گ), K (ک), and L (ل) are very similar in the Persian transcription (گ, ک, ل). For these reasons, what has been recorded as Dzbīl by Mustawfī can be Dartang.

In their descriptions of the Iran-Ottoman borders, Safavid historians maintain that Dartang is close to Mahidasht and Harūnabad, and that Zuhab, the Qal‘a Zanjīr, and Bashīvih are its dependencies.<sup>lxx</sup> Bidlisi (ca.1596) believes that Dartang is the same as Hulwan, and that Pavih, Ravansar, Qal‘a Zanjīr, Bāskih, and Alānī are dependent on it.<sup>lxxi</sup> In the Qajar Period, Cherikov calls it Darrihtang, and he believes that Dartang is the same as Rīdjāb,<sup>lxxii</sup> and after him, Mushir al-Dawlih (ca.1850) says that “Dartang is the nether mouth of Tangih-i Rīdjāb”.<sup>lxxiii</sup> Later, Dartang became derelict, and the whole region received the name of Sar-i Pol-i Zuhab when it experienced prosperity and development. At the end of this section, it should be added that some texts mention the name of a place called Darnih (درنه), which seems to be another

variant of Dartang (درتنگ).<sup>lxxiv</sup> However, these texts give a list of places in W. Iran, on which the name of Dartang can be seen side by side of that of Darniha, and this means that Darnih is not the same as Dartang. Moreover, Mushir al-Dawlih makes it clear that Darnih is a Mountain near Zuhab.<sup>lxxv</sup>

Other places in Kurdistan were Kirind and Khūshān. “These are two villages lying at the summit of the Hulwan pass. Kirind is now a ruin, but Khūshān is inhabited. It has a temperate climate; and its streams flow down from the neighbouring mountains. There are here numerous gardens and fields.” Clearly, Khūshān was located near Kirind. Today, Khūshān has extincted, but Kirind is still alive. Mustawfī adds Māidasht “a district containing some fifty villages, lying in a plain and surrounded by level country. There are excellent meadow-lands here, the climate is temperate, and the water is from streams that rise in the neighbouring hills.” Mahidasht has kept its old name, and it is a great plain near Islamabad-i Gharb.

Kirmanshah was also one of the cities of Kurdistan during the Ilkhanid Period. According to Mustawfī, Kirmanshah was built by the Sassanid kings: “It was formerly a medium-sized town, but is now merely a village”. Clearly, this city declined during the Ilkhanid Period. According to Rashid al-Din, “Hulagu entered Kirmanshah on 27 Muḥarram 655 A.H./15 February 1257 and massacred its people and plundered it”.<sup>lxxvi</sup> One can conclude that the Mongol army met with widespread resistance in Kirmanshah, since the Mongols massacred those who did not abide by their domination,<sup>lxxvii</sup> and therefore, the event might have led to the decline of the city. Later, this city regained its prosperity, and it is today a major city as the center of Kirmanshahan province. Mustawfī also mentions the name of Wisṭām: “A large village lying over against the Stall of Shabdīz. It has a temperate climate, and its water is from the river Kulkū, which rises in the neighbouring mountain of Bīstūn”. Accordingly, one can conclude that Wisṭām is the same as what is known as Tāq-i Bustān today.

Also, Chamchamal plain was another place of the province in vicinity of the Bīstūn Mount. Surrounded by mountains, Chamchamal is a fertile alluvial plain which well watered by the Gāmāsiāb River and its tributaries. Given that they had to control both Shāpūr Khwāst (= the old name of Khorramabad) and Dinawar in the 10<sup>th</sup> century, the Barzikani Kurds built a strong castle called Sarmaj on that plain, which played a key role in the political and military developments during the 10<sup>th</sup> and 11<sup>th</sup> centuries.<sup>lxxviii</sup> Since there is no mention of Sarmaj in the 12<sup>th</sup> century onwards, one can conclude that it have been destroyed in late 11<sup>th</sup> century. Although Guy Le Strange says that the location of Sarmaj is unknown,<sup>lxxix</sup> the ruins of it have discovered in the Southwest of the Bīstūn Mount, near a village called Sarmaj-i Ḥussein Khānī.<sup>lxxx</sup>

According to Mustawfī, Uljaytu the Ilkhanid (1304-16) built a city by the name of Sultanabad-i Chamchamal: “A small town at the foot of the Bīstūn Mount.... It is an excellent and pleasant place, producing much corn”. Again, as a result of misunderstanding of the Mustawfī’s account, Guy Le Strange has considered the city as the capital of the province, but he is wrong.<sup>lxxxi</sup> Despite the importance of the city at the time, it soon disappeared from the geography of this region.<sup>lxxxii</sup> Today, the ruins are on the Gurgvand Hill, or Hale Bag Hill, near the Bīstūn Mount.<sup>lxxxiii</sup> It seems that it was destroyed because of its bad location at the mercy of seasonal floods of the Gāmāsiāb River.

Kangawar was another town of Kurdistan on the side of Baghdad-Khorassan way in the east of Chamchamal. Mustawfī just has described its history without giving any information on its conditions in the Ilkhanid Period. Today, Kangawar is still a big city in Kirmanshahan Province. The other town of Kurdistan was Harsin: “A castle, with a town below the same. It has a temperate climate, and running streams”. Today, this town is about 40 kilometers south of the Bīstūn Mount.

Dinawar is the last, but not the least, city in this area: “It is a small place, with a temperate climate and abundant water, producing crops of corn, fruit and some small quantities of grapes. The people are better folk than most of their neighbours.” Obviously, this account does not locate the town. Dinawar was a big city in the 10<sup>th</sup> century.<sup>lxxxiv</sup> As geographical reports show the city was located somewhere between Hamadan and Kirmanshah. Ya‘qūbī (d.897/8) has said that the city was 4 *Marḥala* away from Hamadan, and that the way to Hamadan was via Muhammadabad.<sup>lxxxv</sup> This means that Dinawar was far from the Khorassan Road which passed through Asadabad, Kangawar, and Bīstūn.

Yaqut al-Hamawī (1179-1229) has repeated the words of previous geographers, and Zacharia of Qazvin (d.1282/3) has not mentioned Dinawar in his list of major cities of the Djibāl.<sup>lxxxvi</sup> This shows that Dinawar had lost its importance in the 13<sup>th</sup> century. However, when he intended to attack Baghdad, Hulagu entered Dinawar two times, once in Rabī‘ al-Thānī 654 A.H./May 1256, and once again in Muḥarram 655 A.H./February 1257, although no historical text mentions that he inflicted damages or committed massacre in the city.<sup>lxxxvii</sup> However, Mustawfī implies that the city continued to degenerate during the Ilkhanid Period. Today, the ruins of this city are near Sunqur, and there is a river by the name of Dinawarāb which flows towards Bīstūn.

Alīshṭar was another town of Kurdistan: “A medium-sized town, pleasantly situated. There existed here (of old) the Fire-temple of Arūkhsh”. The name of Alīshṭar (الیشتر), recorded also as Lāshtar (لاشتر), Līshtar (لیشتر), Ashtar (اشتر) in classical texts, was located on the way of Nihavand to Khuzistan.<sup>lxxxviii</sup> During the Seljuqid Period, the region, and its rich pastures kept the attentions of Seljuqids.<sup>lxxxix</sup> Consequently, its prosperity increased as Mustawfī described it as being



equal in rank with Kirmanshah “a medium-sized town”. Unfortunately, no source has explained how this area was annexed to the territory of Kurdistan. It seems that the town perished in the following centuries as Guy Le Strange was not able in the 19<sup>th</sup> century to identify the town. With the fall of the Qajars, and through the policy of the settlement of tribes, the city was revived, and today it is the center of Silsila city, in the current Luristan province. Therefore, most towns of Kurdistan were located on the sides of the Khorassan Road. This indicates that urban life was heavily dependent on this strategic road.

### 5.3 The Current Ilam Province

Another part of Kurdistan was a region which known as Ilam today. With its abundant water resources, this mountainous area, known as Māsbadhān, was among the prosperous regions of Iran throughout the early Islamic Period.<sup>xc</sup> Given that it was close to Mesopotamia, the hunting places, the mines, the towns, and the castles as Azīwakhān, Sīrwān, Māhkī (or Māhaki), Kalakān, Dizdīlūyya, Khūlandjān, Aranba, among others, were well-known, and the region received a great deal of attention.<sup>xcii</sup>

Bahār is listed by Mustawfī as one of places (or Vilāyāt) of Kurdistan: “A Castle, which, in the days of Sulaymanshah of Īvih, was his capital.” He has not given any information about its location, and some researchers maintain, rather carelessly, that it is the same as Bahār near Hamadan. For several reasons, this can not be accepted:

a. Mustawfī says that Bahār was a castle rather than a district. Clearly, He draws a line of distinction between a castle and a district, in his description of Harsin: “A castle, with a town below the same”. For the description of Bahār, he does not say anything of a district, and this means that Bahār was just a castle. Moreover, a castle is usually built on a hill or a high place so that it can be used as a defensive fortification overlooking the surrounding areas.<sup>xcii</sup> Evidently, the level Plain of Bahār in northern Hamadan does not have such features.

b. The distance between the town of Bahār and Hamadan is roughly 3 Leagues. It is not possible for two capitals of different governments to be that near. For centuries, Hamadan was one of the most important cities in western Iran, and it was the capital of government for Buwayhids, Seljuqids, and Khwarizmshahi rulers in the province.<sup>xciii</sup> Now, if the Bahār of Kurdistan is the same as the Bahār of Hamadan, a question will pop up: How could the Seljuqid sultans and Khwārazmshahi rulers in Hamadan stand the presence of Sulaymanshah of Īvih round the corner? Where was the border line between the territory of Seljuqid sultans and that of Sulaymanshah?

c. According to early Muslim geographers, moreover, Hamadan as a big city controlled a vast area within a radius of several hundred kilometers. Ibn al-Faqīh, says that Hamadan has 24 Districts consisting of an area from Karaj-i Abūdulaf (near what is called today Arāk) to Sīsar (=Sanandaj and Bījār) and from the Asadabad Pass to Sāwih.<sup>xciv</sup> This is confirmed by other geographers such as Yaqut al-Hamawī (d.1229) who was a contemporary of Sulaymanshah of Īvih.<sup>xcv</sup> Mustawfī has presented the following description of the city, which confirms the description of Ibn al-Faqīh: “Hamadan has five districts: 1. Farīvār near the City, with an area of two Leagues (roughly 13kms) consisting of 75 villages such as Shahristānih, Lābjīn (=Lālejīn?), Fakhrabad, Qāsimabad, and Kūshk-i Bāgh, as the biggest villages”.<sup>xcvi</sup> It is clear, therefore, that Farīvār was at a distance of 2 Leagues to Hamadan and continued up to the Asadabad Pass and Sīsar with Bahār being a part. Lālejīn has been mentioned in Mustawfī’s report, and this shows that the Bahār of Hamadan did not exist at the time, or it was less important than Lālejīn, since it was mentioned, and Bahār was not.

d. As noted above, Mustawfī believed that Kangawar was the easternmost borders of Kurdistan, and that Asadabad, and Nihavand were parts of Iraq-i ‘Adjam. Now, the question is how the Bahār of Hamadan, at a distance of more than 60 kilometers in eastern Asadabad, can be a part of Kurdistan? Given that the territory of Sulaymanshah (i.e. Kurdistan) extended from Khanaqīn to Kangawar, how is it possible for him to build his capital in a place outside his territory?

e. According to historians, the Mongols seized Hamadan and massacred its people as a result of a revolt in the year 1220,<sup>xcvii</sup> whereas Sulaymanshah fought against the Mongols for nearly 40 years (1220-58).<sup>xcviii</sup> Now, if the Bahār of Hamadan was the capital of Sulaymanshah, a question will pop up: How could the Mongols in Hamadan stand the presence of Sulaymanshah of Īvih in their territory for 40 years?

For these reasons, it is clear that the capital of Sulaymanshah could not be located in the Bahār of Hamadan, and it is necessary to look for it somewhere else in Kurdistan. In addition, there is no mention of the towns and castles of the Māsbadhān in Mustawfī’s list. Considering what was said above, and given that Māsbadhān was a prosperous region, one can not accept that at the end of the 12<sup>th</sup> century, with the conquests of Īvih Turkmen civilization disappeared suddenly

from the region.

Therefore, the author believes that the capital of Kurdistan, the Vahār (the Kurdish name of Bahār) was in this part of Kurdistan. Fortunately, there are some historical accounts about the war between Sulaymanshah of Īvih and the Atabeg of Minor Lur at Vahār Castle, which can help us to locate the Vahār Castle. According to them, Atabeg of Minor Lur launched an attack on the Liḥf region in 1242 with the support of the Mongols.<sup>xcix</sup> From the Liḥf region, he managed to lay a siege to the Vahār Castle. Then, Sulaymanshah tried to lift the siege from the Lurs. When he came to Hulwan, a great army came to his aid, and he fought with Atabeg of Lur in a place called Shr (سهر), and after he slayed the Atabeg, he hung his head on the gate of Khanaqīn.<sup>c</sup>

Clearly, the aggressors attacked the Liḥf, which was the bureaucratic name of foothills in the east of Iraq, with the most important city being Bandanīdjīn.<sup>ci</sup> Evidently, moreover, the capital of the Atabeg of Minor Lur was in Shāpūrkh<sub>w</sub>āst, and inevitably he had to pass through the third highway of Kurdistan (i.e. Shāpūrkh<sub>w</sub>āst to Bandnīdjīn route), which pass through Ilam region. In addition, it has been reported that the battle ground between Sulaymanshah and the Atabeg was Sahr (سهر), which seems to be a misreading of Seymariḥ (سیمر، سیمر، سیمره), as the historian says that Sulaymanshah seized two of their castles (namely, the Shīgān (شیگان) Castle and the Dozbar Castle) after he defeated the Atabeg.<sup>cii</sup> The ruins of the Shīgān Castle (today known as the Sīkān (سیکان)) can be seen near the present Darrīh Shahr.<sup>ciii</sup> The Dozbar Castle was located in the center of Shāpūrkh<sub>w</sub>āst (like the present Falak al-aflāk Castle in Khorramabad today).<sup>civ</sup> Of course, Mustawfī says that Sulaymanshah and the Atabeg fought in Dihlīz (دهلیز) which seems to be misreading of Dihlīr/Dihlīran (دهلیران) or Dihluran (دهلران).<sup>cv</sup>

In any case, the geographical names in this story show that these places were near each other. Given that Liḥf, Khanaqīn, Hulwan, and Seymariḥ are close to each other in a single region, why should Bahār be at a distance of 400 kms away from the region? As Ibn al-Fowaṭī indicates the invaders attacked Bahār after plundering Liḥf, and for this reason, Bahār must have been round the corner. Otherwise, how could the invaders have rushed to Hamadan from around Mandalī and laid siege to Bahār? Moreover, Rashīd al-Dīn says that Sulaymanshah went to Hulwan in order to rescue Bahār, and that the war began when loyal forces joined him. If the Bahār Castle is really the same the Bahār of Hamadan, why does the historian not explain how Sulaymanshah and his army moved from Hulwan to Hamadan?

In addition, the mountainous situation of the region suited to build unattainable strongholds, and helped to have a better condition against invaders. Given that Bahār was just a castle, one can visualize that Bahār was located in a triangle mountainous region in the midst of the Seymariḥ River, Mandalī, and Hulwan, which be well-proportioned to the establishment of an impregnable stronghold in the area. Historical sources following the Ilkhanid Period do not mention the name of this castle (i.e. Vahār), and it is likely that it was destroyed after the Mongols conquered the area, or that it received a new name. There is a mountainous village with the Kurdish name of Avāriḥ (in Persian Bahāristān) in the western highlands of the present Ilam city which can be associated with the Vahār Castle.

#### 5.4 The current Iranian Province of Kurdistan

In the historical geography of Kurdistan, a considerable part consists of the current Iranian province of Kurdistan. Although, neither early Muslim geographers nor Mustawfī mentions the towns in this part of Kurdistan, but, both maintained that the Taghatū, Djaghatū, Little Zab, and SefīdRūd Rivers originated from the Mountains of Kurdistan.<sup>cvi</sup> This means that there was no significant urban center in this area. Qudāma (CA.873-CA.932-948) says that Dinawar was adjacent to Zanjan,<sup>cvi</sup> and Ya‘qūbī maintains that there is a direct road between Dinawar and Zanjan.<sup>cvi</sup> Abū Dulaf (ca. mid 10<sup>th</sup> century), in turn, says that Dinawar is adjacent to Jabal al-Salq in the north of the Little Zab River.<sup>cix</sup> Given these accounts, one can conclude that some regions in the present Kurdistan of Iran were parts of Dinawar, and that it was a neighbour to Zanjan in Garrūs, and a neighbour to Azerbaijan in what is called Saqiz today. A local historian, Sanandajī (ca. 1901) explicitly says that Sanandaj was a part of Dinawar in the 9<sup>th</sup> century.<sup>cx</sup>

Ibn al-Faqīh mentions this area as Sīsar “30 peaks” or Sadkhānia “100 Fountains”, and he says that it is the permanent pasture of livestock of the Kurds and others.<sup>cx</sup> Evidently, numbers 30 and 100 indicate the abundance of peaks and springs in this area, and apparently, this is the area that has been later referred to as Hizārkāniān “1000 Fountains”. The existence of mountains and much precipitation led to abundant pastures and meadows (rather than agricultural farms), and this predisposed the residents to pastoral life. In addition, wild animals increased in number, and consequently hunting became a common activity in the region, and in this way, it turned into a recreational resort for kings.<sup>cxii</sup>

Absence of urbanization, moreover, paved the way for bandits and mutineers to take refuge in the mountains of the region during the Caliphate al-Mahdī the Abbasid (775-785). The caliph sent an army to suppress the bandits and build the castle of Sīsar. He annexed parts of Dinawar and Azerbaijan to Sīsar and appointed an independent emissary to collect the taxes of that region. When Hārūn al-Rashīd was in power (789-808), bandits destroyed the Sīsar Castle. Later, al-Ma‘mūn (813-833) appropriated the region and turned it into the Caliph’s estate.<sup>cxiii</sup> There is no mention of Sīsar in the 10<sup>th</sup> century, and it was probably on the wane. It follows that the region functioned in the following centuries just as a recreational

resort for rulers or a lush pasture for their horses.

In the early Islamic Period, historical texts mention a pasture around Dinawar by the name of Dāymarg (=Dāymardj), which was both a hunting place and a pasture for the horses of troops.<sup>cxiv</sup> Its name changed to the Panj Angusht (that is, five fingers) pasture in the Seljuqid Period.<sup>cxv</sup> Mustawfī recorded the name of Panj Angusht with its Turkish equivalent BishBirmāq, and he believes that it is the fountainhead of Sefidrūd River.<sup>cxvi</sup> As it was clearly known in the following centuries that the Sefidrūd River originates from the Chihil Chishmih Mountains in a region called Sārāl (which is now near the town of Divandarrih),<sup>cxvii</sup> it can be inferred that the Dāymarg (=Panj Angusht) pasture was located somewhere between Sanandaj and Saqiz, and that all these regions were parts of Dinawar at the time.

As Dinawar fell into decline, and at the same time, Sultaniyyih boomed during the Ilkhanid Period, this region became subordinate to Sultaniyyih in the 14<sup>th</sup> century onwards.<sup>cxviii</sup> Among the reasons for this change of status, one can mention the following factors: Seasonal migrations of Ilkhans between Baghdad, Azerbaijan, and Sultaniyyih;<sup>cxix</sup> Seasonal migrations of the special brigade of Ilkhans (that is, Qaraunas) to Baghdad and the Siāh-Kūh Mountain near Saqiz and Garrūs;<sup>cxx</sup> The seasonal migrations of Ilkhans from Sultaniyyih and Tabriz to Baghdad and vice versa (usually via the Darband of Zab River) highlighted the importance of mountains, pastures and hunting places in this part of Kurdistan, and consequently, the Ilkhans shifted their attentions to the region as summer resort.<sup>cxxi</sup> During the late 14<sup>th</sup> century, the name of this place was changed to Suqūrluq (سقورلق), Sughūrluq (سغورلق), Suyūrluq (سيورلق), Sūrluq (سورلق), Sūrlugh (سورلغ), Sūrlukh (سورلخ), and up to the mid-Şafawid Period, it continued to receive the attentions of kings and courtiers.<sup>cxxii</sup>

In the 17<sup>th</sup> century, however, this region was separated from Sultaniyyih and Zanjan because the Iran-Ottoman conflicts had escalated especially when the Ottomans invaded Iran in the borders of Marivan, in 1629.<sup>cxxiii</sup> The Iranians felt the necessity of defence installations, and therefore, a new city was built with strong fortifications in 1636.<sup>cxxiv</sup> The name of the new city was Senna-Dizh (the current Sanandaj) which turned into the administrative center of Kurdistan.

## 6. Conclusion

This paper aims at describing and explicating the geography of the area which named Kurdistan, and to discuss factors responsible for the separation of Kurdistan from the Iraq-i ‘Adjam, as well as outlining the boundaries of this province and the locations of its cities. The discussion showed that the Kurdistan was separated from the Iraq-i ‘Adjam province when it was occupied by the İvih Turkmen in the early 13<sup>th</sup> century.

Two factors contributed to separation of Kurdistan: 1. The geographical situation and the existence of mountains and valleys which made it impassable, and this paved the way for the local ruling daynasties to gain power in the region. 2. The power gained by Turkmen chieftains. After the domination of Seljuqid, many tribes of the İvih Turkmen became interested in the region, and they tried to settle there. As the Seljuqid became weak, the Turkmen tribes began to gain power throughout the Seljuqid territory. Therefore, the İvih Turkmen, who were scattered across the western the Iraq-i ‘Adjam, managed to replace the local powers in the region under the leadership of Sulaymanshah of İvih.

In the Ilkhanid Period, the borders of this province stretched from the Karkhih River to the valley of the Little Zab River, and from the Iraq-i ‘Arab to the Seymarih River and the Asadabad pass. Today, the region is divided among the following areas: The Sulaymaniyyih province of Iraq, the Iranian provinces of Ilam, Kirmanshahan, Kurdistan, and parts of Luristan. Mustawfī gives a list of places in the region, some of which are existent today, some are extinct, and some have changed names. Unlike the previous studies on the locations of some places, the present study shows that the province of Kurdistan consisted of four distinct parts during the Ilkhanid Period as far as the urban centers are concerned: The first center was the eastern part in present Kurdistan of Iraq, consisting of Shahrazur, Khuftiyān, Darband-i Zangī, and Darband-i Tādj Khātūn. The second center was in the present province of Kirmanshahan, consisting of Alānī, Dartang, Kirind, Khūshān, Māidasht, Kirmanshah, Wištām, Chamchamal, Harsin, Kangawar, and Dinawar. Moreover, Alīshtar was, and still is, within Luristān. The third center was in the current Ilam, and the Bahār Castle, the capital of the province was in this part (not in Hamadan). The fourth center was in the current Iranian province of Kurdistan with no urban center at the time.

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<sup>i</sup>Hamdullah Mustawfī, *Nuzhat al-Qulūb*, (Tehran: Duniyā-yi Kitāb, 1362/1983), 107-9.

<sup>ii</sup>Altaweel, et al. “New Investigations in the Environment, History, and Archaeology of the Iraqi Hilly Flanks: Shahrizur Survey Project 2009-2011”, *Iraq* 74 (2012): 1-35.

- <sup>iii</sup> Boris James, “Mamluk and Mongol Peripheral Politics: Asserting Sovereignty in the Middle East's 'Kurdish Zone' (1260-1330)”, In *Mongols' Middle East; Continuity and Transformation in Ilkhanid Iran*, edited by Bruno de Nicola and Charles Melville (Leiden: Brill, 2016):.
- <sup>iv</sup> Garnik Asatrian, “Prolegomena to the Study of the Kurds”, *Iran and the Caucasus* 13 (2009): 1-58.
- <sup>v</sup> V. Minorsky, “Kurds, Kurdistan: III.-History; B. the Islamic Period up to 1920”, in *EI<sup>2</sup>* (Leiden: Brill, 1986), 5: 449-464.
- <sup>vi</sup> V. Minorsky, “Mongol Place Names in Mukri Kurdistan”, *Bulletin of the School of Oriental and African Studies* 18 (1956): 261-279.
- <sup>vii</sup> Guy Le Strange, *Mesopotamia and Persia under the Mongols in the 14<sup>th</sup> century from the Nuzhat al-Qulub of Ḥamdullah Mustawfī*, (London: Royal Asiatic Society, 1903), 55-9; idem, *The lands of the Eastern Caliphate*, (Cambridge: Cambridge University Press, 1905), 187-94.
- <sup>viii</sup> Also, he has not able to identified the site of Alānī, Khuftiyān, Darband-i Tādj Khātūn, Darband-i Zangī, Drbīl (a variant of Dzbīl), and Sarmāj.
- <sup>ix</sup> V. Minorsky, “Baharlu” in *EI<sup>2</sup>* (Leiden: Brill, 1960), 1: 919; M. Qazvini (ed.), *Tārīkh-i Jahāngushāy*, 3 vols. (Tehran: Dunyā-yi Kitāb, 1375/1996), 3: 454, 455, 458 (The editor's Notes); M. Rowshan and M. Mūsawī (eds.), *Jāmi' al-Tawārīkh*, 4 vols. (Tehran: Alburz, 1373), 3: 2215 (The editor's Notes); ‘Ali Asghar Shamim, *Kurdistan*, (Iran/Tabriz: Kitābkhānih-yi Sa‘ādat-i Husseinī wa Kitābkhānih-yi Surūsh, 1312/1933), 22, 39.
- <sup>x</sup> Īvih or Yīvih was one of the 24 tribes of Oghuz. See Mohsen Rahmati, “Sulaymanshah of Īvih and the Mongol Invasion”, *Historical Studies of Islam* 21 (2015): 83-9.
- <sup>xi</sup> Mustawfī, *Nuzhat al-Qulūb*, 47.
- <sup>xii</sup> See Asatrian, “Prolegomena”, 19-20, 34-35.
- <sup>xiii</sup> Le Strange, *The lands*, 192; idem, *Mesopotamia and Persia*, 55-6. We know Sulayman Ibn Muhammad the Seljuqid was born in Esfahān in 1117 and was brought to Khurasan by his uncle (i.e. Sultan Sandjar). He remained in the court of his uncle as his heir to the crown to 1153 when Sandjar was arrested by Guzz. Then he went to the Iraq-i ‘Adjam and he reigned for a short time and was killed in 1161. (See Ibn al-Athīr, *al-Kāmil-u fi -l-Tārīkh*, 12 vols. (Beirut: Dar Ṣādir, 1965), 11: 180-2, 205-7, 254-5, 266-7); But, Sulaymanshah of Īvih was son of Parcham, who was a Turkman Chieftain of the Īvih tribe in the late 12<sup>th</sup> century. Sulaymanshah became a chief of the Īvih tribe just in 1213 onwards and became the commander in chief of Caliphate in 1243 onwards. He defended against Mongols aggressors to 1257, and was finally murdered by Hulagu when he conquered Baghdad in 1258. Therefore, there was a distance between the death of Sulayman Ibn Muhammad and appearance of Sulaymanshah of Īvih which was more than a half century. (See Rahmati, “Sulaymanshah”, 90-5).
- <sup>xiv</sup> See on Article of “Kurds, Kurdistan”, in *EI<sup>2</sup>*, 5: 439, 455.
- <sup>xv</sup> Ibn al-Faqīh, *Mukhtaṣar Kitāb al-Buldān* (Leiden: Brill, 1885), 239-240; Ibn Hawqal, *Sūrat al-Arḍ* (Leiden: Brill, 1967), 370, 372.
- <sup>xvi</sup> See Ibn al-Athīr, *al-Kāmil*, 11: 225-7, 233-4, 236, 259, 277, 292.
- <sup>xvii</sup> Sadr al-Din al-Husayni, *Akhbār al-Dawlat al-Saljuqiyya* (Lahore: Punjab university press, 1933), 129-140.
- <sup>xviii</sup> Abu bakr Ravandi, *Rāḥat al-Ṣudūr wa Āyat al-Surūr* (Tehran: ‘Elmī, 1363/1984), 345.
- <sup>xix</sup> Ibn al-Athīr, *al-Kāmil*, 11: 239, 395
- <sup>xx</sup> Mustawfī, *Nuzhat al-Qulūb*, 47-74, 165, 171.
- <sup>xxi</sup> Ibid., 107, 109, 111, 228.
- <sup>xxii</sup> Mirza Ja‘afar Khan Mushir al-Dawlih, *Risālih-yi Tahqīqāt-i Sarhaddiyyih* (Tehran: Bunyad-i Farhang-i Iran, 1348/1969), 98.
- <sup>xxiii</sup> Mustawfī, *Nuzhat al-Qulūb*, 39-41, 43, 165.
- <sup>xxiv</sup> Ibid., 75, 86-87, 107, 223, 224.
- <sup>xxv</sup> Ibn al-Athīr, *al-Kāmil*, 7: 538-9.
- <sup>xxvi</sup> Mustawfī, *Nuzhat al-Qulūb*, 41, 102, 107.

- <sup>xxvii</sup>See Rahmati, "Sulaymanshah", 92-6.
- <sup>xxviii</sup>Mustawfī, *Nuzhat al-Qulūb*, 107.
- <sup>xxix</sup>Nasir al-Din Tūsi, *Dhayl-i Tārīkh-i Jahāngushāy* (Tehran: Duniyā-yi Kitāb, 1375/1996), 282-4.
- <sup>xxx</sup>See Rahmati, "Sulaymanshah", 98-9.
- <sup>xxxi</sup>Atā' Malik Juwayni, *Tārīkh-i Jahāngushāy*, 3 vols. (Tehran: Duniyā-yi Kitāb, 1375/1996), 1: 67, 77.
- <sup>xxxii</sup>Rashid al-Din Fazlullah, *Jāmi' al-Tawārīkh*, 4 vols. (Tehran: Alburz, 1373), 2:1009, 1011; Hamdullah Mustawfī, *Tārīkh-i Guzīdih* (Tehran: Amīrkabīr, 1364/1985), 589.
- <sup>xxxiii</sup>Mustawfī, *Nuzhat al-Qulūb*, 107.
- <sup>xxxiv</sup>Ibid., 107-109.
- <sup>xxxv</sup>Ibn Khuradadba, *al-Masālik wa al-Mamālik* (Leiden: Brill, 1889), 19; Ibn Rusta, *al-A'lāq al-Nafīsa* (Leiden: Brill, 1892), 164; Safī al-Dīn 'Abd al-Mu'min Baghdadi, *Marāshid al-Iṭṭilā' alā Asmā' i-l-aminati wa-l-Biqā'*, 3 vols. (Beirut: Dār al-Ma'rifa, 1991), 2: 822.
- <sup>xxxvi</sup>Ahmad Ibn Yahya Ibn Fazluallah 'Umari, *Masālik al-Absār fī Mamālik al-Amsār*, 27 vols. (Abuzabi: Majma' al-Thiqāfī, 1991), 3: 261.
- <sup>xxxvii</sup>Le Strange, *Mesopotamia and Persia*, 57.
- <sup>xxxviii</sup>Muhammad Yusuf Valih Qazvini, *Khuld-i Barīn (Ḥadīqih-yi 6 and 7)*, (Tehran: Andjuman-i Āḡār wa Mafākhir-i Farhangī, 1382), 54, 72, 73.
- <sup>xxxix</sup>Mirza Shukrullah Sanandajī, *Tuḥfih-yi Naṣirī* (Tehran: Amīrkabīr, 1375/1996.), 474.
- <sup>xl</sup>See Altaweel, et al. "New Investigations", 16.
- <sup>xli</sup>Abu Dulaf Khazradji, *Risālat al-Thānia* (Cairo: 'Ālam al-Kutub, 1970), 58-9.
- <sup>xlii</sup>Ibrahim ibn Muhammad Istakhri, *Masālik al-Mamālik* (Leiden: Brill, 1927), 200.
- <sup>xliii</sup>Sanandajī, *Tuḥfih-yi Nāṣirī*, 474.
- <sup>xliv</sup>Muhammad Mardūkh, *Tārīkh-i Mardūkh* (Tehran: Kārang, 1379/2000), 99,101,109,126. He mentions it as *Hoftiān* (حفتیان), or *Hoftān* (هفتیان).
- <sup>xlvi</sup>Ibn al-Athir, *al-Kāmil*, 12: 56.
- <sup>xlvi</sup>Sharaf khan Bidlisi, *Sharaf nama*, 2 vols. (Tehran: Asāfīr, 1377/1998), 1: 23. On this source see Bajalan. "Şeref Xan's Sharafnama: Kurdish Ethno-Politics in the Early Modern World, Its Meaning and Its Legacy." *Iranian Studies* 45 (2012): 795-818.
- <sup>xlvii</sup>Yaqut al-Hamawi, *Mu'djam al-Buldān*, 7 vols. (Beirut: Dār Şādir, 1993), 2:380; Baghdadi, *Marāshid al-Iṭṭilā'*, 1:475.
- <sup>xlviii</sup>'Umari, *Masālik al-Absār*, 3: 256.
- <sup>lix</sup>Bidlisi, *Sharaf nama*, 1: 23.
- <sup>i</sup>Sharaf al-Din 'Ali Yazdi, *Zafarnama*, 2 vols. (Tehran: Kitābkhānih-yi Majlis-i Shūrā -yi Islāmī, 1387/2008), 1: 194, 698,703, 707, 735; 2: 1114.
- <sup>ii</sup>Le Strange, *The lands*, 193.
- <sup>iii</sup>Ibn al-Athīr, *al-Kāmil*, 7: 538; 'Umari, *Masālik al-Absār*, vol.3, 265.
- <sup>iiii</sup>'Ali ibn al-Husayn al-Mas'ūdī, *al-Tanbīh-i wa-l-Ishrāf* (Beirut: Dār wa Maktabat-l-Hilal, 1993), 63.
- <sup>lv</sup>Mushīr al-Dawlih, *Risālih*, 111.
- <sup>lv</sup> - See Minorsky, "Mongol Place Names", 63-64.
- <sup>lvi</sup>Mustawfī, *Nuzhat al-Qulūb*, 228; Ibn al-Faqīh, *Mukhtaṣaral-Buldān*, 240.
- <sup>lvii</sup>Isfahani/Bundari, *Zubdat al-Nuṣra* (Cairo: Dar al-Afaq al-Jadīda, 1980), 183, 223; Husayni, *Akhbar*, 142.
- <sup>lviii</sup>'Umari, *Masālik al-Absār*, 3: 262.
- <sup>lix</sup>See Boris James, "Mamluk and Mongol..." : 287-288.

- <sup>lx</sup> Yazdi, *Zafarnama*, 2: 1114.
- <sup>lxi</sup> See ‘Umari, *Masālik al-Abṣār*, 3: 261.
- <sup>lxii</sup> Mushir al-Dawlih, *Risālih*, 111.
- <sup>lxiii</sup> <http://aftabjavanrood.blogspot.com/11/08/1389/post-55/> (accessed 16 October 2015).
- <sup>lxiv</sup> Le Strange, *The lands*, 193.
- <sup>lxv</sup> Bidlisi, *Sharaf nama*, 1:319.
- <sup>lxvi</sup> Muhammad ‘Ali Sultani, *Historical- Geography and Comprehensive History of Kirmanshahan*, 5vols. (Tehran: Nashr-i Suhā, 1374/1995), 2: 128, 329.
- <sup>lxvii</sup> Mustawfī, *Nuzhat al-Qulūb*, 107, 109, 111, 228.
- <sup>lxviii</sup> Rashid al-Din, *Jāmi‘ al-Tawārīkh*, 2: 1004-5; ‘Umari, *Masālik al-Abṣār*, 3: 260.
- <sup>lxix</sup> Hafiz Abrū, *Dhayl-i Jāme‘ al-Tawārīkh-i Rashīdī* (Tehran: Andjuman-i Aṣar-i Melli, 1350), 257.
- <sup>lxx</sup> See Iskandar-i Munshī, *‘Ālam Ara-yi ‘Abbasi*, 2vols. (Tehran: Amīrkabīr, 1382/2003) 2: 661, 948, 997, 1000, 1019, 1035, 1036, 1087; Valih Qazvini, *Khuld-i Barīn*, 275, 280.
- <sup>lxxi</sup> Bidlisi, *Sharaf nama*, 1: 319.
- <sup>lxxii</sup> Cherikov, *Siyāhat nama* (Tehran: Amirkabir, 1358/1979), 159.
- <sup>lxxiii</sup> Mushir al-Dawlih, *Risālih*, 108.
- <sup>lxxiv</sup> Valih Qazvini, *Khuld-i Barīn*, 275, 280.
- <sup>lxxv</sup> Mushir al-Dawlih, *Risālih*, 115, 116, 121.
- <sup>lxxvi</sup> Rashid al-Din, *Jāmi‘ al-Tawārīkh*, 2:1009.
- <sup>lxxvii</sup> Juwayni, *Tārīkh-i Jahāngushāy*, 1: 67, 77.
- <sup>lxxviii</sup> Ibn al-Athīr, *al-Kāmil*, 8: 705-708; vol.9, 538, 556.
- <sup>lxxix</sup> Le Strange, *The lands*, 189.
- <sup>lxxx</sup> <http://hamgardi.com/place/23039/> (Accessed 2 September 2015)
- <sup>lxxx</sup> - Le Strange, *Mesopotamia and Persia*, 57.
- <sup>lxxxii</sup> See Qashani, *Tārīkh-i Uljaytu*, 133; Hafiz Abrū, *Dhayl-i Jāme‘ al-Tawārīkh*, 120, 272.
- <sup>lxxxiii</sup> Abbas Mutarjim, and Ya‘qub Muhammadifār, “A Suggestion on Locatin of Ilkhani city, Sultan abad of Chamchamal (tiny Baghdad) In Bistūn of Kirmanshah”, *Payām-i Bāstānshinās* 3(2005): 99-102. Doi: <http://www.noormags.ir/view/fa/articlepage/330156>; Muhammad Eqbal Chehri and Zahid Garavand, “On Intend of Sultan abad of Chamchamal; a Comparison of Historical data with Archaeological Founds in Hale Bag Hill”, *Archaeological Researchs* 6 (2012): 59-60. Doi: <http://www.noormags.ir/view/ar/magazine/number/56053>.
- <sup>lxxxiv</sup> Muqaddasi, *Aḥsan al-Taqaṣīm fī Ma‘rifat al-Aqālīm* (Beirut: Dār al-Ehyā’ al-Torāth al-‘Arabī, 1987), 302.
- <sup>lxxxv</sup> A *Marḥala* was the distance traveled in a day. See Ya‘qūbī, *al-Buldān* (Leiden: Brill, 1892), 272.
- <sup>lxxxvi</sup> Zacharia Qazvini, *Āthār al-Bilād wa Akhbār al-‘Ibād* (Beirut: Dār Ṣādir, No date), 342.
- <sup>lxxxvii</sup> Rashid al-Din, *Jāmi‘ al-Tawārīkh*, 2: 997, 1009.
- <sup>lxxxviii</sup> Istakhri, *Masālik al-Mamālik*, 197; Ibn Hawqal, *Ṣūrat al-Ard*, 360.
- <sup>lxxxix</sup> Zahir al-Din Nishapuri, *Seljuqnama* (Tehran: Kulālih khāwar, 1332/1953), 55-7.
- <sup>xc</sup> Ibn al-Faqīh, *Mukhtaṣar al-Buldān*, 209, 236.
- <sup>xci</sup> Khazradjī, *Risālat al-Thānia*, 64; Mas‘ūdi, *al-Tanbīh-i wa-l-Ishrāf*, 70; Muqaddasi, *Aḥsan al-Taqaṣīm*, 299; Ibn al-Athīr, *al-Kāmil*, 2:525; 3:16; 8: 202; 9: 464-65, 493, 528-34, 537-40, 545, 570, 612, 650; 11:119, 195, 229, 249, 286, 328, 409.
- <sup>xcii</sup> Mardūkh, *Tārīkh-i Mardūkh*, 267.
- <sup>xciii</sup> Muqaddasi, *Aḥsan al-Taqaṣīm*, 300; Ravandī, *Rāhat al-Ṣudūr*, 375-89.

- <sup>xciv</sup> Ibn al-Faqīh, *Mukhtaṣar al-Buldān*, 240.
- <sup>xcv</sup> Yaquṭ al-Hamawī, *Mu'djam al-Buldān*, vol.5, 410-17.
- <sup>xcvi</sup> Mustawfī, *Nuzhat al-Qulūb*, 71-2.
- <sup>xcvii</sup> Juwaynī, *Tārīkh-i Jahāngushāy*, 1: 115-16.
- <sup>xcviii</sup> See Rahmatī, "Sulaymanshah", 94-7.
- <sup>xcix</sup> Abd al-Razzaq Ibn al-Fowati, *al-Ḥawādith al-Jāmi'a wa al-tajārib al-Nāfi'a* (Beirut: Dār al-Gharb al-Islamī, 1977), 230.
- <sup>c</sup> Rashid al-Din, *Jāmi' al-Tawārīkh*, 2:1004-5.
- <sup>ci</sup> Mustawfī, *Nuzhat al-Qulūb*, 39.
- <sup>cii</sup> Rashid al-Din, *Jāmi' al-Tawārīkh*, 2: 857.
- <sup>ciii</sup> Hamid Izadpanah, *Āṣār-i Bāstānī va Tārīkh-i Luristan*, 3 vols. (Tehran: Andjuman-i Āṣār wa Mafākhir-i Farhangī, 1376/1997), 2: 410-19.
- <sup>civ</sup> Ibid., 2:48-56. cf. Le Strange, *The lands*, 201. He has written the name of this castle as "Dizbaz", which seems to be a misreading of Duzbar (دزبر، دزبر). Given that there are the remnants of a castle in Harsīn, which called Duzbar by local residents, and that all summer palaces named as Tachra (in Arabic Tazar, or Tajar) in the ancient period (Yaquṭ al-Hamawī, *Mu'djam al-Buldān*, 4: 34), the author this article believes that Duzbar was a common name for some castles which had many characteristics or were been used in similar cases.
- <sup>cv</sup> Mustawfī, *Tārīkh-i Guzīdih*, 556.
- <sup>evi</sup> Ibn Khuradadba, *al-Masālik wa al-Mamālik*, 175; Mas'ūdī, *al-Tanbīh-i wa-l-Ishrāf*, 64, 71; Mustawfī, *Nuzhat al-Qulūb*, 217, 223, 224.
- <sup>cvi</sup> Qudāma Ibn Ja'afar, *al-Kharāj* (Leiden: Brill, 1889), 226.
- <sup>cviii</sup> Ya'qūbī, *al-Buldān*, 271.
- <sup>cix</sup> Khazrajī, *Risālat al-Thānia*, 56.
- <sup>cx</sup> Sanandajī, *Tuḥfih-yi Nāṣirī*, 13.
- <sup>cxii</sup> Ibn al-Faqīh, *Mukhtaṣar al-Buldān*, 239.
- <sup>cxiii</sup> See Sanandajī, *Tuḥfih-yi Nāṣirī*, 24-45, 51.
- <sup>cxiv</sup> Ibn al-Faqīh, *Mukhtaṣar al-Buldān*, 240.
- <sup>cxv</sup> Abū Hanīfā Dinawari, *al-Akhbār al-Tiwāl* (Iran/Qom: Manshūrāt al-Razī, 1368/1989), 58; Isfahani/Bundari, *Zubdat al-Nuṣra*, 164; Ibn al-Athīr, *al-Kamil*, 11: 25.
- <sup>cxvi</sup> Nishapuri, *Seljuqnama*, 56.
- <sup>cxvii</sup> Mustawfī, *Nuzhat al-Qulūb*, 217.
- <sup>cxviii</sup> Sanandajī, *Tuḥfih-yi Nāṣirī*, 61.
- <sup>cxix</sup> Afushta-i Natanzi, *Nuqāwat al-Āthār fi Dhekr al-Akhyār* (Tehran: 'Ilmī va Farhangī, 1373/1994), 332; Iskandar-i Munshī, *Ālam Ārā-yi 'Abbasi*, 1: 117, 141.
- <sup>cxix</sup> Abdullah Ibn Muhammad Qashani, *Tārīkh-i Uljaytu* (Tehran: 'Ilmī va Farhangī, 1384/2005), 82, 87, 109, 178, 199; Hafiz Abrū, *Dhayl-i Jame' al-Tawārīkh*, 104, 127.
- <sup>cxx</sup> Rashid al-Din, *Jame' al-Tawārīkh*, 2:1131; Sanandajī, *Tuḥfih-yi Nāṣirī*, 91, 100.
- <sup>cxxi</sup> See Minorsky, "Mongol Place Names", 64, 66-67.
- <sup>cxixii</sup> Wassaf Shirazi, *Tārīkh-i Waṣṣāf* (Tehran: Kitābkhānih-yi Ibn-i Sīnā wa Ja'afarī-i tabrizī, 1338/1959), 118, 134, 139; Hafiz Abrū, *Dhayl-i Jame' al-Tawārīkh*, 210, 214, 254, 285; Iskandar-i Munshī, *Ālam Ārā-yi 'Abbasi*, 1: 98-99, 117, 141.
- <sup>cxixiii</sup> Valih Qazvini, *Khuld-i Barīn*, 53-64.
- <sup>cxixiv</sup> Sanandajī, *Tuḥfih-yi Nāṣirī*, 122.

# Prioritising Training and People-oriented Security Education for Effective Policing in Nigeria

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## Abstract

Currently, Nigeria's security sector needs effective policing considering the spate of insecurity and frustrated relationship between the citizens and the police. Consequently, some officers are seen as dishonest and agents of complicity. Unlike most parts of the world where the people love, support the police, Nigeria still records threats to police-public relations owing to the attitudes of some officers who tarnish the image of the security agency through uncivilised, inhuman and unlawful acts while on duty and beyond. With qualitative data, this paper explores how training and people-oriented security education can enhance effective policing for a more secure Nigeria. This paper argues that police effectiveness should no longer be hinged only on equipping officers for counter-terrorism or establishment of special units to eradicate organised crime, but also on training them on weekly/monthly basis to respond to rapidly emerging threats to national security and trainings on enhancing collaborative police-public relations.

**Keywords:** Effective policing, Police, Training, Security education, Security skills

## 1. Introduction

The United Nations Office on Drugs and Crime (UNODC) has identified lack of training to help the police adapt or effectively implement new strategies as one of the challenges of policing. The relevance of training to the development of individuals and institutions cannot be downplayed. Training makes it possible for people to improve on the skills they already acquired with appreciable impact on service delivery. The police are an integral part of every modern state system that desires security and maintenance of law and order. The relationship between increasing crime wave and the need for security education and effective policing is crucial.

Training is one of the departments in the Nigeria Police with strategic importance that can facilitate the success of logistics, force intelligence bureau, operations, information and communication, research and planning. Various training programmes are needed by police officers enlisted in the following formations: Port Authority Police, Marine Police, Police Academy, and Counter-terrorism Squad. It is through training that police officers are empowered with the skills they require to excel through on-the-job performance.

The Federal Government is saddled with the responsibility of regulating and controlling the activities of the police as contained in the Constitution of Nigeria, which recognises the existence of the police in the exclusive legislative list, with Section 215 giving the President of the country the powers to appoint the Inspector General of Police (IGP), the head of the Nigeria Police, as well as the powers to appoint Commissioners of Police in the states to the Federal Police Service Commission (Nwolise, 2012).

The police play a central role in maintaining social order. Any discourse on management of public order is incomplete without a focus on the police because they have the constitutional responsibility of forestalling breakdown of law and order in the polity; and initiating and executing lawful efforts at ensuring that Nigerians and foreigners living around the Nigerian geographical space are law-abiding and beneficiaries of a lawful and orderly society. A number of studies have been conducted on the police and national security. Most of these studies rather focused on corruption, inefficiency, lack of accountability, and complicity among others. Ajozie (2000,p.27) argues that the police in Nigeria are "inadequate both



in strength and equipment to curtail the crisis in the land and ensure security of lives and property of the citizens.” The numerical strength of the police is currently below one police officer to 400 citizens in a country as the standard United Nations required ratio to enhance human security. This is why most people blame the police for the abysmal degree of internal security in Nigeria. Similarly, the fact that the public perceive the police offices as “dishonest people who align with armed robbers to terrorise and kill people” (Post Express, 2001,p.41) makes Magbor (2001,p.11) to state that the problem of the police is that they are not mentally prepared for re-orientation project to the extent that they are not concerned with how low they have sunk in the public perception, which demands that they work extra hard to regain the trust and confidence of Nigerians. There is no doubt that ‘police’ as an institution has become a source of sorrow to many families in Nigeria, owing to police brutality, with attendant death of victims. For instance, Asuquo (2013, pp.269-281) discusses the geometric rise of security challenges and Nigeria’s woes since 2000, largely due to the failure of policymakers and security forces to distinguish between the immediate and the underlying causes of civil disorder.

Adekunle (2013) describes the Nigerian state as porous and highly volatile, noting that the police are deficient in crime prevention and detection. According to Idowu (2010), taboos were very effective in combating deviant behaviours in traditional Yoruba society. But today, most societies, including the Yoruba society, have become hotspots of deviant behaviour, and the police are required to contain such. It is timely to explore how effective policing can be enhanced through training and security education for police officers.

Although the police have been empowered to use firearms to achieve a lawful policing objective without violating human rights, some police officers usually kill innocent members of the public while doing their legitimate work (Osse & Cano, 2017). The problem is a result of poor training and security education backed by monitoring. As noted by Muhammedally (2015,p.2), “security forces need to prioritise, learn, and put into practice civilian protection by undertaking in-depth, pre-mission and in-mission planning and training to avoid harm, and proactively protecting civilians provision of security to returnees, as well as protection both from crime and revenge attacks”. The following policing challenges, as identified by UNODC (2013), also affect Nigerian police: order maintained by informal local structures, resource-based conflicts, illegal provision of basic urban services, high levels of deprivation and tension between the wealthy and the poor, being targets of political violence and terrorism. These have complicated police efforts in maintaining law and order despite investigation efforts, street patrols, and arrest of suspects aimed at controlling crime. As asserted by Oshodi (2011), the police have had the problem of sub-standard recruitment and training processes; not only developing a training manual for potential and actual members of the police is a way forward, but also emphasising on ethical guidelines in the task of policing. It is, however, worrisome that after receiving training on the professionalism required in policing, some officers are implicated in the violation of human rights through indiscriminate use of lethal force with arms that are meant for criminals as last resort especially when they pose threat to society.

Poor security education in the Nigeria Police (NP) caused security lapses and greatly contributed to the debate on whether or not Nigeria has reached the stage of establishing state police across the thirty-six states of the federation as a result of the police proclivity for abusing their ranks, politics of security and complicity in different quarters. Nwolise (2012) chronicles some reasons by the protagonists and antagonists of the state police controversies: the protagonists say state police will generate job opportunities for youths, state police is an attribute of federalism, it will check election rigging by the NP, government will easily contain criminality; while the antagonists mention misuse of the state police by some state governors, just as they deploy state electoral commissions for their political interest, inadequate budgetary allocations to accommodate state police, and state police being threat to democracy.

In terms of methodology, this study is qualitative. The data were got through media reports, IFRA-Nigeria press files, Nigeria Watch database, and other secondary sources.

## **2. The Police and Security Education: A Philosophical Explanation**

The police are a body of recruited and trained personnel of the state (Odoma, 2012). Police organisation refers to the agency or institution saddled with the responsibility of enforcing laws and regulations, maintenance of public order and health with a view to preventing crimes and punishing the breach of the law (Adekunle, 2013). This means that anything short of maintenance of law and order undermines the constitutional role of the police. As state security providers (Ashkenazi, 2013; Nwobueze & Okolie-Osemene, 2017), the police are also one of the notable actors of criminal justice in every state. As a security agency that exists to serve all citizens, neutrality should be the watchword of the police organisation, especially in political matters. Part of the maintenance of law and order also include intelligence gathering and prevention of arms proliferation in society.

The Police Act 1958 as amended, Cap 41, and 1990 outlines the constitutional role of the Nigeria Police thus: “the power to prevent and detect crime...the enforcement of all laws; the preservation of law and order; the performance of such military duties within or outside Nigeria as may be required of them by or under authority of this or any other act” (Nigeria Police, 2006; Odoma, 2012; Nwolise, 2012). Like most police institutions across the world, the functions of police

personnel in Nigeria have expanded beyond criminal investigation and prosecution to involve issues of security, community and neighbourhood policing, containment of demonstrations and mass protests, counter-terrorism, anti-kidnapping, containment of bank robberies, cordon-off activities during electioneering or tribunal sittings, as well as restriction of movements in urban and rural areas when leaders visit to commission projects.

The training needs of police officers are essential for the development of manpower in the Nigeria Police. Security education should be attached to the central elements of human rights-based policing in democratic societies, as outlined by European Union Agency for Fundamental Rights (2013), namely: the police's special role given its monopoly on the use of force; professionalism; the requirement of strict legality; internal and external accountability; transparency; and a relationship of trust with the public. Accountability in policing discourages the use of excessive force (Skilling, 2016). The idea of security education is that it is possible to be a security agent without comprehending or appreciating the ethical guidelines for carrying out security tasks.

This paper is anchored in policing community philosophy, which Beu and Nepravishta (2013,p.180) describe as “a working philosophy and an organized strategy which is considered as one of the contemporary methods of policing. This philosophy is essentially based on the fact that, people should cooperate within the process of policing and police should offer to them qualitative services as a return of their support to the police.” The authors state that managing the problems of the community requires the enhancement of the relationships between police and the community. Similarly, in order to confirm their suspicions, officers conduct stop and search as crime control measure which requires public trust in the police (Bradford, 2015). While embarking on stop and search, officers are expected to make such operations intelligence-led, beyond crime scenes to make it effective through timely cooperation with the people (Delsol, 2015). Although there is no disputation on the legality of police action in this regard, scholars are divided on the effectiveness of police searches and identity checks as social control measures which encourage police contact with the people, thus perceived as inadequate security initiative (Fielding, 2005; Body-Gendrot & Wihtol de Wenden, 2014; Delsol, 2015). The essence of training and security education is to enhance effectiveness of policing in the interest of society as far as security provision is concerned. It is believed that the improvement of policing would impact positively on the relationship between police and the people.

### **3. Relevance of Training and Security Education in Policing Nigerian Society**

The Nigeria Police consist of about 371,800 personnel who had to undergo an extensive battery of intellectual, personality, visual-motor, and ethics-related testing usually classified as psycho screening (Oshodi, 2011). Such screening is also the beginning of many events that would empower officers for the task ahead as far as national security is concerned. After the recruitment of police officers, training is organised for them across the six geo-political zones in the country for several months. They are usually hosted at Police Staff College Jos, Police College Ikeja, Police Training School Ibadan, and police colleges in Enugu, Kaduna, Bauchi, Sokoto, Ilorin, Nonwa-Tai in Rivers, Benin, Calabar, Gwoza, Maiduguri and Makurdi. Some of the ranks that receive such training are Cadet Assistant Superintendents of Police, Cadet Inspectors, Constables, and Assistant Superintendents of Police. Urbanisation and the sophistication of criminal networks in Nigerian society have made it necessary for Police Service Commission and other relevant stakeholders to think beyond training officers after recruitment to also consider organising annual or quarterly training programmes that would prioritise security education for people-oriented policing. This is based on how training enlightens people and transforms the mind and thinking. Further, police assistance and training in human rights and good governance within the framework of control efforts will facilitate the improvement of relations between security forces and the public in target areas.

For Nigerian police officers to deliver as expected in the professional policing models that include approaches like community policing, problem-oriented policing, intelligence-led policing (UNODC, 2013), they need training to equip them with the task of swiftly responding to not only crime but also all forms of security threats which usually change in frequency. A number of factors have been presented as contributing to professionalism. Roberts (2003, p.147) argues that the “militarization of the police has manifested in excessive use of force which often yielded objectionable public repercussions, failure to maintain order in real sense and only act during emergencies.” Through the use of force even in peace time, particularly during peaceful demonstrations, the police attack innocent citizens of the state to the extent that their professionalism is subjected to criticisms. Further, continuing corruption and misuse of weapons by members of security forces, and, in particular, the impunity with which “uniformed” men engage in discourteous and unlawful acts, seriously hamper the emergence of the rule of law.

The foregoing contributed to the confrontation of the police when people notice some of their relations/friends have been killed by police officers. Afeno (2014,p.15) avers that “many security personnel have also been killed in the course of discharging their duties, to the extent that the police and the army arguably suffered the highest casualty figures”. Tackling such issues as corruption and the culture of impunity is a considerable challenge, as it requires a profound change in attitudes among government and security officials. While they welcome the provided human rights training for the men

under their authority, they are considerably less open towards cooperation in investigations into alleged human rights violations of police officers.

In addition, tackling impunity requires an effective and neutral judiciary that can withstand external pressure. However, courts are often under the influence of strong and wealthy men and the executive arm of government, that try to intervene in the rulings of the judges. In such circumstances, it is difficult to see how people can be convinced that state institutions and organs are working in the public interest. This clearly hampers the development of the degree of public trust and confidence required to rid Nigeria of the increasing rate of career situational criminality and insecurity across the country.

Police officers earn average of thirty thousand naira a month, a sum that evidently does not allow for covering more than most essential needs of police officers and their families. This possibly explains why the police are much more susceptible to corruption and once you undermine the central role of the police in that way, you will have a very serious weakness in the system of protecting human rights as well as judicial enforcement. It is changes in such fundamental structures and relationships that would seem required for the police force and essential for the consolidation of the rule of law in Nigeria. In this context, the emergence of a viable and critically engaged civil society is the key towards such changes.

Recording avoidable deaths while discharging police duties, is an indication that the officers have little or no security education, particularly in preventing upsurge of violence. Political and urban youth crises are usually used to justify police violence, while it is sometimes claimed that the need for the police to defend themselves and deal with public disorder, especially to contain potentially violent demonstrators or intervention in an area where crime has been committed, makes them to act that way (Brewer, 1996; Momoh, 2003). Such developments make Nwolise (2012,p.30) to argue that “the Nigeria Police Force is psychologically and structurally too distant from the people they are meant to protect; and do not share or get bound by the values, interests and sentiments of the people.” Such psychological disconnect manifests in killing of citizens for various reasons, which range from their failure to do what the police demand to other reasons, like crime control, accidental discharge and self-defence, notwithstanding the fact that some of their stop-and-search activities around checkpoints are usually aimed at extorting the majority of commuters. This situation raises the question of accountability, as most of such culprits have neither been prosecuted nor sanctioned by authorities even after denying people’s rights to life, freedom of movement and other socio-economic rights. Most of the intentional killings occur at the point when drivers refuse to cooperate or when they try to run after the drivers.

Modern policing focuses on the protection of population and effective control of security (İşleyen, 2017). This is why Nigeria’s Ministry of Police Affairs embarked on capacity building and training of police personnel in 2011. About 15,342 police personnel were trained in counter-terrorism, intelligence gathering and many others. This means that for the police to continue delivering the service of protecting the entire populace through the provision of adequate security, tactical training is inevitable to update their skills, considering how new threats to national security usually emerge and increase in frequency.

Beyond professional training in police academies and academic degrees in universities, sending law enforcement personnel to further training to get more knowledge of the job is of great importance to maintaining security in the country (Cao, Huang & Sund, 2016). Such security education can be formal or informal as the case may be and this has to be done in line with the national policy on security. The goal of security education can also be achieved through the organisation of people-oriented conferences and awareness-raising workshops that aim at improving the capacity of police officers to enhance security of lives and property. Through informal and formal security education, police personnel will advance their knowledge and exhibit positive attitude needed in police checkpoint; during joint security patrols and surveillance operations; peacekeeping operations; curbing of youth restiveness; handling of police helicopters; and while engaging in community based policing. It will also help them to appreciate police-public relations as a necessity in the police force and part of confidence-building mechanism, as well as timely protection of victims of crime to save them from further human rights abuses, a necessary condition for effective policing.

Training and security education will not only enhance effective policing but also reduce fatalities that are gradually becoming the attribute of the Nigeria’s security sector relations with the public. There is no disputing the observations of human rights defenders on how some security forces, especially the police, have become trigger-happy, and unable to maintain order properly and peacefully. The Nigeria Watch report revealed that the police have killed in 295 incidents out of 517 in 2006-2007, and 240 out of 443 in 2007-2008 (Nigeria Watch 2008; 2011). Training and security education are crucial due to their potential of reminding officers of the need to identify the stages a firearm must go through before an officer fires at a target to reduce casualties.

Training and security education will reduce the violation of citizens’ inalienable rights in the process of discharging police duties and still ensure a lawful society. The fact that civilians have had a large share of human rights abuse in the hands of the Nigeria police cannot be disputed, especially considering how crime control has become synonymous with flagrant disregard of fundamental rights.

Security education will enhance police public relations, the image of the police, with appreciable impact on the public respect for the police. This would reposition police officers to become agents of solution to the problem of insecurity rather than becoming the sources of insecurity or aggravating it themselves. When they understand the training they undergo, they can extend it to various communities on ways of responding to threats to human security before the arrival of officers, particularly in identifying the locations where criminals operate from and also being knowledgeable about security tips. This shows the need for cordial relationship between communities and police Department of Operations, and Department of Training and Development for people-oriented security education.

Police Department of Operations is headed by a deputy inspector general of police, with the following sections: Department of Operations Administration, Department of Federal Operations, Force Veterinary Section, Border Patrol Section, Police Mobile Force, Explosive Ordinance Disposal Unit, Force Police Air Wing, Force Dog Section, Force Mounted Troop, Force Armaments Section, Counter-Terrorism Unit, Force Transport Section, Directorate Of Peacekeeping Operations, National Inland Waterways, Central Motor Registry, Force Marine Section, Special Protection Unit, and INEC Liaison Unit. Adequate partnership between the police and communities will address the need for non-violent policing, which remains an important aspect of security education. Security education is important to the task of ensuring safety because it will promote non-violent policy in policing. Non-violent policing encourages the maintenance of law and order without using the instrument of violence which should only be adopted when necessary as the last resort. A case in point on the issue of violence in policing is the incident in February 2016, when two police officers engaged a soldier in argument that led to a conflict between them. The soldier had just returned from the Northeast where he participated in counter-insurgency operation and drove his car through the *garr* market at Ojoo near the Headquarters 2 Division Nigerian Army when he was stopped and molested by the police officers who threatened to shoot him and fired into the air. A clash between the army and the Ojoo Divisional Police officers was averted when soldiers got to the scene with motorcycles and discovered that the police officers had fled the scene.

Security education will reduce the involvement of police personnel in avoidable human rights abuses and also shape the image of the police. Police officers will be equipped with relevant training to respond swiftly to distress calls whenever criminals attack residential and business areas instead of waiting for bandits to finish their operations before arriving at crime scenes. Only a security officer that does not understand the dangers of delaying to respond to calls would give reasons for failing to rescue oppressed citizens from criminals. It is simply an indirect way of motivating crime. Also, the issue of ambush that threatens the police crime control model of national security would be a thing of the past when they are equipped with the needed training and material resources to counter crime. Hence, it becomes crucial to address most of the issues during deployment of police personnel to volatile areas.

Security education is also necessary because most officers are yet to appreciate the importance of appearing in public to carry out their assignments in uniform. Some armed officers usually mount road blocks, particularly in Edo State, without approved uniform, thereby making it difficult for residents to differentiate them from armed gangs. This ugly trend was observed along Airport Road, Akpakpava Road, Irhirhi Road, Ubgowo-Uselu Road in Benin City and many other areas in the state. Police personnel must be made to understand their roles in ensuring that they adhere strictly to the provisions of the national policy on public safety and security by inculcating security education into their minds and thinking. Equipping the police through training will strengthen their capacity to protect all citizens and also reduce the formation of ethnic militias, most of which are indirectly motivated by security lapses.

Security education will build the capacity and skills of police officers in the craft of writing and presentation of reports to enhance prosecution in law courts and justice delivery system as well as judicial enforcement. In the light of the above, the police can serve the cause of justice and peace. It is possible to redirect security energies through functional education for sustainability of Nigeria's democracy and economy.

In this context, security education will prove vital to ensure that police officers respect and promote human rights, curb rascality and impunity as well as promote healthy and peaceful living among men and officers of the Nigeria police force.

#### **4. Conclusion**

This paper has examined the relevance of training and security education in Nigeria. It has been noted that security education will promote non-violent policing even when officers are carrying out their constitutional duties because some police officers have been implicated in repression and extra-judicial killings. Adequate training and security education can offer officers the opportunity to comprehend the dangers associated with violent and indiscriminate use of firearms on the civilian population they should protect. With adequate security education, police officers can easily map the trends of crime and threats to human security. Police officers require intelligence gathering as part of security strategy to achieve the goal of maintaining law and order in the country. This is achievable when they respond swiftly to early warning signs.

Security education is essential for security operatives to understand why suspected criminals must not be abused, released or allowed to escape after being apprehended until they have been prosecuted. This will reduce criminality in society.

Security education and welfare scheme must go together to motivate gallantry in the police because poor insurance scheme makes the majority of the officers to hold the perception that reward for effective service delivery is usually lacking and that their diligence is gamble with life that has become synonymously brutish with the police work. It is evident that the police officers are the least paid officers when compared with related agencies, like the Department of State Services and the Economic and Financial Crimes Commission, which seem to have lesser hazards; the police personnel have to confront armed bandits almost on a daily basis at highways, in the streets, at financial institutions, on campuses, and in the markets and motor parks among others.

Apart from the fact that adequate training and security education have the capacity to discourage excessive lethal force, they have confidence-building significance in encouraging citizens to cooperate and collaborate with the police in crime prevention and containment, and also motivate them to give police helpful information without fear of arrest and prosecution. Given that effective policing has positive impact on the image of a nation, security education, just like peace and human rights education, will eradicate the tradition of police violence, make the slogan “police is your friend” a reality on the ground and promote people’s trust and confidence in the police. Apart from transforming the perception of excessive force, security education has a human rights value. The main argument of this paper is that, when training and security education are people-oriented, with programmes organised on weekly and monthly basis to respond to rapidly emerging threats to national security to enhance police-public relations, the country would witness a gender-sensitive and effective policing with peace impact on national security and development.

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# How the Financial Sector Could Fight The Increasing Generational Divide (1)

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## Abstract

How can the financial system support young people's social and economic development? Is the financing of startups the only way to combat the growing generational divide in Europe? This paper, using the Generational Divide Index, focusses on four domains: *Financing, Income, Wealth* and *Family Welfare*—to demonstrate why financial regulation should intervene during a young person's life to combat emerging intergenerational inequalities. The aim of this paper is to examine the extent to which the *Credit, Wealth* and *Family Welfare* domains affect the generational divide—referring, in particular, to the new Generational Divide Index (GDI 2.0) indicators—which have been recently modified with a new set of sub-indicators in the domains of *Financing, Income, and Wealth*.

**Keywords:** income, wealth, household, family welfare, generational divide

Some of the results that are discussed in this paper have been presented to the round table “**Building the Future: Human Development, Sustainability and Resilience**”—held in Rome, on 16 December 2017, at the ROME INVESTMENT FORUM 2017: Financing Long-Term Europe. I thank Jan Kermer for proofreading.

## 1. Introduction

It is not easy to estimate the impact and measure the intensity of unsustainable growth of young generations, since the recent recession is the product of multifarious factors. Amongst other things, we should consider lower job protection and a less job-specific experience. The still present imbalances stemming from European integration and sectorial impact of the recent financial crisis has led to a less favorable climate for youth development. Much of southern Europe remains mired by unacceptably high rates of youth unemployment that have left indelible scars on young people, both psychologically and economically, posing economic problems for future generations and threatening the European economies' competitiveness.

The *Bruno Visentini Foundation* (hereinafter abbreviated as BVF) explores the youth problem through the prism of the 'generational divide'—which is a term referring to the accumulated delay that young people of a single European country face in reaching certain personal and professional development 'life goals' compared to previous generations, taking into consideration the obstacles that restrict the full attainment of social and economic maturity (Monti 2017a).

In order to measure this phenomenon, BVF has devised a composite index, called the Generational Divide Index (GDI) that is currently (GDI 2.0 version) composed of 13 relevant domains, which are the following: Unemployment, Housing, Pensions, Government Debt, Participation in Democracy, Health, Income & Wealth, Environment, Education & Culture, Access to Credit, Mobility, Legality, Innovation and Gender Equality (Monti 2017b).

The GDI results indicate a continuing decline in young people's life prospects compared to previous generations. This deterioration has been attributed to *inter alia*: rising pension liabilities per worker, increasing healthcare costs due to aging demographics, disproportionately high youth unemployment rates *vis-à-vis* the wider population, increasing government debt per person, and rising housing costs. According to Intergenerational Fairness Index (IFI), the weakest ranks are those of Greece, Italy, Romania, Cyprus and Spain, which means (save for France) a clear concentration in the Mediterranean area (Leach & Hanton 2016).

The aim of this paper is to examine the extent to which the *Credit, Wealth* and *Family Welfare* domains affect the generational divide—making reference to the revised Generational Divide Index (GDI 2.0) indicators—recently enriched with new sub-indicators in the domains of *Financing, Income, Wealth* and *Family Welfare* (Monti 2017b).

## 2. Methodology

In order to analyze the impact of the financial sector on the generational divide, 3 of the 13 GDI 2.0 indicators are particularly relevant: *Income, Wealth & Family Welfare* and *Financing*. The analysis begins with *Income, Wealth & Family Welfare*, which are composed of four different sub-indicators. The quantitative study is focused exclusively on the country case study: Italy. Data has been collected from 2004 until 2015 for most of the indicators, save for some that are limited to 2014 for practical purposes—in the latter case, figures have been estimated. The following figures illustrate the historical trends for the country case study.

- a) *Income*: The objective is to compare the median income of young people with the general populations’ median income. The population median income is divided by the median income of young people aged between 16 and 24 years old. The GDI thereby grows as the ratio increases.

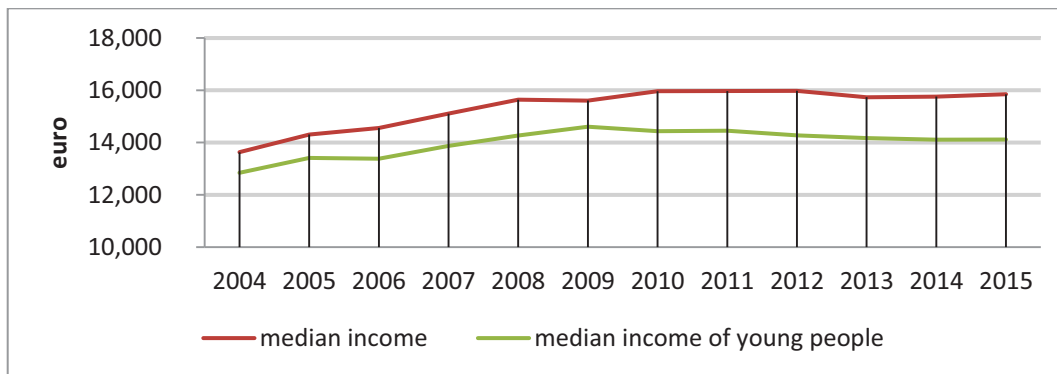


Fig. 1. Median income of young people and of the general population

Source: Bank of Italy data elaborated by Fondazione Bruno Visentini

- b) *Wealth*: The objective is to compare the median wealth of young families with respect to the median wealth of families. Wealth measures the value of all the assets of worth owned by a person. Wealth is determined by taking the total market value of all physical (property) and intangible assets (i.e. shares) owned, and then subtracting all debts. Essentially, wealth is the accumulation of resources (Investopedia 2016). Recent studies paint a negative picture for young Europeans. A report by the London School of Economics has shown that the median total wealth for UK households aged 55-64 had grown to £425,000, but for those aged 25-34, it has fallen to £60,000—representing a £365,000 gap between generations 30 years apart, and with the gap still widening. (Hill et al. 2015) This indicator measures the ratio between the annual median wealth of families (expressed in euro) and the annual median wealth of families with the head of the household under the age of 34.

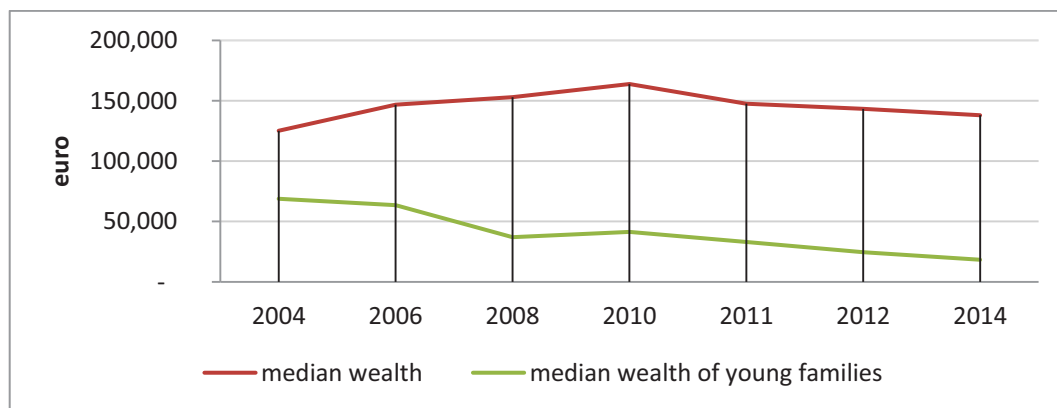


Fig. 2. Annual median wealth of Italian families (expressed in euro) and the annual median wealth of under 34 families

Source Bank of Italy data elaborated by Fondazione Bruno Visentini



- c) *Family investments in bonds and mutual funds*: This indicator corresponds to the percentage of young families possessing bonds or mutual funds. A bond is a fixed income investment in which an investor loans money to an entity (typically corporate or governmental) which borrows the funds for a defined period of time at a variable interest rate (Hayes, 2017). A mutual fund is an investment vehicle made up of a pool of monies collected from many investors for the purpose of investing in securities such as stocks, bonds, and other assets (Investopedia, 2018). A family is deemed young if the head of the family is aged under 34. As the indicator increases, the intergenerational divide gets smaller.

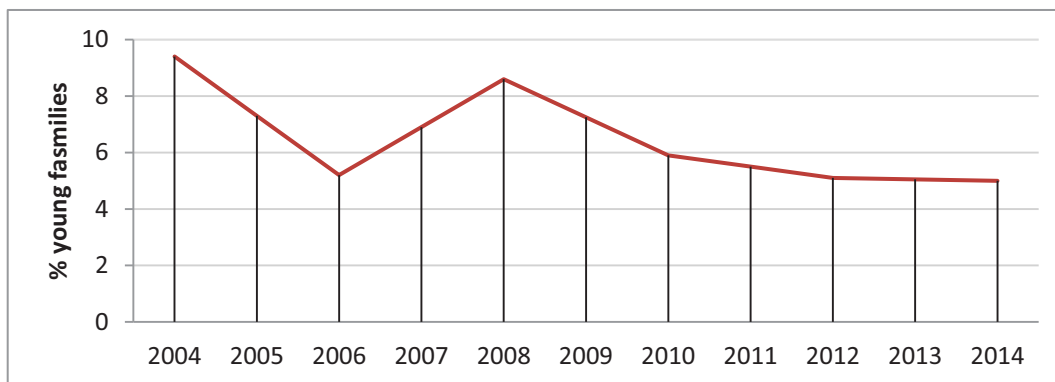


Fig. 3. Percentage of Italian young families possessing bonds or mutual funds

Source Bank of Italy data elaborated by Fondazione Bruno Visentini

- d) *Integrated pensions*: The objective is to assess to what extent young families benefit from integrated pensions. This indicator is measured by the percentage of young families who possess integrated pensions. As the indicator increases, the intergenerational divide gets smaller.

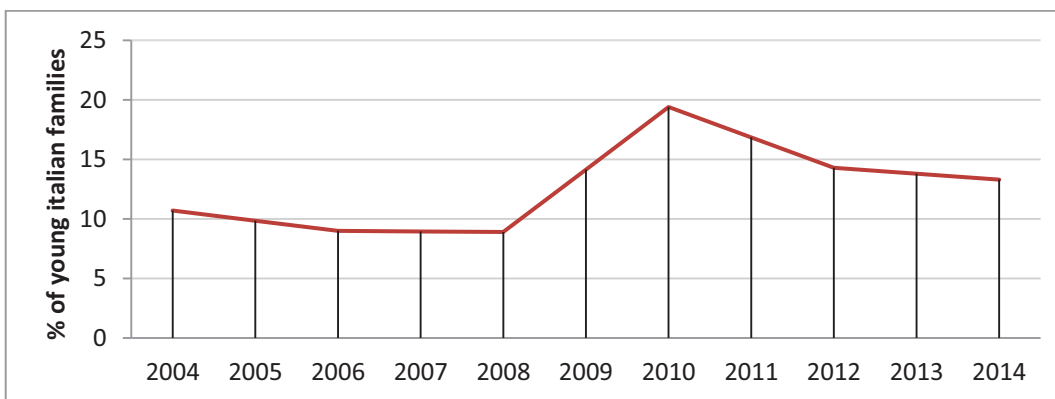


Fig. 4. Percentage of householders (under35) having complementary private pensions in Italy

Source: Bank of Italy data elaborated by Fondazione Bruno Visentini

For the second domain, *Financing*, the following three sub-indicators have been adopted:

- e) *Credit*. The objective is to assess the borrowing capacity of Italian young people, defined as the amount of money available that an individual can borrow, which is dependent on the individuals financial situation. As a result of the 2008 financial crisis, borrowing has become harder in many European countries. Banks have become more risk-averse—recent banking regulations (i.e. Basel III) have reduced the appetite for lenders to borrow to, in particular, young people. Many mortgage lenders now require significantly higher deposits from home purchasers, with 20 per cent being a typical requirement (Dolphin 2012). This reduced borrowing capacity has had knock-on effects for the wider economy. A recent report by the British Labour party found that the key drivers for falls in homeownership in England derived from *inter alia* long-term falls in relative incomes and diminished borrowing power of young people (see Redfern 2016). Such an improvement could occur through an easing of credit constraints for first time buyers through easing the prudential regulation.

In the UK, steps have been taken to improve the borrowing capacity of young people through mortgage initiatives such as the “Help to buy” scheme. As the name implies, under this initiative, people are granted favourable borrowing conditions on their first home. Although the measure does not directly target young people, as most first-time buyers are predominantly younger people, they are the cohort that is most likely to benefit. This indicator is measured as the ratio between the borrowing capacity of over-65s and under-34 age groups. The intergenerational divide grows as the indicator increases.

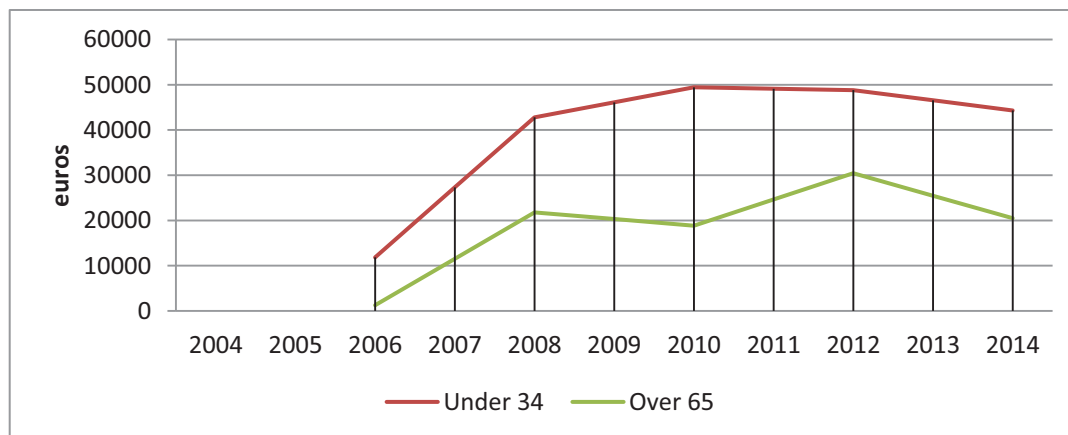


Fig. 5. Borrowing capacity

Source: Bank of Italy data elaborated by Fondazione Bruno Visentini

- f) *Debt level of families*: This indicator corresponds to the debt level of families expressed as a percentage of their available income. As the indicator increases, the GDI grows. According to Consumer Finance UK, a debt-to-income ratio of up to 43% is deemed sustainable (CFPB 2017). Likewise, in the USA, to reach the requirements for a Qualified Mortgage, the DTIR (debt-to-income ratio) must not exceed 43% (Federal Reserve Bureau 2015). In Europe, it appears that the borrowing eligibility criteria are more stringent than its American and British counterparts. For example, in Italy, borrowers are normally eligible for a mortgage as long as their DTIR does not exceed 33%. In France along with Spain, the DTIR cannot exceed 35%. As Fig.6 below shows, the debt level for Italian families has reached an unsustainable footing.

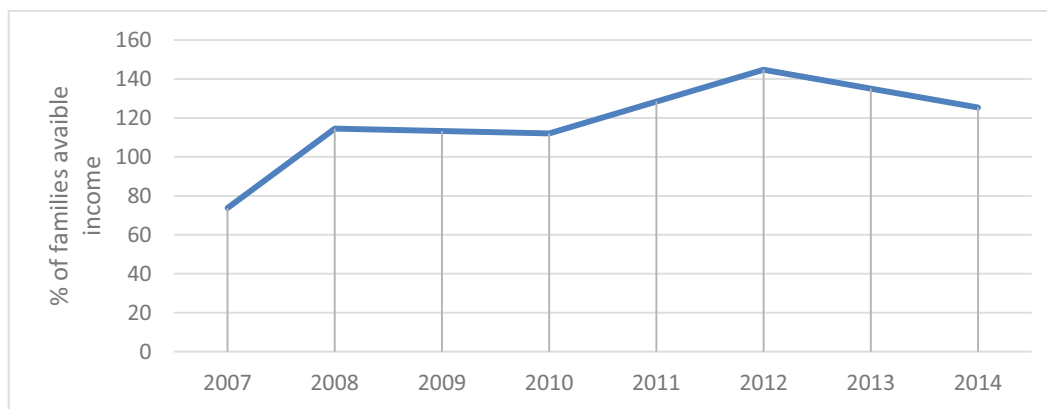


Fig. 6. Debt level of Italian families expressed as a percentage of their available income

Source: Bank of Italy data elaborated by Fondazione Bruno Visentini

g) *Insurance policies*: The objective is to evaluate to what extent the possession of insurance policies are widespread among young people. This indicator is measured as the percentage of under-34 persons possessing a life insurance policy. As the indicator increases, the intergenerational divide falls. To put it in perspective, according to Bestow, a leading American online insurance provider, up to 25% of American millennial families have taken out life insurance. Similarly, in the UK, up to 25% of millennial parents have subscribed to a life insurance policy, compared to just under 10% of Italian families (Business Insider 2017).

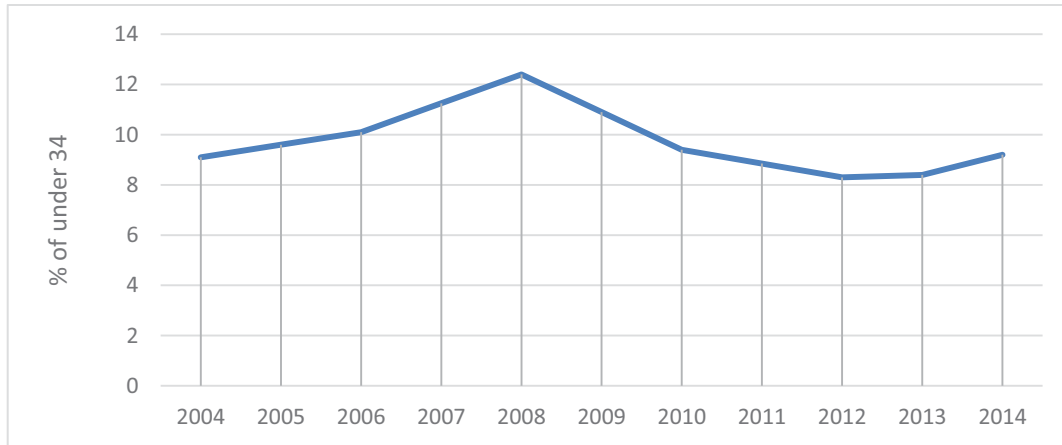


Fig. 7. Percentage of under 34 people possessing a life insurance policy in Italy

Source: Bank of Italy data elaborated by Fondazione Bruno Visentini

### 3. Results

In regards to the categories *Income*, *Wealth* and *Family Welfare*, the most negative results concern *Wealth*—in fact, this data significantly affects the whole performance of the indicator. The increasing of over-65 investments, which positively affects the whole indicator, could be relevant if we consider intergenerational solidarity between older people and their descendants. However, this is a very questionable conclusion. These long-term investments, on the one hand, might be construed as investments for prospective generations—but on the other hand, might also be considered as producing negative externalities, as arguably, these practices entrench social immobility as rich parents will transfer wealth only to their direct descendants, thereby empowering family networks. Furthermore, integrated pensions are still largely overlooked by young families. In Italy, after an increasing rate of integrated pension’s ownership until 2010, in the years from 2011-2015, that number has fallen by more than 5%.

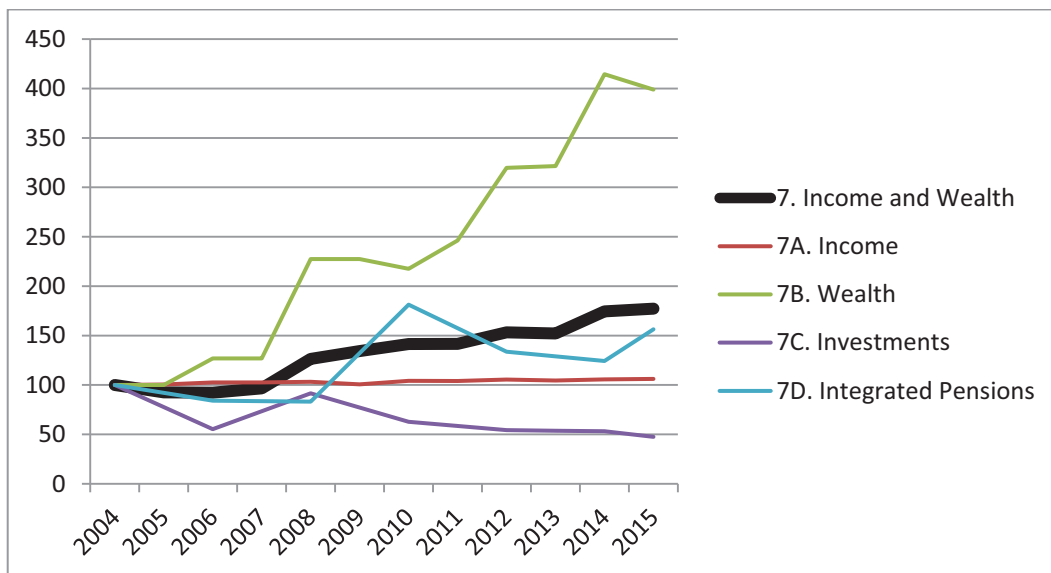


Fig. 8. GDI index of Income, Wealth and Family Welfare for Italy

Source: Fondazione Bruno Visentini GDI 2.0

Concerning the second domain, the data illustrates a marked deterioration in the *Credit* indicator i.e. the borrowing capacity. This indicator is not only influenced by the labour market for young generations, but also by the increasing general debt level. Young people are more likely to be employed on “fixed-term,” (UK) or “contratto tempo determinato” (Italy) contracts, and as a result, they have less job security than older generations. This might partially explain why the GDI for *Wealth* has widened so considerably. Focussing on *Financing*, the worst sub-indicators are *Credit* and *Debt Level* (see fig. 10). As alluded to before, integrated pension plans subscribed by under-35s remain marginal.

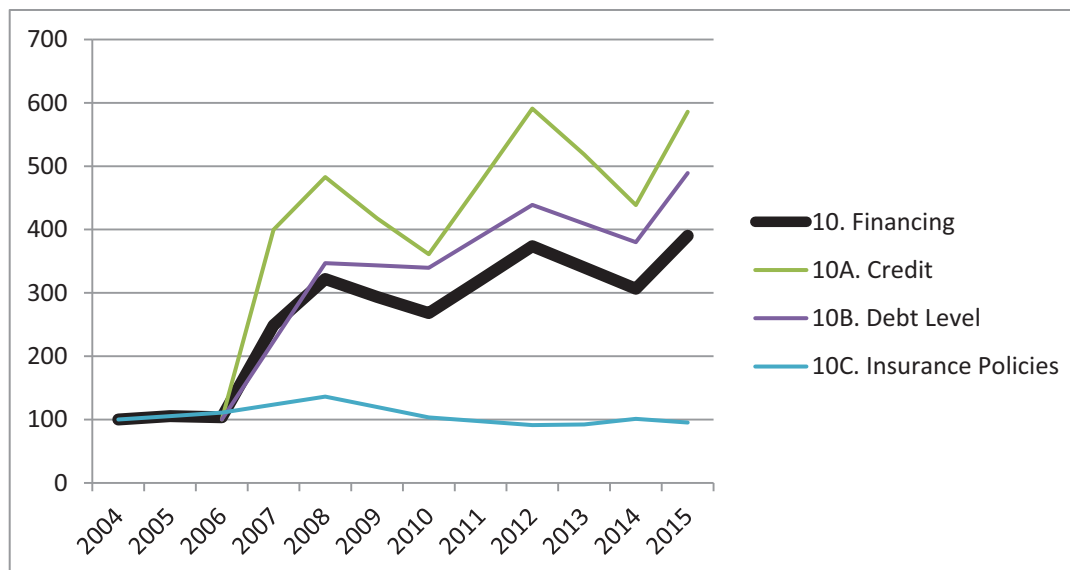


Fig. 10. GDI index of financing for Italy

Source: Fondazione Bruno Visentini GDI 2.0

#### 4. Conclusion

As far as the country case study of Italy is concerned, the deteriorating trends for *Income* and *Wealth* can be explained by the relatively low salaries and unstable unemployment arrangements for young adults (between 29 and 34 years old) vis-à-vis older generations. This phenomenon is not the cause of generational divide, but one of its effects. Therefore, any solutions should be tied to systemic, organic and multidimensional governmental policies—such as reforms to educational practices, which are garnered towards new, emerging jobs and targeted industrial policies. However, banks and assurance sectors could play a decisive role—by incentivising family investment and complementary private pension targets, promoting new and specific forms of integrated pension plans for young people and long-term investments in favor of descendants.

In short, the new GDI indicators of *Income*, *Wealth* and *Family Welfare* demonstrate, as far as the Italian case is concerned, a lack of relevant incentives to promote complementary pensions for under-35 households.

Therefore, banks and assurance companies should promote long-term investment for over-65 households in favour of their descendants. In order to avoid a simple transfer of wealth to direct descendants, this measure should be balanced by instruments of mutualisation.

#### Acknowledgements

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# Urban Conflict, Rent Seeking, and Corruption

## *Economic and Political Institutions in a Historical Perspective*

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### Abstract

This paper is an empirical analysis to explore the relationships between urban conflict and both rent seeking and corruption. It examines social disturbances in medieval France through a sample of twelve towns examined over the period 1270-1399 in a real context of informational asymmetries, commitment problems, and issues indivisibilities. As regards the economic corruption class, it is found that townspeople rebel more often and more intensely against the extortion of funds carried out by policy makers than against the embezzlement of a part of these funds. As to the political corruption class, the findings highlight that abuse of power against municipalities is identified in more social unrest than influence peddling against these local institutions. Furthermore, it is shown that rent-seeking-related policies (like arbitrary actions limiting property rights, economic rules-based policies, and targeted political measures) have less influence on urban conflict than corrupt policies do. These findings produce insights that apply beyond the historical context and analysis of the paper. Situations presenting over-indebted towns despite overtaxed people disturb also modern democracies.

**Keywords:** Corruption, Institutions, Rent seeking, Urban conflict

### 1. Introduction and Literature Overview

Modern urban conflicts are diverse and complex. Some of them may come from the gradual dismantlement of the Welfare State, the deterioration of living conditions, and the rise of slums in European cities. Others seem more ideological and political and may stem from mistrust towards governments, even from defiance, leading to increasing authority from democratic institutions faced to growing and simultaneous violence in many towns and preoccupied with avoiding civil war.

The subject of civil confrontation has generated a large literature on theoretical models and empirical studies. These contributions have delivered a significant amount of knowledge on causal factors of political conflict. However, they target distinct causes and even for the same cause they are not all consensual on the sign of causality. Firstly, some authors have shown that civil movements may be generated by asymmetric information (Fearon, 1995; Powell, 2002), commitment problems (Fearon, 1995; Walter, 1997; Acemoglu & Robinson, 2001, 2006; Fearon & Laitin, 2003; Powell, 2006) or issues indivisibilities (Fearon, 1995). Secondly, another option to address source of conflict was to consider the role of wealth distribution, inequality or fractionalization indexes. However, due to model specification and data problems, economic and political scientists have delivered positive or no conclusive findings (see the review by Lichbach, 1989). In this respect, while some studies have posited inequality appears connected to the outburst of civil turmoil (Sen, 1973; Muller & Seligson, 1987; Brockett, 1992; Biswanger et al., 1993; Alesina & Perotti, 1996; Perotti, 1996; Schock, 1996; Midlarsky, 1988, 1999; Hegre & Sambanis, 2006; among others), other relevant papers did not find a clear link between inequality and conflict (e.g., Keefer & Knack, 2002; Cramer, 2002, 2003; Collier & Hoeffler, 2004; Collier et al., 2004; Fearon & Laitin, 2003; Miguel et al., 2004; Alexander & Harding, 2005; Ostby, 2008; Thaize Challier, 2010). Civil disorder onset has nevertheless been linked to relative economic deprivation within populations (Baten & Mumme, 2013). Thirdly, other contributors, pioneered by Alesina and Rodrick (1994) have focused to another measure of inequality: the polarization index. They have indicated that a polarized population with a two-spike distribution may be more conflict-ridden than a uniformly distributed population (Foster & Wolfson, 1992; Esteban & Ray, 1994, 2008, 2011; Wolfson, 1997; Quah, 1996; Wang & Tsui, 2000; and the survey of Esteban & Schneider, 2008). Ethnic polarization has also been perceived as a predictor of civil disturbances (Montalvo & Reynal-Queyrol, 2005; Esteban et al., 2012). Fourthly, the “greed versus grievance” theory has given opposite arguments on the cause of civil war (for a survey see

Blattman & Miguel, 2010) and then it has been emphasized that the interaction between greed and political grievances underlies conflict (Keen, 2000, 2008). Fifthly, an additional set of motivations for civil unrest has given attention to complex relationships intermingling economic, social and psychological determinants (Cramer, 2003) as well as sociological elements such as social divisions with regard to ethnicity (Fearon & Laitin, 2003), geographic location (Aguirre, 2016), and political representation and participation (Tilly, 1978, 1992; Acemoglu & Robinson, 2000, 2006; Besley & Persson, 2009).

This paper examines urban social conflict by drawing on a historical perspective.<sup>i</sup> It investigates historical learning on the origins of strife in twelve municipalities of medieval France between 1270 and 1399. Evidence based on historical analyses has the advantage of both source criticism as evaluation of an information source quality and historical reasoning in the sense of successful argument to the best explanation. The main motives of social unrest identified by historians in reliable data are in fact mainly related to rent seeking and corruption. More explicitly, historical facts and narratives have enabled us to identify factor of conflict and then to classify them. When assessing social disorders occurring for more than a century in those municipalities, we have found that rent seeking and corruption are appropriate elements to explain the onset of urban violence. Krueger (1974) coined the term rent seeking from Tullock's (1967) idea. Rent seeking is usually known as the unproductive behavior aiming to obtain existing wealth or privileged benefits by means of influence over policy (Congleton & Hillman, 2015). These gains could be possible by governmental decisions and policies given that a government can empower certain groups in society and disadvantage others (McChesney, 1987; Hillman, 2015). For instance, protectionist constraints on trade first create rents, then rent seeking through income transfer or influence peddling, and lastly rent extraction or sharing of rents between those who created the rent (Hillman, 2013; Long & Vousden, 1987). (For general overviews of rent seeking and contestable rents, see Congleton et al., 2008; Hillman, 2013; Long, 2013). Another way to extract rents is corruption. Common definitions state that corruption is "sale by government officials of government property for private gain" (Shleifer & Vishny, 1993) – i.e., use of authority by public agents for unlawful personal benefits (see e.g., Shleifer & Vishny, 1993, 1998; Rose-Ackerman, 1999) – or corresponds to situations where "the power of public office is used for personal gain in a manner that contravenes the rules of the game" (Jain, 2001). (For a discussion, see Aidt, 2016, pp. 144-145). Corruption can pervade all the levels of government or bureaucracy (Abed & Gupta, 2002; Aidt et al., 2008; Williams et al., 2000) in particular given three conditions: discretionary power, economic rents, and weak institutions (Aidt, 2003, p. 633).

In most academic treatments of rent seeking and corruption, the literature has mainly focused on their role on efficiency, growth, institutions, and organizations (see for example the literature surveyed by Aidt, 2003, and Hillman, 2013). However, the relationships between rent seeking or corruption on the one hand and urban conflict on the other hand have been little explored and leave us with unresolved questions. Less is known about these links partly because of the difficulty to collect data. Measuring and analyzing this issue require that we possess a comprehensive representation of rent seeking, corruption and social tension in time and space. This was possible first using a collection of data on medieval urban unrest that we have built from historical facts and narratives. Second, observation of these historical elements allowed us to define rent seeking and corruption through various items. With regard to this, we have characterized: (i) the economic rent seeking class by arbitrary policies and rules-based policies; (ii) the economic corruption class by extortion of funds from policy makers, embezzlement of a part of these collected revenue, and extortion of real estate values; (iii) the political rent-seeking class by arbitrary policies and targeted policies; (iv) and the political corruption class by abuse of power and influence peddling against municipalities from superior rulers.<sup>ii</sup> The objective of the paper is therefore to assess the relationships between urban social movements and the diverse items making up the rent seeking and corruption classes.

The remainder of the paper is organized as follows. Section 2 provides a brief presentation of historical evidence that helps for the understanding of the rest of the research. Section 3 gives the methodology and introduces both the analytical framework and the empirics on social urban unrest. Section 4 presents the findings related to the relationships between conflict and the actions implemented by rulers engaged in rent seeking and corruption. Section 5 concludes.

## 2. Historical Context

Many forms of medieval urban governments emerged throughout Western European areas (Table A in the Appendix A for this movement in France). To investigate urban rebelliousness we focus on a sample of twelve medieval French towns that experienced a redistribution of political property rights initiated by the creation of the first emancipated municipalities. In this regard, as in many parts of the late 11<sup>th</sup>- to the early 12<sup>th</sup>-century Europe, some towns succeeded in obtaining a fairly high degree of autonomy towards local feudal lords who had to bestow privileges regarding legal, social, economic, and political aspects (e.g., Le Goff, 1998; Chédeville, 1980, pp. 171-174; Fossier, 1992, pp. 247-249; Reynolds, 1977; Pounds, 1994, pp. 244-248). These towns were known as "sworn communes" (*conjuratio*) because at their creation only householders and other property holders (generally less than half of the town-dwellers) had to swear a collective oath to foster mutual solidarity. Inhabitants had the right to participate in the election of the town administrators (sworn jurors,

*jurés*) headed by a mayor often appointed by the territorial ruler (king or overlord); later, from the second half of the 12<sup>th</sup> century, the success of European trade and banking promoted the integration of the upper bourgeois in the ruling class, and the mayor was often co-opted (see e.g., Chédeville, 1980, pp. 175-176). Sworn municipalities emerged with the required consent of the king who was extending his authority by this licensing of communes. Benefits and responsibilities of actors were carefully encapsulated in municipal charters that delimited the privileges (“liberties”) granted by overlords, after being accepted by the king; nevertheless, whereas the secular lords renounced wholly or partially to their sovereign rights in exchange for money, it was not the same for non-lay institutions outraged by these charters. The charter specified the objectives of the sworn municipality, mainly: (i) promote mutual aid that its members give each others, guarantee civil relations among townspeople, and regulate relations between its ordinary members and powerful lords; (ii) ensure efficient prevention of breach of the law by unlawful demands of lords and foresee punishment to prevent crimes (Dow, 1903, pp. 654-655); (iii) gain political liberty as the right to govern itself by selecting their own municipal rulers, the local power being collective, delegate, and dismissible; (iv) and further economic exchanges by codifying taxes, lowering tolls (reducing sales taxes as well as taxes on traveling merchants), and facilitating inter-towns trade. Within hanses, and sometimes between guilds, economic transactions could be marked with “social networks”, reciprocity, trust, and cooperation. Overall, weak institutions, low social capital (e.g. low-shared norms, rules, information, and values), and non-polarized population (Thaize Challier, 2016) nonetheless characterize the studied period.

A sworn municipality eventually became a “multiple political unit and base of organization ... in which political relations were often multi-faceted and shifting” (Lantschner, 2015, p. 22). The political property rights redistribution changed the economic property rights so that finally sworn communes “were doubtless acting less for the town than for the private interests of a greater or less number of their members” (Dow, 1903, p. 656). Bargains and arrangements took place between new local and territorial rulers as well as wealthy merchants to conserve their persons, possessions, and business (Dow, 1903, pp. 655-656). Sworn municipalities, created and protected by the kings, were initially “peace institutions”. Before the second third of the 13<sup>th</sup> century, international trade and fairs, guilds, and hanses developed and thrived thanks to the growth of land routes, waterways, and seaways; meanwhile the artisans specialized in the process of creation of the same product gathered in the towns within a district or street.<sup>iii</sup> In these sworn communes, often called “good towns of the king” (*bonnes villes du roi*) (Chevalier, 1982), the monarchs relied on the bourgeois, took them for trusted advisors, and gave them high offices. They strengthened both their authority and security of the kingdom by supporting existing towns – and by creating new ones especially on the border of their domain. They demanded high fees from the towns that sought their protection. High taxes were also a way of curbing municipal power.

In the course of time, the sworn municipalities sometimes suffered brigands, communal militias, and a merchant aristocracy who took over the municipal offices and was violent towards inhabitants and nobles themselves. Faced with this, the middle- and low-ranks of urban society disrupted and challenged the political order. Sworn local governments also fought against the lay and non-lay landlocked lordships in the city. Furthermore, many municipalities became indebted due to both mismanagement of municipal administrators in some towns and expenses bound to trials against very hostile (lay and) non-lay institutions. In other words, over time, hostility of superior rulers grew up while municipalities were subject to numerous attacks, accusations, and disfavours. From the 1270s and over the course of the fourteenth century it ensued that, in spite of new political property rights, urban population aspiration was frequently stymied by the local ruling group and/or central governing units, sparking off urban civil turmoil. Protesting groups rebelled against rulers’ practices such as economic excesses (heavy or undue taxes but not the taxes themselves), misgovernment in the form of arbitrary policies, misuse of a part of taxes, and diverse other forms of corruption. Protesters demanded either the creation of new rights or the recovery of the earlier ones.<sup>iv</sup> The communal movement declined (either under the will of the king often influenced by overlords or when some municipalities themselves asked for the suppression of their written communal charter) at a time of middle and lower groups discontent throughout Western Europe. Before the middle of the 14<sup>th</sup> century the French sworn municipalities became mainly “bourgeois towns” (*villes de bourgeoisie*, *villes de franchises*) or “provostal towns” (*villes de prévôté*) (Table A in the Appendix A), i.e., towns governed by royal or seigniorial rulers. However, despite this evolution, some municipalities still knew social grumbling. We will examine urban conflicts in the twelve towns over a period of one hundred and thirty years, the period stretching from 1270 (at that time all sampled towns were sworn municipalities) to 1399.<sup>v</sup> These dates are of course somewhat arbitrary but considering all that has just been specified, there is justification for this choice.

The urban medieval life was teeming with agency problems. For example, as is well known, the long-term contracts (here the collective oath between townspeople in sworn municipalities, or the municipal charter ratified between the king, the potential future representatives of the city council, and sometimes the territorial overlord) provided possibilities of shirking whereas the short-term contracts (like the one- or two-year contract of the local rulers’ mandates) enabled opportunities of pretending. Asymmetries of information, commitment problems, and issue indivisibilities contributed to spark conflict (Fearon, 1995, Fearon & Laitin, 2003, Blattman & Miguel, 2010). A first source of inefficiency and urban



troubles was obviously due to informational asymmetries such as those related to uncertainty on rulers themselves (adverse selection) or their policies (moral hazard). In the real context of the paper, adverse selection occurred when, before the charter was written / re-examined or before the municipal rulers were elected, the uninformed party (e.g. homeowners swearing the communal oath) ignored the morality of the municipal rulers they elected as well as their capability to drive a good governance. Moreover, moral hazard arose when, once the charter was signed or when the municipal elections were over, the informed policymakers engaged in untoward activities for the other party, which led to the opportunistic and corrupt activities analyzed in this paper. Second, besides asymmetries of information, commitment problems and incomplete contracting seem also significant. For example, credible commitments to social peace have not always been upheld, the commitment difficulty sometimes coming from the inability to deal without a third-party enforcer. The kings were however not always reliable third-party enforcers: after having favoured the creation and maintenance of municipalities, they sometimes reneged and supported their abolition. Additionally there were also issues indivisibilities. For example, there could be no compromise due to the enduring hostility against the communal movement from non-lay institutions or other territorial entities. In the end, besides the limits to the enforcement of municipal charters, there were also limits to conflict resolution due to weak institutions and few checks and balances on powerful leaders, economic and political property rights being neither well defined nor protected.

### 3. Methodology

As for the analytical framework, several methods have been experienced in the literature concerning the construction of conflict index. Some scholars identify societal violence with civil war or with a number of deaths above a fixed level (Collier & Hoeffler, 1998; 2004; Fearon & Laitin, 2003). Others capture the number of disorders in a given period (Svensson, 1998). Another part of the literature defines an aggregate index that projects diverse variables (like dispute, riot, rebellion, revolt, and so on) into one dimension (Hibbs, 1973; Venieris & Gupta, 1986). In the current paper, for each town we define the mass of civil conflict  $m$  by the sum of the intensity violence  $v$  of each conflict:

$$m = \sum v. \quad (1)$$

For each town, the mean intensity violence  $\bar{v}$  is given by:  $\bar{v} = m/\rho$  where  $\rho$  is the occurrence of conflict. Put differently, the mass of civil conflict is also given by:

$$m = \bar{v} \times \rho. \quad (2)$$

To analyze urban civil violence we explore consensual historical studies identified as very good evidence coming from original sources (e.g., municipal accounts and registers, tax rolls, communal charters, town ordinances, royal and seigniorial documents, court cases, inquiries, condemnations, and local chronicles, among others). The sample selection process is as follows. Firstly, we construct a reduced sample of communes that both experienced at least one social uproar over the period and offered sufficient data on: (i) the identity of the protesters and their opponents and (ii) economic and political/administrative rent seeking and corruption. The field of investigation is therefore reduced to the following French 12 towns whose date of creation of their sworn commune is indicated in parentheses: Amiens (1113), Beauvais (c. 1108), Compiègne (1153), Laon (c.1107-c.1111), Noyon (c. 1108), Poitiers (1138), Provins (1230), Senlis (1173), Sens (1246), Soissons (c.1116), St-Quentin (c.1080-c.1102), and Valenciennes (1114). Moreover, these communes offer a wide array of economic specialization, administrative operations, and political situations and are distinct from a geographical perspective, although mostly covering the north and northeast of France. Over the period 1270-1399, we control for each town time persistent traits as well as change. Secondly, as to the collect of data, we identify each urban conflict by 28 observations regarding its intensity, nature, and identity of the protagonists. Then, we pinpoint each conflict by 108 observations regarding its origins (the economic ones are captured by 66 observations and the political/administrative ones by 42 observations). This leaves us with 136 observations for each social unrest. Given that we observe 51 conflicts for the 12 cities, the final sample consists of 6,936 observations.

Then, with regard to the concrete evaluation of the mass of societal conflict  $m$  for each town, we classify the conflict intensity and determine its corresponding *quantitative* scale by means of notional values (see Table B1 in the Appendix B for the definition of the five quintiles assessing the *very low*, *low*, *medium*, *high*, and *very high* conflict). Afterwards we collect the evidence by means of the textual data method (see Lebart and Salem, 1994; Guérin-Pace, 1997) that is made possible through an excellent documentary reference offered by a large number of authors as said above. Afterwards, due both to the theoretical framework and the empirical research, we collect the pieces of evidence on the occurrence and intensity of the civil disturbances. We lastly compute the average mass of conflict  $m$  for each town. (See Equations (1) and (2) and Tables B2 and B3 in the Appendix B).

Table B1 clearly shows that we voluntarily exclude some violence like external conflict between towns and outside actors, struggles between duchies or counties, civil wars, the Hundred Years War and other fights against the foreign occupier, as well as environmental causes (bad harvests, high foodstuffs prices and the subsequent famines). The paper hence focuses on a myriad of social movements ranging from tumults over specific issues to full-scale urban revolts intending to the

reorganization of the local political life. Tables B2 and B3 present the descriptive statistics of the 51 conflicts that took place in the sample of the twelve towns throughout the period under study. Some revolts were isolated facts whereas others were linked to earlier ones via events distributed across time and space. Others were collective actions (Tilly, 1978) like riots – defined by irrational angry crowd, ordinary people protesting in an uncontrolled way – or rebellions – organized resistance to any authority and based on carefully structured solidarity through topographical unities (e.g., quarters or streets), vocational relations (in craft guilds), or voluntary associations (e.g., brotherhoods) (see e.g., Vincent, 1994; Dumolyn & Haemers, 2005). The baseline findings presented in Tables B2 and B3 show that one town (Provins) underwent 13 conflicts with a quasi-high average intensity. At the other end, two towns (respectively Noyon and Poitiers) knew only one conflict whose intensity mean is respectively very high and very low; the town of Senlis experienced two social disturbances (high mean of intensity). Between these extremes, two towns (Amiens and Laon) endured six societal movements with a high mean of intensity. Two other towns (St-Quentin and Valenciennes) suffered five conflicts with the same quasi-high mean of intensity. Finally, three towns (Compiègne, Sens, and Soissons) experienced three social protests with a quasi-moderate average intensity while one town (Beauvais) underwent three revolts with a high mean of intensity. To simplify reading and bring out essential facts, an additional presentation given in Table B4 also displays two large categories of conflict intensity: the one of ‘weak’ intensities (corresponding to the sum of *very low*, *low*, and *medium* intensities) and the one of ‘strong’ intensities (collecting *high* and *very high* intensities).

Depending on usual definitions of rent seeking and corruption, it is possible to have rent seeking without corruption and vice versa; however it is right that these two phenomena are not entirely different (Aidt, 2016, p. 145). To untangle as clearly as possible originally intertwined real historical situations, we classify unlawful or illegal actions or policies in the corruption class and sort the lawful or legal ones in the rent seeking class. Our empirical evidence on urban protest gives thus rise to the following typology according to the nature of property rights concerned (see Table 1 for a synoptic view). First, we identify economic rent seeking by arbitrary policies – i.e. the arbitrary labour policies on wages and working hours as well as the arbitrary policies limiting other economic property rights – and by rules-based policies – mainly the monopolization of economic market and the encroachment on economic rights. Second, we define political / administrative rent seeking both by arbitrary policies limiting political / administrative rights and by targeted policies via the encroachment on municipal charges. Third, we examine economic corruption through three types of notions concerning crimes and offenses against economic property rights as: the extortion of funds by policy makers, the embezzlement of public funds, and the extortion of real estate values. Fourth, we assess political / administrative corruption by examining crimes and offenses against public institutions committed by political leaders. We measure corrupt behaviors by the abuse of power and the influence peddling against sworn municipalities.

Table 1. Taxonomy of rent seeking and corruption (10 items)

<b>Economic property rights</b>
<b>Economic rent seeking class</b>
1. Rules-based policies: monopolization of economic markets, infringement of banal rights, and other misdoings.
2. Arbitrary labour policies: labour rent extraction on wages and /or on working hours.
3. Arbitrary policies limiting other economic rights.
Creation of <i>new</i> taxes (poll taxes, taxes on consumption).
Unpredictable changes related to diverse economic rights.
<b>Economic corruption class</b>
4. Extortion of funds by policy makers.
Within the jurisdiction: levy of not justified taxes or taxes exceeding the amount due.
Outside the jurisdiction: usurpation of economic rights by levying of taxes.
Currency manipulation by the king.
5. Extortion of real estate values.
6. Embezzlement of public funds by policy makers.
<b>Political/administrative property rights</b>
<b>Political or administrative rent seeking class</b>
7. Arbitrary policies limiting political or administrative rights:

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Unpredictable municipal policies.

Arbitrary reorganization of municipalities.

8. Targeted policies via encroachment on municipal charges:

    Transpassing of superior authorities to limit or remove municipal rights.

    Encroachment in the municipal affairs of powerful guilds to their own gain.

**Political or administrative corruption class**

9. Abuse of power against municipalities:

    Abusive supervision and policies.

    Despotism such as intimidating acts and relentless hostility.

10. Influence peddling against municipalities:

    Bribes paid to the king by certain municipalities to continue to exist.

    Bribes paid to the king by non-lay institutions in exchange for the overthrow of municipalities.

    Bribes paid to legal institutions by non-lay institutions in return for the overthrow of municipalities.

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Table 2. Number of conflicts according to their origins,  $N_o$  <sup>(a)</sup>

Origins of conflicts	$N_o$ and ( $N_o / 51$ )
<b>ECONOMIC PROPERTY RIGHTS</b>	
<b>Economic rent seeking class</b>	
Rules-based policies	12 (23.5)
Arbitrary labour policies	6 (11.7)
Arbitrary policies limiting economic rights	6 (11.7)
<b>Subtotal :</b>	<b>24 (47)</b>
<b>Economic corruption class</b>	
Extortion of funds by policy makers	26 (50.9)
Extortion of real estate values	5 (9.8)
Embezzlement of public funds by policy makers	8 (15.7)
<b>Subtotal :</b>	<b>39 (76.4)</b>
<b>POLITICAL PROPERTY RIGHTS</b>	
<b>Political or administrative rent seeking class</b>	
Arbitrary policies limiting political or administrative rights	12 (23.5)
Targeted policies <i>via</i> encroachment on municipal charges	15 (29.4)
<b>Subtotal :</b>	<b>27 (52.9)</b>
<b>Political or administrative corruption class</b>	
Abuse of power against municipalities	20 (39.2)
Influence peddling against municipalities	11 (21.6)
<b>Subtotal :</b>	<b>31 (60.8)</b>

Note: (a)  $N_o$ , the total number of conflicts according to their origins, is greater than the total number of conflicts (51) because some conflicts are due to several motives.

Table 3. Number of conflicts according to their intensities and origins

Origins of conflicts	Number of conflicts according to their intensities and origins <sup>(a)</sup>					Total: $N_o$
	Very Low	Low	Medium	High	Very High	
<b>Economic rent seeking class</b>						
Rules-based policies	-	1 (8.3)	5 (41.7)	3 (25)	3 (25)	12
Arbitrary labour policies	-	-	3 (50)	1 (16.7)	2 (33.3)	6
Arbitrary policies limiting economic rights	-	-	2 (33.3)	2 (33.3)	2 (33.3)	6
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	-	<b>1 (4.1)</b>	<b>10 (41.7)</b>	<b>6 (25)</b>	<b>7 (29.2)</b>	<b>24</b>
<b>Economic corruption class</b>						
Extortion of funds by policy makers	-	-	6 (23.0)	10 (38.5)	10 (38.5)	26
Extortion of real estate values	-	-	1 (20)	-	4 (80)	5
Embezzlement of public funds by policy makers	-	-	3 (37.5)	2 (25)	3 (37.5)	8
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	-	-	<b>10 (25.6)</b>	<b>12 (30.8)</b>	<b>17 (43.6)</b>	<b>39</b>
<b>Political or administrative rent seeking class</b>						
Arbitrary policies limiting political or administrative rights	-	-	7 (58.3)	3 (25)	2 (16.7)	12
Targeted policies <i>via</i> encroachment on municipal charges	-	1 (6.7)	7 (46.7)	5 (33.3)	2 (13.3)	15
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	-	<b>1 (3.7)</b>	<b>14 (51.9)</b>	<b>8 (29.6)</b>	<b>4 (14.8)</b>	<b>27</b>
<b>Political or administrative corruption class</b>						
Abuse of power against municipalities	-	-	10 (50)	6 (30)	4 (20)	20
Influence peddling against municipalities	-	1 (9.1)	3 (27.3)	3 (27.3)	4 (36.3)	11
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	-	<b>1 (3.2)</b>	<b>13 (41.9)</b>	<b>9 (29)</b>	<b>8 (25.8)</b>	<b>31</b>

Note: (a) The total number of conflicts according to their origins is greater than the total number of conflicts (51) because some conflicts are due to several motives.

Table 4. Number of times a social group is involved in the origins of conflicts (for each class and its items)<sup>(a)</sup>

Origins of conflicts	Municipal rulers	Rich merchants / corporation masters	Kings, relatives, royal agents (state-centred officials)	Non-lay institutions / organizations	Lay overlords	Total $N_{SG}$
<b>Economic rent seeking class</b>						
Rules-based policies						
Arbitrary labour policies	8 (40) <sup>(b)</sup>	8 (40)	-	4 (20)	-	20
Arbitrary policies limiting economic rights	6 (50)	6 (50)	-	-	-	12
	1 (14.3)	1 (14.3)	2 (28.6)	3 (42.8)	-	7
<b>Subtotal <math>n</math> and <math>(n/N_{SG})</math></b>	<b>15 (38.5)</b>	<b>15 (38.5)</b>	<b>2 (5.1)</b>	<b>7 (17.9)</b>	<b>-</b>	<b>39</b>
<b>Economic corruption class</b>						
Extortion of funds by policy makers	5 (17.9)	-	18 (64.3)	4 (14.3)	1 (3.5)	28
Extortion of real estate values	-	-	-	5 (100)	-	5
Embezzlement of public funds by policy makers	7 (87.5)	-	1 (12.5)	-	-	8
	<b>12 (29.3)</b>	<b>-</b>	<b>19 (46.3)</b>	<b>9 (22)</b>	<b>1 (2.4)</b>	<b>41</b>
<b>Subtotal <math>n</math> and <math>(n/N_{SG})</math></b>						
<b>Political or administrative rent seeking class</b>						
Arbitrary policies limiting political or administrative rights	-	-	7 (46.7)	5 (33.3)	3 (20.0)	15
Targeted policies via encroachment on municipal charges	1 (6.2)	3 (18.7)	6 (37.5)	3 (18.7)	3 (18.7)	16
<b>Subtotal <math>n</math> and <math>(n/N_{SG})</math></b>	<b>1 (3.2)</b>	<b>3 (9.7)</b>	<b>13 (41.9)</b>	<b>8 (25.8)</b>	<b>6 (19.4)</b>	<b>31</b>
<b>Political or administrative corruption class</b>						
Abuse of power against municipalities	-	-	8 (33.3)	13 (54.2)	3 (12.5)	24
Influence peddling against municipalities	5 (23.8)	-	10 (47.6)	6 (28.6)	-	21
<b>Subtotal <math>n</math> and <math>(n/N_{SG})</math></b>	<b>5 (11.1)</b>	<b>-</b>	<b>18 (40)</b>	<b>19 (42.2)</b>	<b>3 (6.7)</b>	<b>45</b>

Notes: (a) For each town, the number of social groups  $N_{SG}$  at the origin of conflicts can be higher than the number of conflicts because a same conflict can involve several social groups. (b) Parenthesis: For a number of conflicts observed in a given item and a given social group, the number in brackets is the share of that number in the total number of conflicts in the item.

#### 4. In-Depth Study of Conflict and Pertaining Findings

Table 2 reports the findings of our investigation on the number of social protests according to their origins,  $N_o$ . (Remember that some protests being due to several factors, the total number of conflicts counted by factor is greater than the total number of conflicts, i.e., 51). With this in mind, Table 2 shows that the class corresponding to the economic corruption is the most important source of discontent as it affects 39 conflicts on the total of 51 (that is to say, 76.4%). Come next the political / administrative corruption class (60.8%), then the class of political / administrative rent seeking (52.9%), and lastly the economic rent seeking class (47%). In what follows, we dwell on each class according to the intensities of urban conflict and their specific sources.

##### 4.1 The Economic Rent-Seeking Class

In our context, economic rent seeking encompasses rules-based policies (mainly monopolization of economic markets), arbitrary policies including labour policies (i.e., labour rent extraction despite earlier codified rules) as well as other arbitrary policies on markets or institutions. We now examine the respective effects of arbitrary and rules-based policies on the occurrence and intensity of urban conflict (Table 2). The item ‘rules-based policies’ is the most significant constituent of this class (23.5% among the 51 conflicts of the sample), surpassing the motives bound to ‘arbitrary labour policies’ (11.7%) and to ‘arbitrary policies limiting other economic rights’ (11.7%) (Table 2). By adding the last two items, it nevertheless results that both arbitrary and rules-based policies engender the same number of conflict. Furthermore, 54.2% of the societal unrest intensities linked to this economic rent-seeking class appears ‘strong’ (i.e., 25% high and 29.2% very high) while 45.8% are proving to be ‘weak’ (i.e., 4.1% low and 41.7% medium) (Tables 3 and B4). Finally, social groups involved in this economic rent seeking class are the ones of the municipal rulers and wealthy merchants (both together: 76.8%), non-lay institutions (17.9%), and royal administration (5.1%) (Table 4).<sup>vi</sup> The respective effects of arbitrary and rules-based policies on the occurrence and intensity of urban protests are as follows.

*Rules-based policies.* The item ‘rules-based policies’ refers to two elements. (i) It firstly concerns the monopolization of economic markets, i.e. the exclusive rights and domination of markets. In northern Europe, hanses and guilds were sworn communities of traders and merchants established in networks in several places where international fairs took place, or near these fairs. For instance, regarding the textile industry, five towns of our sample (Amiens, Beauvais, Provins, St-Quentin, and Valenciennes) were members of the *Hanse of the Seventeen Towns* that was a guild of cloth merchants gathering a number of Flemish and French textile-producing towns from the 1230s to the 14<sup>th</sup> century.<sup>vii</sup> The aim of this professional organization was not only to foster the sale of the textile production but also to protect the economic interests and privileges of the merchants and corporation masters living in the affiliated towns. In the other towns under review, artisans were also organized in (major and minor) guilds establishing a monopoly for their members within the urban area.<sup>viii</sup> Whether the professions were regulated or sworn,<sup>ix</sup> each guild held the trade monopoly in its craft within the town where it was located. The professions were not considered of equal weight but ranked according to their social and economic importance, themselves defined by the urban institutional rules and/or the tax system (Fossier, 1994, p. 327; Roux 2004, p. 75). In most cases, greater guilds (mainly those of judges, notaries, moneychangers, moneylenders, or artisans working in the wool, fur, or silk areas) constituted the major part of the municipal electoral colleges. Craft guilds thus influenced the urban governments regarding mainly craft regulation – tax rules, prices and quality of products, training prerequisites, other standards, working hours, and so on. Guilds gradually wielded important economic power in the urban domain (Ogilvie, 2008; 2011). For example, most of the mayors were drawn from the narrow circle of well off merchants and corporation masters, i.e. in oligarchic families sharing lucrative and honorary functions. (In other contexts, see Ekelund & Tollison, 1981; Wintrobe, 1998; Congleton & Lee, 2009, p. 113). Guilds redistributed resources to politically influential traders, their main goal being to develop their rent seeking activities (for economic studies, see e.g., Hillman & Katz, 1987; Shleifer & Vishny, 1993). This eventually entailed disgruntlement and urban upheavals. (ii) Secondly, rules-based policies also concern royal and non-lay institutions engaged either in trespassing on municipal jurisdiction for the sole purpose to recover taxpayers or sometimes in infringing banal rights despite the granting of municipal charters, which generated grievances from the bulk of the population and eventually social tension.

The findings show that conflict intensities are low (8.3%), medium (41.7%), high (25%), and very high (25%), which gives a perfect balance between ‘strong’ and ‘weak’ intensities (Table 3). These ‘strong’ disturbances indicate how the guilds were monopolistic and exclusive institutions using many means to dominate the market and keep the competing artisans away, which would confirm the point of view of Ogilvie's (2011). Three social groups are involved in rules-based policies: municipal rulers (40%), rich merchants/corporation masters (40%), and non-lay institutions (20%) (Table 4). In the end, the findings suggest that urban confrontations appear fuelled by deadweight losses imposed because of various encroachments carried out by local oligarchs as well as through protectionist policies and their subsequent monopoly pricing and distortions of markets.

*Arbitrary labour policies.* These arbitrary labour policies concerned two types of workers. (i) Regarding the increasing

category of semi-skilled and skilled labourers (apprentices, journeymen) working in the guilds, rent seeking refers to labour rent extraction on wages and/or working hours in spite of earlier fixed rules. Actually, although guilds promoted vocational identity via social codes and legal statuses, they were unable to promote general social capital and welfare (Ogilvie, 2011). For example, in some towns, the ruling merchant oligarchy played off workers paid by the day and those paid by the piece, and set greater guilds against lesser artisanal ones to extract more labour rents. In other cases (mainly Amiens, Beauvais and Provins), employees rebelled against the length of the working day or its lengthening. (ii) Rent seeking also concerns self-employed unskilled or semi-skilled workers (mainly small artisans, temporary workers, migrant workers) without regular earnings, paid either on a daily basis, or for a specific task, or for short-term contracts, who also revolted against inappropriate wages. (Among the abundant historical literature, see e.g., Halphen, 1964; Le Goff, 1964, 1991; Mollat & Wolff, 1973; Hilton, 1995; Richardson, 2004; Ogilvie, 2011; Boissonnade, 2013; Cohn, 2012; Firnhaber-Baker & Schoenaers, 2016).

The findings clearly highlight that conflict intensities concerned by arbitrary labour policies are medium (50%), high (16.7%), and very high (33.3%) (Table 3), which represents a strict balance between ‘strong’ and ‘weak’ intensities. Moreover, these revolts broke out obviously against rich merchants / corporation masters but also against municipal rulers belonging to the oligarchic families in the guild-based urban government (Table 4); it was the case of the towns of Amiens (1335 and 1351), Beauvais (1390), and Provins (1280, 1324, and 1348).<sup>x</sup>

*Arbitrary policies limiting economic rights.* These other arbitrary policies refer to decisions or actions aiming at a mercantile accumulation without regard to economic rules or facts. They were supported by unforeseeable or random decisions without consideration for the collective well-being. In our context, they gather: (i) levying of taxes whose amount is constantly changed; (ii) seeking new sources of taxation on individuals (poll taxes), products (e.g., taxes on grain, wool and other raw materials, and manufactured goods,) and consumption, rulers thereby funding territory’s defense or strengthening their position or wealth; and (iii) unpredictable changes implemented by lay or non-lay overlords regarding banal rights and other coveted economic rights (e.g. Burg, 2004; Skoda, 2013).

The findings point out that conflict intensities are identically distributed (33.3%) in three levels (medium, high, and very high intensities) (Table 3), which gives a summarized ‘strong’ level (66.6%) indicating a significant opposition to this type of rent seeking. The change from non-contestable to contestable rents (Aidt and Hillman, 2008) due to the excess burden in taxation (Kahana & Klunover, 2014) thus ignited huge protests. Moreover, rent-seeking groups involved in these arbitrary policies are mainly the ones of non-lay institutions (42.8%), then royal administration (28.6%), the ones of rich merchants/corporation masters (14.3%), and municipal councilors (14.3%) (Table 4). Rent seeking appears here based on arbitrariness coming from this alliance of entities (corporations, city council and superior political decision makers) in quest of a common private gain by often modifying tax laws and common rights.

To summarize this subsection 4.1, both arbitrary and rules-based policies entail the same number of urban protests (Table 2) and barely more than half of them (54.2%) are of ‘strong’ intensity (Table B4).

#### 4.2 The Economic Corruption Class

Economic corruption here gathers extortion of funds by policy leaders, extortion of real estate values, and embezzlement of public funds (Table 1). Urban dwellers reacted strongly to economic corruption since very-high intensity protests are the most represented (43.6%), followed by high-intensity ones (30.8%), so that 74.4% of the agitation in which this class is involved are outbreaks (Tables 3 and B4). They faced adverse selection and moral hazard given that they were poorly informed on local rulers’ types and behaviours. Extortion of funds by local and territorial political leaders is the most important factor of economic corruption (50.9 % of the total number of conflicts), outdistancing the embezzlement of a part of these public funds (15.7 %) and the extortion of real estate values by non-lay institutions (9.8%) (Table 2). The findings on these first two elements mean that citizens revolt more against the extortion of funds (unjustified taxes and diverse economic usurpations) than against the misuse that was made of a portion of these public receipts. Put differently, upstream extortion of tax revenue obviously sparks more large-scale popular revolts than the downstream embezzlement. The details by item are as follows.

*Extortion of funds by policy makers.* The extortion of funds by royal leaders (kings, bailiffs, provosts, and other tax collectors) and local agents working for municipalities or non-lay institutions captures a form of bureaucratic corruption gathering at least two main misconducts: undue taxation and usurpation of economic rights.<sup>xi</sup> (i) Extortion of funds took place when local and royal governments levied not justified taxes or taxes exceeding the amount due (Mollat, 1986, 2006; Hilton, 1989; Cohn, 2012), or when local rulers distorted the tax base for their own benefits (Duby, 1968, p. 144). (ii) Some decision makers usurped economic rights given their political influence, by acting beyond their powers (*ultra vires*) or by levying funds outside their authority or jurisdiction, through ruse, fraud, or violence.

Extortion of a part of personal earnings was chiefly the work of out-of-control royal agents (64.3% of the cases), but also sometimes of municipal rulers (17.9%) and non-lay institutions (14.3%) (Table 4). These findings first imply that, in some

towns, short-lived municipal leaders responsible for tax collection may be fairly honest either because they internalized moral costs or feared being pinpointed by planned or random institutional controls and subject to legal punishments (for a theoretical analysis see Rose-Ackerman, 1975). Second, in contrast, excessive taxes suggest the non-benevolence of kings and the predatory of some affiliate officials (on predatory state, see Besley & Persson, 2011), all this being accentuated by some corrupt representatives of non-lay institutions. Due to the growing size of the government, it seems that the heavy-spending royal administration was unable to curtail its power to tax. (For a theoretical review on this topic, see Besley, 2006). That led to inefficient policies and corrupt opportunities (Shleifer & Vishny, 1998). Not only the preferences of local citizens were not aligned with the ones of their local representatives but also the latter were unable to discipline their members due largely to the electoral system and informational asymmetries. Overall, extortion of money inflamed the crowds ending with both very high- and high-intensity urban popular rebellions (38.5% of the total conflicts for each of them, therefore 77% of 'strong' intensities) whereas medium-intensity ones were less present (23% of all conflicts under study) (Table 3).

*Embezzlement of public funds.* Misuse of tax receipts is another form of bureaucratic corruption characterized by the fraudulent misappropriation of public assets by policy leaders because of lack of civic virtue and excessive class-based interests. Embezzlement against people and public institutions left few resources to fund common services<sup>xii</sup>, which may explain the subsequent increasing levy of arbitrary and huge taxes. Given that collective property rights were ill defined and /or unprotected, sanctions against the embezzlers could not be decided by the administrative side itself but rather by popular revolts.

The findings show that 37.5% of the social tensions involved in these breaches against the duty of probity are of medium intensity whereas other 37.5% are of very high intensity and 25% of high intensity (i.e., 62.5% for the two latter intensities) (Table 3). Faced with unsanctioned misappropriation of public money, the injured party began to have doubts about the legitimacy of the system and then revolted with enough force. Regarding the social groups involved in the embezzlement of public revenue, it appears that 87.5% of this peculation was due to power- and revenue-maximizing municipal rulers. Local peculators were hence careful not to change the rules. However, these misconducts justified tax audits by royal investigators. Yet, despite audit reports, embezzlement ended up starting again. Selfishness and misuse of municipal receipts consequently maintained vulnerable property rights (Table 4). This suggests a self-reinforced corruption pointing out the role of history as a determinant of corruption (Acemoglu et al., 2001, 2002; Acemoglu & Robinson, 2012; Aidt, 2003 pp. 647-648; La Porta et al., 2008; Di Liberto & Sideri, 2015).

In sum, both items 'extortion of funds' and 'embezzlement of public funds' highlight prominent relationships between economic corruption and urban conflict. Indeed, the factors listed in the economic corruption class are observed in three-quarters of the total number of conflicts. However, these elements do not have the same weight: the extortion of funds by political leaders is observed in fifty percent (50.9%) of the overall number of conflicts in the sample whereas the embezzlement of tax revenue is only identified in fifteen percent (15.7%) of these urban movements (Table 2). In addition, *mutatis mutandis*, the extortion of funds carried out by policy makers through excessive taxes and unfair changes in taxation generates more social unrest (76.9%) than the embezzlement of a portion of these funds does (62.5%).

*Extortion of real estate values.* At this time of urban emancipation, the possession of land was a real basis of power. Historical evidence has disclosed that non-lay institutions sometimes practiced the extortion of real estate values to the detriment of municipalities (Saint-Denis, 1994, 2000). For example, in bishoprics, several agents (e.g., vidames and vicars) performed functions such as protecting the temporal holdings of the bishopric and, accordingly they enlarged the ecclesiastical enclosed plots. To do this, they misappropriated inheritances and aroused donations, bartering or purchases using figureheads or other subterfuges. Because of these slow encroachments, municipal jurisdictions lost a significant part of the private urban land.<sup>xiii</sup> The aim was to extend the bishop's jurisdiction to gain more power and in some cases to recover more taxpayers. Later, the prelates themselves purchased the rights of jurisdiction that still belonged to their delegates (Saint-Denis, 1994, 2000).<sup>xiv</sup> Shady land appropriation was at the origin of violent revolts and their flare-up. Actually, 80% of the disturbances related to this form of unremitting appropriation of land were of very high intensity and 20% of medium intensity (Table 3).

#### 4.3 The Political/Administrative Rent-Seeking Class

The political / administrative rent-seeking class incorporates both arbitrary and targeted policies (Table 1). In this class, social unrest characterized by 'weak' intensity (55.6%) predominates slightly over the 'strong' intensity one (44.4%) (Table B4). More specifically, the item called targeted policies via encroachment on municipal charges by higher authorities represents 29.4% of the 51 social movements, followed closely (23.5%) by the one of the arbitrary policies limiting political / administrative rights from local and higher rulers (Table 2).

*Arbitrary policies limiting political / administrative rights.* These arbitrary policies group together: (i) unpredictable policies triggered by the multiplication of sudden by-laws or local ordinances. In fact, a myriad of executive bodies of



performing municipal officials acted for different objectives such as collecting taxes, holding guild assemblies and court meetings, auditing counts, advising town councilors, and so on. However, there were also policies subjectively decided from non-performing local rulers; these empowered protagonists did not refrain from opportunism to get extra payments. The fact that some entrenched oligarchic families did not justify their privileges by major talents nor even by a scrupulous administration eventually prompted the inhabitants to demand the dissolution of their communes (Landes, 1995, p. 245; Le Goff, 1998); and (ii) arbitrary reorganization of the municipalities after the exclusion of some town councillors or brotherhoods' heads (the chiefs of the "little bourgeoisie") – when they presented their grievances to the Parliament of Paris and finally endured setbacks (Petit-Dutaillis, 2012).

The findings reveal that 58.3% of disturbances connected to arbitrary policies curbing political / administrative rights are of medium intensity, 25% of high intensity, and 16.7% of very high intensity (Table 3). Social groups involved are the one of the state-centred leaders (46.7%), non-lay institutions (33.3%), and lay overlords (20%) (Table 4). In sum, these institutions used resources to unjustifiably modify pre-existing activities and organizations rather than to engage in more productive and efficient ones. (For this form of rent-seeking mechanism, see Congleton et al., 2008).

*Targeted policies via encroachment on municipal charges by superior authorities.* These targeted policies encompass two elements: (i) the interference with the town councils' affairs by higher decision makers. On the one hand, the meddling of royal agents in the local administrations seems to have been intended to limit communal rights. However, in the discharge of royal elites, the encroachments come from the inability of municipal councilors to lead good urban governance, the latter being sometimes chosen because of defective electoral systems (Petit-Dutaillis, 2012, p. 281). In contrast, the trespassing of non-lay institutions aimed to eliminate communal rights (see e.g., Leroux, 1839); and (ii) the growing intrusion in the municipal affairs of powerful guild masters to the detriment of artisanal ones. The objective of this form of lobbying was to constantly preserve the reputation of both town and guild itself subordinated to fairs and export of products.

State-centred rulers (37.5%), non-lay institutions (18.7%), and lay overlords (18.7%) carry out these targeted policies (Table 4). The conflict intensities are medium (46.7%), then high (33.3%), very high (13.3%), and low (6.7%), which gives a quasi balance between 'weak' (53.3%) and 'strong' (46.7%) intensities (Tables 3 and B4). Due to this equilibrium, and despite the mistrust of the governed with regard to the institutions, the former wanted to gradually gain stronger and equity-oriented institutions without threatening revolts. On the other hand, the importance of 'strong' protests underlines the distress of the townspeople who, either by carefully structured solidarity or by irrational angry movement, attempted to jeopardize the institutions.

Finally, to conclude this subsection 4.3, the influence of arbitrary and targeted policies on the occurrence and intensity of conflict does not reveal decisive elements since both policies present almost the same number of social protests (Table 2), a little less than fifty percent being of 'strong' intensity (Table B4).

#### 4.4 The Political or Administrative Corruption Class

As for the political or administrative corruption class, it is shown that the medium-intensity protests represent 41.9% of those involved in this class, the high (29%) and very high (25.8%) intensities amounting together to 54.8% (Table 3). In addition, non-lay institutions are the most implicated (42.2%) in this class, followed by the royal government (40%) (Table 4). Moreover, and interestingly, the findings show that the abuse of power against municipalities represents 39.2% of the total sample of societal strife while the influence peddling against these municipalities accounts for 21.6% (Table 2). Protesters thus reacted more often against the abuse of power from which they were directly victims than to the influence peddling. We now examine the relationships between the components of this class and urban social unrest.

*Abuse of power against municipalities from higher leaders.* This form of abuse of power occurred wherever political property rights were poorly defined or weak enforced, that is to say when laws or rules collapsed under the will of one individual or a group. It took place wherever absolute non-contestable hereditary and/or non-lay authorities prevailed. Economic literature has examined the influence of protests on policy changes (for a review, see Amenta et al., 2010) and their consequences on public opinion (Branton et al., 2015). However, little attention has been paid to the influence of superior authorities' policies on local municipalities. Abuse of power against municipalities here includes: (i) abusive supervision and policies who overwhelmed the municipalities with political / administrative claims, recriminations, or sabotage. This often impeded the enforcement of municipal rules and frequently led to their over-indebtedness; and (ii) despotism from authoritarian and non-benevolent central government consisting of intimidating acts and relentless hostility. These political or administrative abuses prevented "good" municipalities from achieving their goals and in particular wrecked their local plans to foster more liberties and fairness. This bred unfairness and sometimes sparked social contentions (Turning, 2009, p. 361).<sup>xv</sup>

It turns out that the main perpetrators of disturbances involving this form of domination were primarily superior leaders as non-lay representatives (54.2%) and, in a lesser extent, king or guardians of the royal interests (33.3%), and lay overlords

(12.5%) (Table 4). The findings also indicate that urban disorders resulting from the abuse of power against sworn municipalities have medium (50%), high (30%), and very high (20%) intensities (Table 3), which completely balances the distribution between ‘weak’ and ‘strong’ intensities.

*Influence peddling against municipalities.* Faced with the abovementioned abuse of power, the municipalities thought they could obtain redress by filing complaints. In this process, townspeople often supported local rulers, their joint actions being shaped by legitimacy. The principles of complaint and redress were however frequently flouted by political patronage. Effectively the trials took place in the Parliament of Paris whose members (judges, prosecutors, and lawyers) depended on royal or non-royal power. Historical literature has thereby shown that most of trials were already lost given lobbying and collusion between non-royal institutions and royal magistrates (see e.g., Thierry, 1839 p. 214; Saint-Denis, 2000). Influence peddling, as the practice used by a person or group to influence the policy outcome, was mainly based on bribery (persuasion by favours)<sup>xvi</sup> and judicial misconduct like falsification of facts and/or summary judgment.

Influence peddling here encompasses the following costly activities. (i) The state-centred leaders (including the king) extorted money from municipal rulers for the final purchase of all municipal rights or for his renunciation to impose certain charges to municipalities, therefore to taxpayers; (ii) the king or royal representatives received money promised by powerful organized groups as non-royal organizations in exchange for the suppression of the communes or for maintaining their abolition; (iii) non-royal institutions had also titles established by the king to support their position and win the lawsuits. Furthermore, the clergy may extract money from corrupt members of the Parliament in return for sentences against municipalities; (iv) Guilds also lobbied and bribed rulers to impose their position and eliminate the other guilds or associations who attempted to infringe on their privileges (Ogilvie, 2011); and lastly (v), the district court held by the royal bailiff regularly broke the judgments delivered by the municipalities in return for huge fees. Because of bribery and judgments decided beforehand, municipalities were sentenced to pay fees and heavy fines, which increasingly put them into debt and revolted the taxpayers who had to bear these expenses. These communal institutions were consequently riddled with debts and weakened, defamation tarnishing the reputation of municipal administrators. According to historians (see e.g., Saint-Denis, 2000), unfair judging and unfounded condemnations were the result of combined plans to bring about the decline of these over-indebted municipalities.<sup>xvii</sup>

It is found that 47.6% of the social tensions motivated by the illegitimate rent distributions through influence peddling against municipalities were due to state-centred officials organized around central jurisdictions, 28.6% to non-royal institutions, and 23.8% to municipal rulers who betrayed their initial mission and agreed to get along with corrupt superiors in exchange for money (Table 4). In this regard, according to towns and time, the lack of intrinsic qualities (civic virtue) of some municipal councilors may come from a “manipulation effect” when unreliable superior authorities appointed unskilled (i.e., lacking administrative skills) and subservient persons with the aim of extracting high rents in exchange for services (for a theoretical analysis of this effect see Cerina and Deidda, 2017). Moreover, urban tension engendered by traffic of influence have very high (36.3%), high (27.3%), medium (27.3%) and lastly low (9.1%) intensities; the ‘weak’ intensity thus amounts to 36.4% whereas the ‘strong’ one rises to 63.6% (Tables 3 and B4). Influence peddling against town councils wiped out them, evidenced by the disappearance of these sworn municipalities before the end of the period under review.

To summarize the subsection 4.4, the relationships between the political / administrative corruption and the urban disturbances point out meaningful aspects. Abuse of power against municipalities is observed in more conflict than influence peddling against these local institutions (respectively 39.2% against 21.6%) (Table 2). However, *mutatis mutandis*, the proportion of ‘strong’ intensity discontent is more frequently identified in the traffic of influence case (63.6%) than in the one of abuse of power (50%) (Table B4). Influence activity seems to have more harmful direct economic repercussions on municipal rulers and dwellers – the obligation to pay overwhelming fees and fines – than abuse of power does.

## 5. Conclusion

When evaluating the patterns of urban conflict that occurred over more than a century in twelve municipalities of medieval France, we found that rent seeking and corruption are suitable concepts for explaining this violence. Indeed rent seeking and corruption gather several components that seem to be major motives of social turmoil as historical facts and narratives present them. Then we analyze the influence of each of these factors on the occurrence and intensity of social urban unrest.

In conducting this research, we have learned lessons about the outbreak of societal tumults, and the findings go beyond the specific context in which they are revealed. The paper highlights that social conflict seem to be connected to rent seeking and corruption from empowered local or superior leaders, which aroused grievances from the urban society. As might be expected, rulers' corruption triggers more conflict than rent seeking does; however, the gap between the two is not very large. More specifically, first, regarding the *economic rent seeking class*, conflicts of strong intensity are barely more

prevalent than weak intensity ones. Moreover, arbitrary policies limiting economic property rights generate as much social agitation as rules-based policies. Second, and likewise, as for the *political / administrative rent seeking class*, strong social conflicts appear to be a little less frequent than the weak ones. In addition, it is found that both arbitrary and targeted policies present almost the same number of social conflict. Third, as to the *economic corruption class*, it is found that strong revolts account for three-quarters of urban social unrest. *Mutatis mutandis*, the extortion of funds — carried out by state-centred policy makers, local rulers, or non-lay jurisdictions — by the way of excessive taxes and unfair changes in taxation results in more social tensions than the embezzlement of a portion of these funds does. In addition, relentless greed and speculation observed in some towns tend to refer to a self-reinforced corruption underlining history dependency. Fourth and lastly, as regards the *political / administrative corruption class*, strong conflicts are a little more frequent than the weak ones. Furthermore, abuse of power against municipalities from superior policy leaders engenders more social unrest than influence peddling against these local institutions does. However, *mutatis mutandis*, the part of strong conflict was higher with traffic of influence than with abuse of power; this may due to dwellers' obligation to pay massive fines and fees as the result of lost court cases because of influence peddling.

While these findings strike us as productive, two aspects deserve special mention. First, the analysis ignores the extension of the voting franchise when rulers faced threat of upheavals (see e.g., Acemoglu & Robinson, 2006; Aidt & Jensen, 2014); however this phenomenon seem more noticeable in the consulates of the southern France than in the northern communes. Second, we are well aware of the limitations of our findings because of a bare-bones statistical analysis. Regarding the cause-and-effect relationships, although we relied on trustworthy historical explanations, we have been careful in our interpretations because correlation does not imply causation. In addition, for a same conflict, we have sometimes observed several motives. When there may be causality between conflict and several rent seeking and/or corruption items (according to the historical observations and commentaries) it is possible that there is no correlation between the conflict and one of its causes considered in isolation. We have then analyzed the data with statistics allowing us to accurately and simply report on intricate facts.

Despite these limitations, the paper provides an additional way to explain the observed complexity of social unrest by focusing on rent seeking and corruption. This in-depth analysis thus complements the research by measuring societal discord through case studies (twelve towns) examined in a 130-year historical perspective. It substantiates the view that rent seeking and corruption are persisting characteristics of human society determined by political and economic institutions as well as by history. It also underpins the existence of relationships between these features and social unrest.

In an environment of weak institutions, powerful decision makers free to extract rent and practise corruption, and urban conflict involving overtaxed people and over-indebted then overthrown municipalities, the findings spawn insights that apply beyond the historical framework that we have focused on. In this respect, in modern democracies, whether or not they present an expansion or reduction of authority, there are also similar situations in view of social conflict, over-taxation, over-indebtedness of cities and reprehensible economic or political actions. The implications of the paper therefore refer to suitable direction of policy intervention such as changes in the taxation system but also administrative reforms like the field of competence of municipalities in relation to territorial or national entities as well as the moralization of political life. As for future research, the findings must obviously be validated in other settings and particularly in the sense of improving the measurement of the causes of social urban conflict. It is also essential to widen the findings to other institutional contexts.

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## Appendix A

Table A. Synopsis of some medieval urban governments in France

Municipalities with high autonomy	Governance	Privileges	Areas
Sworn communes <sup>(a)</sup>	Self-governed towns through (i) collective oath sworn by property holders and (ii) communal charter granted by overlords after being accepted by the king.	Personal freedom, political liberties, economic and political privileges came from the communal charter.	Northeast of France between the Loire and Rhine rivers (mainly <i>Hauts de France</i> area: Nord-Pas-de-Calais, Picardy).
Consulates <sup>(b)</sup>	Self-governed towns by both a college of administrators and a consultative consular council helped by a general assembly of dwellers.	Personal, legal, tax, and political privileges came from seigniorial negotiated grant.	Occitania (mainly Languedoc, Roussillon, and parts of Midi, Aquitaine, and Pyrenees), some towns in Provence and along the Durance valley.
<i>Escartons</i> <sup>(c)</sup>	Self-governed territories (1343-c.1789) grouped into the <i>Escartons Republic</i> through a specific charter. Direct democracy: general assembly of the inhabitants who elected their representatives (called “syndics”). Dwellers raised taxes without royal or seigniorial agents, among other tasks. Social and political peace.	Personal liberty, large economic, banal, fiscal, and political privileges: e.g., all inhabitants became “franc-bourgeois” (status between nobles and commoners), freely distributed their own taxation, and organized annual international fair attracting European merchants.	Alps: the bailiwick of the town of Briançon with five <i>escartons</i> , two of which were on the current territory of France ( <i>escartons</i> of Briançon and of Queyras). Much less autonomous <i>escartons</i> have existed in other bailiwicks of alpine valleys.
<b>Municipalities with moderate to-low autonomy</b>			
“Bourgeois towns” <sup>(d)</sup> (or <i>villes de bourgeoisie</i> , <i>villes de franchises</i> )	Without sworn associations but close to communes through their municipal charters. Governed by royal officials.	<i>Sui generis</i> privileges on personal statutes. More or less the same economic privileges as sworn communes.	Northeast (mainly the Champagne-Ardenne area) and Center of France.
“Syndicat towns” <sup>(e)</sup> (or <i>villes de syndicat</i> )	Coexistence of a mayor, his peers, and ordinary inhabitants (called “syndics”) elected by the population for specific issues.	Privileges on personal statutes and some economic and administrative aspects.	Occitania: mainly in the Garonne valley, Ardèche, and the Carcassonne area.
“Provostal towns” <sup>(f)</sup> (or <i>villes de prévôté</i> )	Towns without municipal councils, and ruled by royal or seigniorial provosts ( <i>praepositi</i> ) who did not hold complete authority.	Some privileges.	North-central France (mainly Burgundy, Loire valley and its drainage basin, Île-de-France).
“Towns bâties” <sup>(g)</sup> (or <i>villes bâties</i> )	Neither town charter nor town council.	No communal rights <i>stricto sensu</i> but some privileges through statements of rights.	Lorraine (Meuse), Normandy, and <i>Hauts-de-France</i> (Nord-Pas-de Calais, Picardy).
Imperial towns. <sup>(h)</sup>	No town charter but town council. Allegiance to the emperor.	Commercial network between the ten towns of the Decapolis.	Alsace. (Alsatian Decapolis in the Holy Roman Empire).

Sources: (a) As to the sworn municipalities, see the literature quoted in the text. Remember that this paper is interested in municipalities having only this status of “sworn communes” at the *start* of the reporting period. (b) Regarding the consulates see e.g., Wolff, 1990; Hilton, 1995; Le Goff, 1998; Derville, 2000. (c) As for the *escartons*, see Vivier (2002). (d) On the “bourgeois towns”, see e.g. Dupin, 1834, p. 33; Langlois, 1964, p. 68. (e) As for the “syndicat towns”, see e.g. Fourquin, 1975, pp. 539-540; Bourin-Derruau, 1987, pp. 152-154. (f) As to the “provostal towns”, see e.g. Dupin, 1834, p. 33. (g) Concerning the towns bâties, see e.g. Guizot, 1840, p. 320; Fourquin, 1975, p. 541; Fossier, 1992, p. 252; Derville, 2000, p. 72. (h) On the “imperial towns” of the Holy Roman Empire, see e.g. Johaneck, 2000, p. 296.

## Appendix B

Table B1. Classification of civil urban conflicts

	<b>Conflict between townspeople and local or territorial authority</b>	<b>Conflict between town rulers and superior authority or political units</b>	<b>Conflict within corporations and workshops</b>
Quintile 2	<i>Very low</i> (e.g., very low emotional or ideological outrage)	<i>Very low</i> (e.g., very low discord as for jurisdiction or political / administrative conflict)	<i>Very low</i> (e.g., very low dispute as to vocational conflict)
Quintile 4	<i>Low</i> (e.g., low emotional and/or ideological outrage)	<i>Low</i> (e.g., low political or administrative disagreement, difference of opinion, conflict of jurisdiction)	<i>Low</i> (e.g., disagreement within corporations and workshops)
Quintile 6	<i>Medium</i> (e.g., loud claims, moderate protests against judicial sentences or wrongdoing, moderate civil disobedience or resistance, moderate rumbling against taxation)	<i>Medium</i> (e.g., reasonable conflict of jurisdiction, moderate litigation)	<i>Medium</i> (e.g., disputes between corporation masters and journeymen / apprentices)
Quintile 8	<i>High</i> (e.g., non-violent revolt against economic or political abuse: street protests; uprising against deprivation; insurgency against authority; disobedience to king)	<i>High</i> (e.g., non-violent revolt against king or other superior authorities, or against judicial sentences ; riotous assemblies; disobedience to king)	<i>High</i> (e.g., non-violent strife within corporations and workshops but high conflict over wages and/or working conditions)
Quintile 10	<i>Very High</i> (e.g., violent revolt against economic or political abuse; violent trespass or pillaging; bloodshed; fomented or spontaneous bloody revolt; assassination)	<i>Very High</i> (e.g., violent revolt against superior authorities, or king or against judicial sentences)	<i>Very High</i> (e.g., violent strife within corporations and workshops concerning wages and/or working conditions)

Notes: Rating using the literature quoted in the text.

Table B2. Descriptive statistics. Number and intensity of conflicts in each selected town on the studied period

Towns	Number and intensity of conflicts <sup>(a)</sup> (Brackets: number of conflicts in the item compared to the number of conflict in the town itself)					Total
	Very Low	Low	Medium	High	Very High	
	Amiens	0	1 (16.7)	2 (33.3)	1 (16.7)	
Beauvais	0	0	1 (33.3)	0	2 (66.7)	3
Compiègne	0	0	2 (66.7)	1 (33.3)	0	3
Laon	0	0	2 (33.3)	1 (16.7)	3 (50)	6
Noyon	0	0	0	0	1 (100)	1
Poitiers	1 (100)	0	0	0	0	1
Provins	0	0	5 (38.4)	5 (38.4)	3 (23.1)	13
Senlis	0	0	1 (50)	0	1 (50)	2
Sens	0	0	2 (66.7)	1 (33.3)	0	3
Soissons	0	0	2 (66.7)	1 (33.3)	0	3
St-Quentin	0	0	1 (20)	4 (80)	0	5
Valenciennes	0	0	2 (40)	2 (40)	1 (20)	5
TOTAL	1 (1.9)	1 (1.9)	20 (39.2)	16 (31.4)	13 (25.5)	51

Notes: (a) Number of conflicts over the period, whether the conflict is of short or long duration. Each conflict gets the value 1.

See Table B1 for the coding of the conflicts.

Sources: Calculation using the following literature: Béchard, 1862; Benaut, 1975; Blanchet, 1988; Boissonnade, 2013; De Bonnechose and Boisnormand de Bonnechose, 1839; Boone and Stabel, 2000; Bourquelot, 1856; Burg, 2004; Chevalier, 1982; Clauzel, 1996; Cohn, 2008, 2009, 2012; Decrusy et al., 1833; Derville, 2000; Dinaux et al., 1832; Dupin, 1834; Dusevel, 1848; Espinas, 1929; Graves, 1850; Guilbert, 1845, 1853; Guizot, 1840; Hilton, 1989, 1995; Junot, 2009; Kidner, 2007; Labande 1892; Landes, 1995; Le Goff, 1988, 1991, 1998, 2009; Lefranc, 1888; Leroy and Dinaud, 1837; Leroux, 1839; Martin and Jacob, 1837; Mollat, 2006; Davis, 2013; Petit-Dutaillis, 2012; Pirenne, 2014; Rossiaud, 1998.

Table B3. Descriptive statistics for the working sample. Civil urban conflicts (occurrence, intensity, mass, intensity mean) for the studied period

Towns	Occurrence <sup>(a)</sup>	Intensity for each conflict <sup>(b)</sup>	Mass <sup>(c)</sup>	Mean of Intensity
Amiens	6	4;6;10;8;6;10	44	7.333
Beauvais	3	10;10;6	26	8.666
Compiègne	3	6;6;8	20	6.666
Laon	6	10;8;6;10;10;6	50	8.333
Noyon	1	10	10	10
Poitiers	1	2	2	2
Provins	13	8;10;10;6;6;6;8;6;6;8;8;10;8	100	7.692
Senlis	2	6; 10	16	8
Sens	3	6;6;8	20	6.666
Soissons	3	8;6;6	20	6.666
St-Quentin	5	8;8;6;8;8	38	7.6
Valenciennes	5	6;6;8;8;10	38	7.6

Notes: (a) Number of conflicts over the period, whether the conflict is of short or long duration. Each conflict gets the value 1.

(b) See Table B1 for the coding of the conflicts. (c) See Equation (1).

Sources: The same as in Table B2.

Table B4. Number of conflicts according to their ‘weak’ or ‘strong’ intensities and origins (sample of 12 towns, 1270-1399)

Origins of conflicts	Number of conflicts according to their weak or strong <sup>(a)</sup> intensities and their origins <sup>(b)</sup>		
	Weak	Strong	Total: $N_o$
<b>Economic rent seeking class</b>			
Rules-based policies	6 (50)	6 (50)	12
Arbitrary labour policies	3 (50)	3 (50)	6
Arbitrary policies limiting economic rights	2 (33.3)	4 (66.7)	6
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	<b>11 (45.8)</b>	<b>13 (54.2)</b>	<b>24</b>
<b>Economic corruption class</b>			
Extortion of funds by policy makers	6 (23.1)	20 (76.9)	26
Extortion of real estate values	1 (20)	4 (80)	5
Embezzlement of public funds by policy makers	3 (37.5)	5 (62.5)	8
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	<b>10 (25.6)</b>	<b>29 (74.4)</b>	<b>39</b>
<b>Political or administrative rent seeking class</b>			
Arbitrary policies limiting political or administrative rights	7 (58.3)	5 (41.7)	12
Targeted policies <i>via</i> encroachment on municipal charges	8 (53.3)	7 (46.7)	15
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	<b>15 (55.6)</b>	<b>12 (44.4)</b>	<b>27</b>
<b>Political or administrative corruption class</b>			
Abuse of power against municipalities	10 (50)	10 (50)	20
Influence peddling against municipalities	4 (36.4)	7 (63.6)	11
<b>Subtotal : <math>n</math> and <math>(n / N_o)</math></b>	<b>14 (45.2)</b>	<b>17 (54.8)</b>	<b>31</b>

Notes: See Table 3. (a) ‘Weak’ intensity includes “very low”, “low”, and “medium” intensities. ‘Strong’ intensity encompasses “high” and “very high” intensities. (b) The total number of conflicts according to their motives is greater than the total number of conflicts (that is, 51) because some conflicts are due to several motives.

Source: Calculation using the literature quoted in Table B2 and the text.

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## End Notes

<sup>i</sup> The border between urban conflict and civil war is narrow since in both cases there may be distrust or defiance against authorities, as well as power and counterpower, the outburst of violence from specific cities provoking eventually generalized uprisings in the country.

<sup>ii</sup> To clarify we call, on the one hand, *economic rent seeking* and *economic corruption* the elements related to economic property rights, and on the other hand, *political rent seeking* and *political corruption* the elements associated with political property rights. These categories are established for the convenience of the analysis because it is obvious that a tax revolt is both an economic protest and a complaint against political representatives (Cohn, 2013, p. 60).

<sup>iii</sup> This era of demographic, economic, and commercial urban expansion was however punctuated by periods of economic instability and urban conflict.

<sup>iv</sup> Historians have shown that some revolts were the responses directed against the fiscal and military demands of state-centred elites organized around central or urban governments (see, e.g., Cohn, 2013) whereas some other protests actively or indirectly supported the political order (see, e.g., Lantschner, 2015; Dumolyn & Haemers, 2005).

<sup>v</sup> In the course of the Hundred Years War (1337-1453) some of these towns were subject to the authority of the kingdom of England or to numerous *comtés* before returning to the kingdom of France.

<sup>vi</sup> To examine the social actors we decompose the global term “town oligarchs” or “oligarchic elites” into specific five main social groups: royal government or state-centred elites (kings and royal agents), rich merchants/corporation masters, other lay overlords, non-laymen (or non-lay institutions), and municipal (or local) rulers. It is worthwhile noting that, depending on circumstances, the municipal rulers group were either in the disadvantaged or advantaged categories. The disadvantaged group was thus composed of (i) either only ordinary inhabitants (the sixth social group composed of distinct urban categories: mainly craftsmen, working citizens, and unemployed) who were by definition not involved in the causes of conflict, (ii) or both ordinary townspeople and municipal rulers.

<sup>vii</sup> Despite its name, *the Hanse of the Seventeen Towns* eventually grew to incorporate merchants from other cities. This hanse declined in the fourteenth century and disappeared in the early fifteenth century (Ogilvie, 2011, pp. 27-28). The five examined towns of the Hanse gathered many guilds of the textile activity like weavers, dyers, drapers, finishers, dressers, hatters, haberdashers, tanners, furriers, among others. Note that the town of Provins was both a production and trading center given that it was one of the four towns where the Champagne fairs took place.

<sup>viii</sup> For instance, the trading town of Senlis – greater than the capital Paris in the twelfth and thirteenth centuries – sheltered many guilds and specialized covered markets, the two most lucrative activities being cloth merchants and bankers (known as the “Lombards”).

<sup>ix</sup> In the Middle Ages, trades were classified into three categories: (i) free craft professions (*métiers libres*) carried out without learning or administrative formalities; (ii) regulated professions (*métiers réglés*) bringing together artisans submitted to royal rules. Through letters patents, they enjoyed privileges issued by the king and generally overseen by local town authorities. This means that the statutes of these guilds were approved or imposed by royal authorities which administer them, either directly or indirectly; and (iii) sworn professions (*métiers jurés*) where the craftsmen of the same trade under a special statute took an oath to respect this status and assist each other. The statute of the guild was approved and guaranteed by a higher authority (often the municipality), gave members a monopoly in the sector of activity, and allowed to regulate the profession. These sworn crafts or trades had legal personality and their members were sanctioned by their disciplinary jurisdiction if they did not observe their commitment. More broadly, these self-enforcing associations gained the exclusive privilege to self administer their business and determined the professions according to rules controlled by the public authority (see e.g., Halphen, 1948; Le Goff, 1998; Richardson, 2004).

<sup>x</sup> In northern Europe, other working-class revolts broke out in towns outside our sample, such as Douai (1245, 1280), Ypres (1280), Rouen (1281), Tournai (1281, 1307), Bruges and Ghent (1301). See e.g., Cohn, 2012; Firnhaber-Baker and Schoenaers 2016.

<sup>xi</sup> Currency manipulation by the kings are another form of extortion of funds; nevertheless, little is know about their



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consequences on social conflict.

<sup>xii</sup> In the early development of sworn municipalities, taxes were mainly raised to fund useful projects, in particular public buildings (town belfries and walls), commercial ones (town halls, covered squares, houses for the *octroi* (toll)), and health or charitable institutions (hospitals, almshouses and leper-houses). Increasingly, taxes were mainly raised to pay for wars led by the king or overlords, to cover expenses related to the lifestyle of the king and other rulers, and to fund public works not monitored by the local taxpayers (see e.g., Duby, 1973, p. 229; Derville, 2000, p. 127).

<sup>xiii</sup> For instance, regarding the towns under study, between the end of the 13<sup>th</sup> century and the early 14<sup>th</sup> century, the municipality of Beauvais lost more than one hectare which fell into the purse of non-lay institutions; it is unclear if this led to personal enrichment or social contribution. Similarly, the town of Laon lost one third of eastern district area, that is to say, 7.5 hectares; at least 60 houses of value belonging to bourgeois changed hands (Saint-Denis, 1994, 2000).

<sup>xiv</sup> For instance, this occurred in the town of Noyon in the 13<sup>th</sup> century (Saint-Denis, 1994, 2000).

<sup>xv</sup> Of course, in some cases, abusive supervision and authoritarian decision could also aim to fight against the corruption of local governments.

<sup>xvi</sup> Rose-Ackerman and Palifka (2016) state that bribes clear the market, act as incentive bonuses, lower costs, and permit criminal activity.

<sup>xvii</sup> In many cases, a municipality that did not comply with the local clergy governance project lost trials, paid large fines, was indebted and discredited. The latter then put in place an expulsion solution of municipal members: public humiliation and excommunication (see e.g., Saint-Denis, 2000). For a recent analysis on evolution and change within religious organizations, see Ferrero, 2017.

# Importance of Childhood Psychological Wellbeing on Parental Divorce-Educational Level Relationship

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## Abstract

Although there is consistent evidence of the negative effects of parental divorce on children's educational level, the mechanisms and the protective factors that explain the consequences of divorce on children have not been clearly determined. This information is required in order to create effective policies and programs to help children through the divorce process. This study uses the longitudinal data from the British Birth Cohort Study 1970 and structural equation models to test whether family income, maternal supervision, and children's psychological problems mediate the effect of parental divorce on children's educational level and to what extent these variables are important protective factors for children through the divorce process. The main aim of this study, however, is to test the importance of children's psychological well-being on the relationship between parental divorce and children's educational level. Only two studies noted the importance of children's psychological well-being theoretically, but were unable to measure it. This study demonstrates empirically that children's psychological well-being is not a negligible mechanism and that this variable represents a very important protective factor for children of divorce, since the effect of psychological problems on educational level is significantly greater for children from divorced families than for those from intact ones. Although most family policies aimed at divorced families are targeted to improving family income, these findings reveal the need for governments to ensure that all children of divorce have access to programs and interventions designed to improve their psychological well-being.

**Keywords:** Parental divorce, children's psychological well-being, educational level, mechanisms and protective factors of divorce

## 1. Introduction

Over the last several decades, divorce rates have increased substantially in most western societies. Research shows that parental divorce is associated with several negative outcomes in children (Amato, 2010; Sigle-Rushton & McLanahan, 2004). Prior to marriage dissolution, families who divorce differ from intact families in several characteristics, including parental conflict or socio-demographic background (Bhrolchain, 2001). Moreover, several studies designed to identify the causal effects of parental divorce concluded that there is consistent evidence of the negative effects of parental divorce on children's educational level (McLanahan, Tach, & Schneider, 2013), which is a key determinant of individual life chances. These findings revealed the need to elucidate the mechanisms and the protective factors that explain the consequences of divorce on children in order to create effective policies and programs to help them through the divorce process.

Amato's divorce-stress-adjustment model notes that the effects of divorce largely depend on a set of mediators and moderators that children experience after their parents divorce (Amato, 2000). His model focuses on five main explanations: the loss of the non-custodial parent, the adjustment of the custodial parent, economic deprivation or disadvantage, inter-parental conflict and stressful life-changes. The scientific knowledge of the merits of these perspectives, however, is still limited, and the importance of other explanations, which are not included in this model, has been debated (Potter, 2010). In spite of this, most family policies and policy recommendations aimed at divorced families have largely been designed from the perspective of economic deprivation, since they mainly focus on improving family income (Breivik & Olweus, 2006). The emphasis of policymakers on the income level of divorced families is not

surprising. As Mayer (1997) pointed out, most social scientists consider income to be the most important influence on children. Indeed, some believe income is the only factor that matters. Moreover, as McLanahan and Sandefur (1994) argued, governments are in a better position to increase income than other types of more intangible family resources, such as the quality of parenting or children's emotional well-being. However, Breivik and Olweus (2006) stated, "quite a few social scientists and policy advocates are heavily influenced by economic perspective both in trying to explain why children of divorce have an increased risk of problematic outcomes and in suggesting ways to amend it". This perspective is based on an assumption that had not been clearly demonstrated in previous research, namely that family income is the most important factor in explaining the differences between children from divorced and intact families.

Although family policies pay little or no attention to other possible explanations, such as the quality of parenting, since the 1990s several scholars have shown that there has been a decline in parenting quality following parental divorce, and that this decline might explain some of the differences between intact families and divorced families (Elder Jr & Russell, 1996; McLanahan & Sandefur, 1994; Thomson, Hanson, & McLanahan, 1994). Several programs aimed at increasing the quality of parenting by divorced parents have been developed and most show that improving the quality of parenting has a positive effects on long-term outcomes in children such as grades (for a review, see Vélez, Wolchick, & Sandler, 2011). In spite of this, the literature places greater emphasis on studying family income than quality of parenting. However, more research on quality of parenting as mediator (Bastaitis & Mortelmans, 2016) and a protective factor in the divorce process is needed.

In addition, several studies have shown that the effect of parental divorce is stronger and more consistent on educational level than on test scores (Amato & Keith, 1991; McLanahan, 1997; Sigle-Rushton, Hobcraft, & Kiernan, 2005). For this reason, McLanahan (1997) suggested that something besides cognitive ability is responsible for the poorer school outcomes of children from non-intact families. Several studies have mentioned the importance of children's psychological well-being as a possible mechanism between parental divorce and children's educational level, although they were unable to measure it (Biblarz & Raftery, 1999; Jonsson & Gahler, 1997). They only speculated that, after controlling for other possible mechanisms, the net effect of parental divorce might be explained by the adverse psychological consequences of divorce. Potter (2010) empirically validated the link between parental divorce, children's psychological problems and test scores. No study has focused, however, on the relationship between parental divorce, children's psychological well-being and a long-term outcome such as educational level. To our knowledge, research has also not explored to what extent children's psychological well-being acts as a protective factor for the educational performance of children who experience parental divorce. The main reason for this lack of studies is that few surveys provide information both about children's psychological well-being before and after parental divorce and on long-term educational outcomes such as educational level. For this reason, more research on these issues is needed, since most programs for helping children of divorce are designed to address children's psychological well-being. Although they do not focus on working specifically on children's academic performance, they do, however, improve it (for a review, see Vélez et al., 2011).

Establishing whether family income, quality of parenting and children's psychological well-being explain the relationship between parental divorce and children's educational level requires the identification of three relationships: the relationship between these mediating variables and educational level, between parental divorce and the mediating variables, and between parental divorce and children's educational level. However, the various mediating variables posited are likely to be related. For this reason, to determine the contribution of a particular hypothesized mediating variable, it is also necessary to control for the impact of the other mediating variables and to take into account the indirect effects between them (Simons, Lin, Gordon, Conger, & Lorenz, 1999). However, previous research has only investigated one or two mediating variables at a time. When proper controls were used, the effects reported for some explanations turned out to be spurious or indirect through other factors (Simons et al., 1999).

Divorce is often associated with a decline in material well-being. The economic resources of a household have to be divided in half, and each new house loses the advantage of economies of scale (McLanahan & Sandefur, 1994). Research has shown that most women suffer a substantial loss of income after marital break-up, whereas men's economic circumstances appear to be relatively unaffected or can even improve slightly in some cases (Aassve, Betti, Mazzuco, & Mencarini, 2007; Jarvis & Jenkins, 1999; Mortelmans & Jansen, 2010). Children also experience a substantial reduction in material well-being, since most of them live with their mothers after divorce. The negative association between parental divorce and children's educational achievement may, therefore, simply be a consequence of the economic hardship that often follows marital disruption. Mayer (1997) noted that income can affect children's outcomes in many ways. This decline in the standard of living may lead to a reduction of children's access to enrichment activities, such as tutoring, after-school classes or camp, and a decrease in their perception that their family can afford university. In fact, poorer families might not be able to afford university tuition or other costs of university, such as campus accommodation. Furthermore, limited means may lead a family to move to neighborhoods with inadequate schools (McLanahan & Booth, 1989) that also limit access to higher education and improved economic results.

In assessing the influence of family income, it is necessary to separate the effects of family income from the effects of the decline in the mother's quality of parenting, as well as those attributed to the level of involvement by a non-residential father or other family characteristics. To our knowledge, none of the previous studies that evaluate the importance of the mediating role of family income on the relationship between parental divorce and educational outcomes (Francesconi, Jenkins, & Siedler, 2009; Jonsson & Gahler, 1997; McLanahan & Sandefur, 1994; Thomson et al., 1994) controlled for these other mediating variables, including quality of parenting. It is therefore possible that the effect of family income might be upwardly biased if these other mediating variables are not included in the analysis. Moreover, family income can have an indirect effect on the mother's parenting. Kiernan and Huerta (2008) showed that financial hardship often leads to maternal psychological distress and disrupted parenting practices in both single parent and intact families. The impact of reduced family income on the adjustment of children of divorce might therefore be expressed indirectly by its negative effect on the emotional well-being and the quality of parenting of the custodial parent (Simons et al., 1999).

Authoritative parenting is positively correlated with adolescent school performance, whereas authoritarian and permissive parenting are negatively so (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). Authoritative parents give warmth and support to their children but they also control and supervise them. Although a few studies have reported an association between family structure and the level of parental warmth and support, the dimension of parenting most consistently linked to the number of parents in the home is that of control and supervision (Simons et al., 1999). Divorced mothers control and supervise their children less than married mothers (Astone & McLanahan, 1991; Bastais & Mortelmans, 2016; Simons & Associates, 1996). Moreover, divorce is associated with a decline in the quantity and quality of the relationship between children and the non-custodial parent (Amato & Gilbreth, 1999), usually the father, which means that the non-custodial parent has fewer opportunities to supervise the child. Bastais and Mortelmans (2016) demonstrate that children who mostly reside with their mother after parental divorce receive less control from their father than children whose parents remain married.

Is the decline in quality of the parenting after parental divorce the reason for the lower educational attainment of the children of divorce? The evidence is mixed. Astone and McLanahan (1991) showed that differences in parental behavior account for only about 10 percent of the difference in dropout rates between children from single-parent and two-parent families. Similarly, Thomson et al. (1994) found that parenting practices account for virtually none of the differences in educational attainment between children from intact and non-intact families. Painter and Levine (2004) showed that parental involvement only explains a small part of the association between family structure and dropping out of high school. In contrast, Simons et al. (1999) found that the quality of mothers' parenting partly explains the relationship between divorce and conduct problems among adolescents. Moreover, McLanahan and Sandefur (1994) showed that parenting practices account for over half of the differences in high school dropout rates between children in single-parent families and those in two-parent families. Similarly, King and Sobolewski (2006) demonstrated that adolescents from divorced families are worse off in a range of outcomes when they have weak ties with both their mothers and non-resident fathers. Due to this lack of consensus, we believe it is important to focus more on this particular explanation for the effect of parental divorce on children's educational achievement.

Besides the decline in income and quality of parenting, as stated before, children's psychological adjustment might also explain some of the differences between children of divorced and intact families in regard to their educational attainment. Student achievement, such as test scores, has been linked to the state of children's emotional and mental health (Lane, Carter, Pierson, & Glaeser, 2006; Needham, Crosnoe, & Muller, 2004; Potter, 2010). Children with poor psychological adjustment are significantly less likely than others to graduate from high school and to enroll in postsecondary education (Kessler, Foster, Saunders, & Stang, 1995; McLeod & Fettes, 2007; Vitaro, Brendgen, Larose, & Trembaly, 2005). These children have more disruptive behaviors at school, fewer academic aptitudes and educational expectations than children without psychological problems (McLeod & Fettes, 2007). Additionally, abundant research shows that parental divorce has a negative effect on children's psychological well-being even when pre-divorce factors are considered and causal methods are used (for a review, see McLanahan et al., 2013). However, the pathways that explain the effect of parental divorce on this specific dimension of well-being are unclear, and more research is needed (Lacey, Bartley, Pikhart, Stafford, & Cable, 2014).

A number of explanations have focused on the effect that divorce has on several aspects of a parent's well-being that, in turn, affect children's psychological well-being. As mentioned, parental divorce affects children's economic conditions and the quality of parenting and both factors are associated with children's psychological problems (Kiernan & Huerta, 2008). Some studies showed that family income explains part of the effect of parental divorce on children's psychological well-being (Carlson & Corcoran, 2001; Lacey et al., 2014; Morrison & Cherlin, 1995; Thomson et al., 1994; Wu, Hou, & Schimmele, 2008), while others indicated that this variable is not a mediating factor (Simons et al., 1999). Fewer studies have explored the mediating role of the quality of parenting on the relationship between parental divorce and psychological well-being (Bastais & Mortelmans, 2016). Simons, Whitbeck, Beaman, and Conger (1994) showed that

among children from divorced families, the quality of the mother's parenting is associated with externalizing problems of boys and girls, and is also related to internalizing problems for boys. Bastaitis and Mortelmans (2016) provided evidence that maternal and paternal parenting can mediate the relationship between post-divorce family structure and children's self-esteem and life satisfaction. By contrast, Thomson et al. (1994) showed that although quality of parenting explains part of the effect of growing up in a stepfather family on children's internalizing problems, this factor does not mediate the effect of growing up in a single mother family. Moreover, post-divorce conflict, non-residential father involvement and the mother's psychological well-being after divorce also affect children's emotional health (King & Sobolewski, 2006; Simons et al., 1999).

Parental divorce might have a direct effect on children's emotional health regardless of family and parental characteristics and involvement. Pryor and Rodgers (2001) defined "trauma theories" as those theories that argue that parental divorce in itself has a negative impact on psychological outcomes, notwithstanding other family and parental characteristics and involvement. Feelings of loss and abandonment that children might experience after parental divorce could explain the decline of their emotional well-being after this event (Pryor & Rodgers, 2001). In addition, another well-known argument is the so-called "attachment" theory (Bowlby, 1973, 1980), which stresses the fact that children have a need for a secure relationship with adult caregivers, without which normal social and emotional development might not occur. Parental divorce may lead to an insecure attachment by children to their parents (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000), which might explain the negative effect of parental divorce on children's psychological outcomes.

On the other hand, to what extent does family income, quality of parenting and children's psychological well-being have a greater protective effect against educational failure amongst children from divorced families than children from intact families? Very few studies have analyzed whether these variables influence each family type differently. Kiernan and Huerta (2008) suggested that quality of parenting has a stronger positive association with children's cognitive and psychological development among children from lone-parent families than among children from intact families, although group differences are not significant. Xu, Zhang, and Xia (2008) found that the effect of parenting skills on children's academic performance and well-being is similar for children from two-parent families and those from divorced families. They also observe that among children from intact families, family income has a positive effect on children's academic performance and well-being, while among those from divorced families, this variable has a negative effect on academic performance and a non-significant effect on well-being. However, as mentioned, to our knowledge no study has explored to what extent children's psychological well-being is more important for the academic success of children in divorced families than it is for those in intact families.

Considering this background, this study has two main hypotheses, namely that: family income, maternal supervision, and children's psychological problems mediate the effect of parental divorce on a long-term outcome such as educational level and that these variables are important protective factors for children through the divorce process. In order to test these hypotheses, this study uses structural equation modeling, since this technique allows for the three mediating variables—family income, quality of parenting and children's psychological problems—to be taken into account in the same analysis, together with their indirect effects. With the exception of Havermans, Botterman, and Matthijs (2014), previous research on the explanations and protective factors of the divorce process on educational outcomes did not use this technique. Based on the theoretical and empirical evidence detailed above, the main aim of this study is to test the importance of children's psychological problems on the relationship between parental divorce and children's educational level. For this reason, this study uses the longitudinal cohort data from the British Birth Cohort Study 1970, which offers a unique opportunity to evaluate the importance of this variable since, to our knowledge, it is the only cohort survey that provides information about children's psychological problems during childhood, before and after parental divorce, as well as long-term outcomes.

## 2. Method

### 2.1 Participants

The British Birth Cohort Study 1970 is a nationally representative, longitudinal study of a birth cohort in Great Britain. The BCS study follows the lives of a cohort of children born in one week of April in 1970. The original sample provides information on over 17,000 births. Later waves are similarly designed, and include a wide range of socio-economic, demographic, psychological, health, and attitudinal measures of the children and their parents (Despotidou & Shepherd, 1998). With each successive wave, the scope of enquiry has broadened from a strictly medical focus at birth to encompass physical and educational development at the age of five, physical, educational and social development at the age of ten and then to include economic development and other factors at 30 years. Few longitudinal surveys are as multidisciplinary and long-term as the BCS. Compared with many other studies, the multidisciplinary character of the survey allows a range of factors to be taken into account that might explain the association between parental divorce and children's educational level, such as psychological well-being during childhood. It is important to highlight that there is a more recent UK cohort survey, the Millennium Cohort Study, that follows children born in 2000-01. This data has information about children's psychological well-being during childhood but does not yet have information about their educational level since these cohort children are still too young to have completed the higher educational levels. For all these reasons, we have used the British Birth Cohort Study 1970 in this paper.

We restrict the analyses to children whose parents remained together until the children were 21 years old (inclusive) and to children whose parents divorced or separated between wave 1 (age 5) and wave 2 (age 10). We do not distinguish between children whose parents were cohabitating and those whose parents were married, since including only those that were married could produce a bias in the analysis and, moreover, few children were living in a cohabiting family. We exclude children who were born in to a single-parent family at birth or whose parent(s) died or if they were living in foster care and those whose parents separated before age 5 or between 11 years and 21 years old. In order to create this sample, the information on family structure was collected at the waves when the children were 5, 10 and 30 years old.

### 2.2 Procedure

Due to data constraints, the analyses were limited to those children who experienced parental divorce between 5 and 10 years old and lived with the mother at this age, and those whose parents remained together until the children were 21. Firstly, relevant information on the controls and mediating variables was only available for the first and second BCS follow-up interviews at age 5 and 10. Sweep 0, when the child was born, did not provide any information about the most important control variables needed and there was a large non-response rate to the third follow-up interview at age 16. Secondly, we only included in the analysis those children who lived with their mothers after divorce since, as mentioned in the introduction, custodial mothers and custodial fathers have different parenting styles (Hetherington & Kelly, 2002; Simons & Conger, 2007). We would have liked to have included children who lived with their father after the divorce in a separate analysis, but too few children had these living arrangements. The number of cases ( $n=150$ ) was not big enough to undertake the analysis when missing cases of mediating and control variables were taken into account. Furthermore, we restricted the sample to children whose parents remained together from birth until the age 21 (inclusive), since this age is around the time that most young people finish their university degree in the United Kingdom. However, we experimented with different cut-off points from 16 to 25 years old but found that there were no substantial changes in the results.

For the divorced group, we used the family structure variables from waves 1 and 2. All longitudinal studies lose individuals between waves and the BCS is no exception. The target sample in the first wave (at age 5) was 16,181, 13,135 of whom were successfully interviewed, yielding a response rate of 78.9%. Information on the family structure was available for all of them, and 11,752 (90.1%) were living with both natural parents from birth to age 5. Of these, information was not available for 1,499 regarding their family structure at the second wave at age 10, mostly due to the fact that their families were not interviewed in this wave. Combining information for both waves, we find that 436 children experienced parental separation between the first and second waves, and were living with their mother by the second. Meanwhile, in order to create the group of children from intact families, we used information from the fifth wave, at age 30. The length of time between waves means that sample attrition is inevitable, particularly at older ages. In wave 5 (at age 30), out of a target sample of 15,503, 10,833 were successfully interviewed, which represents 70.4 % of the target sample. 9,997 provided information about their family structure in childhood, with the parents of 7,531 of these cohort members having remained together from birth to age 21.

### 2.3 Measures

#### 2.3.1 Educational Level

The main dependent variable is the highest level of academic or vocational qualifications attained by age 30, as most people have obtained their final level of education by this age. When information on this variable was unavailable at age 30 (wave 5), we used information at age 26 (wave 4). The academic qualifications, in order of increasing attainment, were: the Certificate of Secondary Education (CSE) grades 2 to 5 (normally taken at the minimum school leaving age); the ordinary level General Certificate of Education (O level), normally taken at the minimum school leaving age; the advanced level General Certificate of Education (A level), normally taken at 18 years old; a degree or diploma (bachelor's degree or higher education diploma); and a higher degree (master's degree or doctorate). The vocational qualifications consist of National Vocational Qualifications (NVQs) and other vocationally-based credentials of an equivalent standard. NVQs are based on national occupational standards and are awarded for evidence of competency in work-based situations at 5 levels, reflecting increasing job complexity and personal responsibility. These academic and vocational qualifications are subsequently collapsed into 6 categories, reflecting increasing attainment: no qualifications; CSE grades 2 to 5/NVQ level 1 and equivalent; O levels/NVQ level 2 and equivalent; A levels/NVQ level 3 and equivalent; degree or diploma/NVQ level 4 and equivalent; and higher degree/NVQ level 5.

#### 2.3.2 Mediating Variables of Parental Divorce

As mediating variables for the effect of parental divorce, this study used variables from the second wave when cohort members were 10 years old. We included variables that were related to each theoretical explanation exposed in introduction. Family income is not a continuous variable. Parents were asked about the range of family's gross weekly income: under 35 pounds per week; between 35 and 49 pounds per week; between 50 and 99 pounds per week; between 100 and 149 pounds per week; between 150 and 199 pounds per week; between 200 and 249 pounds per week; 250 pounds or more per week. In order to create a continuous variable of family income, we calculated the mean for each range but used 17.5 pounds for the lowest range and 275 pounds for the highest range. Although there are several ways of adjusting household income, recent OECD publications (e.g. Foster, 2009) use the square root scale. We therefore standardized this variable using the formula of pounds per week /  $\sqrt{\text{number of people in the household}}$ . We found similar results using the OECD modified equivalence scale, which assigns a value of 1 for the head of the household, 0.5 to each additional adult member and 0.03 for each additional child.

We also created an index that measures maternal supervision, which is one dimension of quality of parenting that, as mentioned, has been consistently linked to family structure (Simons et al., 1999). Mothers were asked four questions referring to supervision: "Does your child go to the shops on his/her own? Does your child play in the street on his/her own? Does your child go to the park or playground on his/her own? Does your child go on local buses on his/her own?" For each question, the response options were: 1 = almost every day; 2 = about once a week; 3 = seldom; 4 = never. The index was calculated by adding up all answers. This variable has values ranging from 4 (minimum) to 16 (maximum). The alpha reliability coefficient for the four items in this study is 0.63.

As stated in the introduction, the BCS70 allows children's psychological problems before and after parental separation to be taken into account. Children's psychological problems were measured on the Rutter Parental 'A' Scale of Behavior Disorder (Rutter, Tizard, & Whitmore, 1970). This scale was completed by the parents—usually the mother—and was designed to measure behavior adjustment problems. However, only 15 items on the original scale were collected in wave 2. These items were summarized in a continuous variable, which takes values between 0 (no psychological problems) and 84 (highest psychological problems).

#### 2.3.3 Control Variables

To estimate our complete models, we controlled for a variety of child and parental characteristics, all of which were measured in the first follow-up wave prior to any family disruption. Since the main dependent variable is the children's educational level at age 30, information on cognitive skills was obtained at age 5 from the English Picture Vocabulary test, which is an adaptation of the American Peabody Picture Vocabulary Test. It consists of a series of 56 sets of four different pictures, with a particular word associated with each set of four pictures. The child is asked to point out the one picture that corresponds to the given word and the test proceeds with words of increasing difficulty, until they make five mistakes in a run of eight consecutive items. The final item achieved is designated the ceiling item. The EPVT raw score is the total number of correct items occurring before the ceiling item. The resulting distribution of raw EPVT scores was skewed, and so the scores were transformed to give a standard normal distribution value (minimum = -5; maximum = 3) (Institute of Child Health, University of Bristol, 1975).

Although the BCS70 dataset is rich in many domains, its ability to measure family processes, such as parental conflict, which is a very important control variable of the effect of parental divorce, is limited. There is no direct measure of family

conflict. However, mother's mental health problems prior to divorce is related to parental conflict (Choi & Marks, 2008). The mother's mental health was measured using the Malaise Inventory (Rutter et al., 1970). The Malaise Score is a continuous variable based on a 24-item questionnaire.

This study also included controls for each mediating variable explained above. Firstly, as for age 10, children's psychological problems at age 5 were measured using the "Rutter A Scale of Child Behavior Deviance Test", based on the mother's reports. At the first wave, a 19-item questionnaire was summarized in a continuous variable with values between 0 (no psychological problems) and 63 (highest psychological problems). Some items included in the original Rutter A-scale were excluded from this scale, mainly because of the high non-response rate to these items compared with the other items in the scale (Institute of Child Health, University of Bristol, 1975). It should be pointed out that the "psychological problems at age 5" variable has 19 items, while at age 10 this variable has 15 items. We therefore did not have exactly the same variable for children's psychological problems before parental divorce and afterwards, but they are broadly similar. Secondly, one of the main limitations of the British Birth Cohort Study 1970 is that the first wave contains no information about family income. For this reason, we used a proxy, namely the highest level of parental education completed by the father or the mother. This variable includes 6 categories: 1- No qualifications; 2- Low level vocational qualifications; 3- O-level or equivalent; 4- A-level or equivalent; 5- State Registered Nurse (SRN) or Certificated of Education (Teachers); 6- Degree. Thirdly, other control variables were related to quality of parenting before separation, such as "Father has read to the child in the last week" or "Mother has read to the child in the last week". The final control variable is sex, in which 1 is female and 0 is male.

#### *2.4 Data Analyses*

As mentioned earlier, this paper is based on the framework of structural equation modeling (SEM) and employs two types of structural equation models. A mediated structural equation model was used to disentangle the effect of parental divorce into direct and indirect effects, i.e. to observe the importance of family income, maternal supervision and children's psychological problems, in order to explain the effect of parental divorce on children's educational level. A multi-group model was also conducted in order to test whether the effects of family income, maternal supervision and children's psychological problems were statistically different for children from divorced families and for those from intact ones.

Structural equation models in this paper were estimated on the basis of a correlation matrix. Poly-choric and poly-serial correlations for non-continuous variables were used. These kinds of correlations provide better estimations of dichotomous and ordinal variables than Pearson correlations (Saris, van Wijk, & Scherpenzeel, 1998). The PRELIS and LISREL programs enable data obtained from an ordinal scale to be analyzed by estimating a matrix of poly-choric and poly-serial correlations developed from categorical data and computing the asymptotic variance-covariance matrix for the estimation (Jöreskog & Sörbom, 1996a, 1996b). For these reasons, the structural equation models in this study were undertaken using matrices of poly-choric and poly-serial correlations, and the asymptotic covariance matrix was estimated and used as input in the estimation of structural models. The analyses were carried out using the LISREL 8.51 computer program (Jöreskog & Sörbom, 2001). Jöreskog and Sörbom (1986) recommend using the Weighted Least Squares Solution (WLS), rather than the Maximum Likelihood Solution (MLS). The former provides better estimates of the chi-square goodness-of-fit measures and standard errors for categorical and ordinal data than the latter. However, LISREL does not allow estimation of multi-group models using an asymptotic covariance matrix.

Meanwhile, assessing the correctness of a structural equation model is essential in avoiding incorrect conclusions from empirical research. In order to evaluate whether a model fits the data, we reported the chi-square test and the RMSEA. However, Saris, Satorra, and van der Veld (2009) showed that these fit indices do not provide sufficient evidence on the fit of models, because they ignore the power of the test. For this reason, the models were adjusted using JRule software for the detection of misspecifications (Van der Veld, Saris, & Satorra, 2009) based on the procedure developed by Saris et al. (2009). If a misspecification was detected, we introduced the reasonable adjustments suggested by the JRule on a step-by-step basis.

In a longitudinal study, the potential for missing data to influence the results is very important. For this reason, two strategies were used to deal with missing cases (analyses of missing data available upon request). First, we carried out all analyses using list-wise deletion of missing data. This reduces the sample size by 37 percent. Although this method is the most common for dealing with missing data, it reduces statistical power and biases the parameter estimates. Secondly, we used multiple imputation estimation by using the PRELIS software. This procedure allowed all cases in the analysis (amounting to 7,967) to be included. Since the results of the methods for handling missing data were similar, the preferred model was the one with the largest sample size, which was obtained using the second strategy.



### 3. Results

#### 3.1. Does Parental Divorce Have an Effect On Children's Educational Level?

Table 1 shows the descriptive results for intact and divorced families for the different sets of variables measured at different points in time: the control variables measured before parental separation when the children were 5 years old; the mediating variables measured after parental separation when the children were 10 years old; and the children's educational level at age 30. Children from divorced families have a lower educational level than those from intact ones, and these differences are statistically significant. However, it is important to note that differences in educational achievement begin before parental divorce, since the vocabulary test score at 5 years old is lower for children who subsequently experience parental divorce than for those who do not. The descriptive results also show that before family dissolution, mothers that divorce have more psychological problems than those from intact families and that parents who experience this event are less educated and read less to their children than their counterparts in intact families; this is particularly true for fathers. These results indicate that the parents' disengagement starts before parental divorce. Before parental divorce, both groups of children, at age 5, have similar levels of psychological problems. Similarly, there are also important differences by family type in the mediating variables. After parental divorce, children from divorced families, at age 10, have more psychological problems and are less supervised than those from intact ones. Table 1 also shows that the divorced families only have around half of the income of intact ones. In short, families that divorce are different from those that stay together both before and after this event. For this reason, it is unclear from these findings alone whether the difference in children's educational level between children from intact and divorced families is due to parental divorce per se or to previous family characteristics.

Table 1. Means, percentages and standard deviations by family type.

	Divorced families	Intact families	Total	
<i>Control variables</i>				
Gender	45%***(std=1.00)	53%***(std=1.00)	53%	(std=1.00)
Children's psychological problems at age 5	58.16 (std=4.71)	57.81 (std=4.12)	9.02	(std=4.07)
Mother's malaise at age 5	5.04***(std=3.74)	3.99***(std=3.17)	4.04	(std=3.21)
Mother having read to the child at age 5	68%***(std=1.00)	74%***(std=1.00)	73%	(std=5.69)
Father having read to the child at age 5	39%***(std=1.00)	52%***(std=1.00)	50%	(std=5.69)
Vocabulary test at age 5	-0.37***(std=1.32)	-0.13***(std=1.28)	-0.15	(std=1.28)
Highest parental education	2.50***(std=1.00)	2.82***(std=2.46)	2.56	(std=2.46)
<i>Dependent variable</i>				
Educational level at age 30	2.09***(std=1.00)	2.60***(std=1.00)	2.58	(std=2.89)
<i>Mediating variables</i>				
Children's psychological problems at age 10	25.70***(std=11.67)	21.97***(std=10.19)	22.17	(std=10.30)
Family income at age 10	38.98***(std=24.19)	64.33***(std=27.34)	62.93	(std=27.74)
Maternal supervision at age 10	8.96***(std=1.00)	10.20***(std=1.00)	10.01	(std=1.98)

For means, independent samples t-test and  $\chi^2$  test for percentages: \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

Model 1 in Table 2 shows that parental divorce has a significant effect ( $b = -0.18$ ,  $p < 0.001$ ) on children's level of education. When control variables are included in Model 2, the effect of parental divorce decreases from -0.18 to -0.10, a reduction of 40% of the impact but remaining significant ( $p < 0.001$ ). It is important to note that the effect of other variables, such as parental education, on children's educational level ( $b = 0.38$ ,  $p < 0.001$ ) is higher than the effect of parental divorce. These findings indicate that parental divorce is not the most critical factor determining educational achievement, but is a factor that has significant measurable consequences (Sandefur & Wells, 1999).

Table 2. Unstandardized coefficients from the structural equation models showing links between parental divorce and control variables on children’s educational level.

	Model 1 <sup>a</sup>	Model 2 <sup>b</sup>
	Educational level	Educational level
Parental divorce	-0.18***(0.02)	-0.10***(0.02)
Sex		-0.04** (0.01)
Children’s psychological problems		-0.03** (0.01)
Mother’s malaise		-0.03** (0.01)
Mother having read to the child in the last week		0.02 (0.02)
Father having read to the child in the last week		0.16***(0.02)
Highest parental education level		0.38***(0.01)
Vocabulary test age 5		0.10***(0.01)

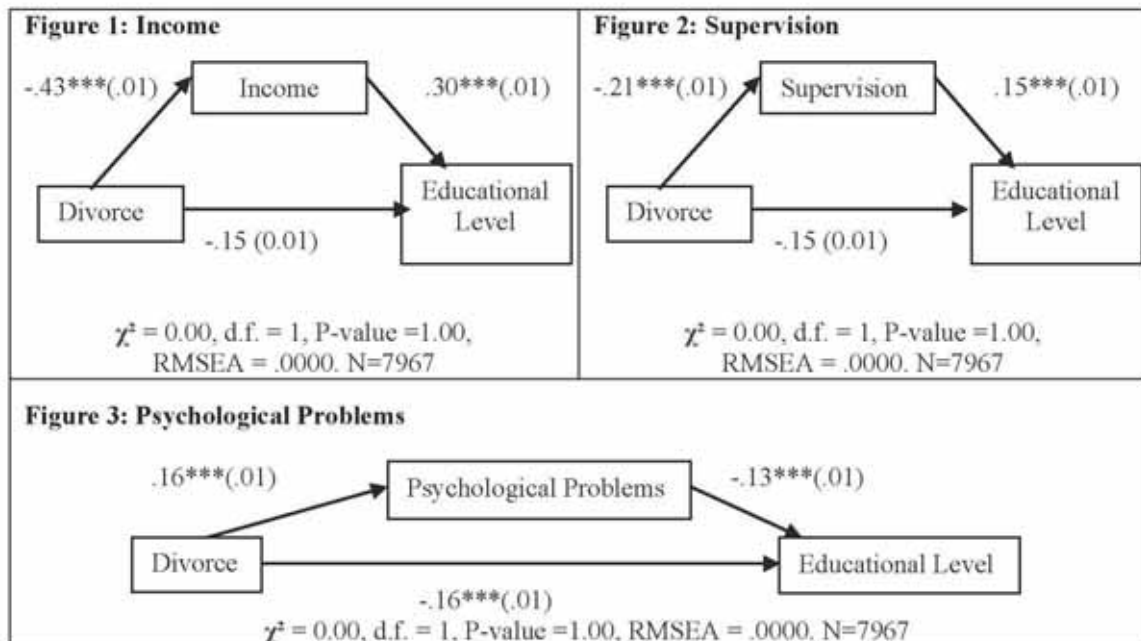
<sup>a</sup>  $\chi^2 = 0.00$  d.f. = 1, p-value =1.00, CFI=1, GFI=1, RMSEA = .0000. N=7967.

<sup>b</sup>  $\chi^2 = 0.00$  d.f. = 21, p-value =1.00, CFI=1, GFI=1, RMSEA = .0000. N=7967.

Standard Errors in brackets. \*p < 0.05, \*\*p < 0 .01, \*\*\*p <0 .001 (two-tailed tests).

### 3.2 Which Mechanisms are Relevant?

One of the main goals of this paper is to analyze whether family income, maternal supervision and children’s psychological problems after divorce explain part of the effect of parental divorce on children’s educational level. Structural equation modeling allows us to test to what extent these variables mediate the effect between parental divorce and children’s educational level. A mediating variable must be affected by parental divorce, and must also have an impact on children’s educational level. Figures 1, 2 and 3 show the effect of parental divorce on each individual mediating variable and the direct effect of these variables on children’s educational level. These models do not include the effects of the other mediating variables or the control variables.



Figures 1, 2 and 3. Mediated structural equation models for each mediating variable. Unstandardized coefficients are shown, with standard errors shown in brackets. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

Figure 1 shows that the effect of parental divorce on family income ( $b = -0.43, p < 0.001$ ) and the effect of this mediating variable on children's educational level ( $b = 0.30, p < 0.001$ ) are both large and significant. The direct effect of parental divorce on children's educational level decreases from  $b = -0.18, p < 0.001$  (see model 1 in Table 2) to  $b = -0.05$  and is no longer significant once family income is included in the model. In the model without control variables, family income therefore mediates around 70% of the effect of parental divorce on children's educational level. Figure 2 shows that parental divorce has a strong and negative impact on maternal supervision ( $b = -0.21, p < 0.001$ ) and that maternal supervision also affects children's educational level ( $b = -0.15, p < 0.001$ ). Maternal supervision therefore mediates around 19% of the effect of parental divorce on children's educational level. Finally, Figure 3 shows that the effect of parental divorce on children's psychological problems is positive and significant ( $b = 0.16, p < 0.001$ ) and that these problems also have a significant impact on their educational level ( $b = -0.13, p < 0.001$ ). Children's psychological problems consequently mediate around 13% of the effect of parental divorce on children's educational level. In summary, models without control variables demonstrate that the most important mediating variable is family income, but that maternal supervision and children's psychological problems explain a non-negligible part of the effect of parental divorce on educational level.

Figure 4 shows the links between parental divorce, income, maternal supervision, children's psychological problems after divorce and children's educational level, taking into account the control variables and the effects between the mediating variables. It also shows that although parental divorce has a significant effect on family income ( $b = -0.37, p < 0.001$ ), family income does not have a significant impact on children's educational level ( $b = 0.02$ ). Moreover, family income does not have a significant effect on children's psychological problems ( $b = 0.00$ ) or maternal supervision ( $b = -0.13$ ) either. This mediating variable does not explain, therefore, the negative effect of parental divorce on educational level when the control variables are added. In contrast, the effect of parental divorce on children's psychological problems ( $b = 0.07, p < 0.001$ ) and the impact of this variable on children's educational level ( $b = -0.07, p < 0.001$ ) are both significant. As a result, children's psychological problems explain around 5% of the effect of parental divorce on children's educational level, which is small but not negligible. At the same time, maternal supervision also mediates around 15% of this effect, since parental divorce has a significant impact on maternal supervision ( $b = -0.16, p < 0.001$ ), which has an effect on children's educational level ( $b = 0.09, p < 0.001$ ). It can also be clear that maternal supervision is not associated with children's psychological problems ( $b = 0.00$ ). Finally, Figure 4 shows that the direct effect of parental divorce is still significant, which means that the mediating variables used do not explain the entire effect of parental divorce.

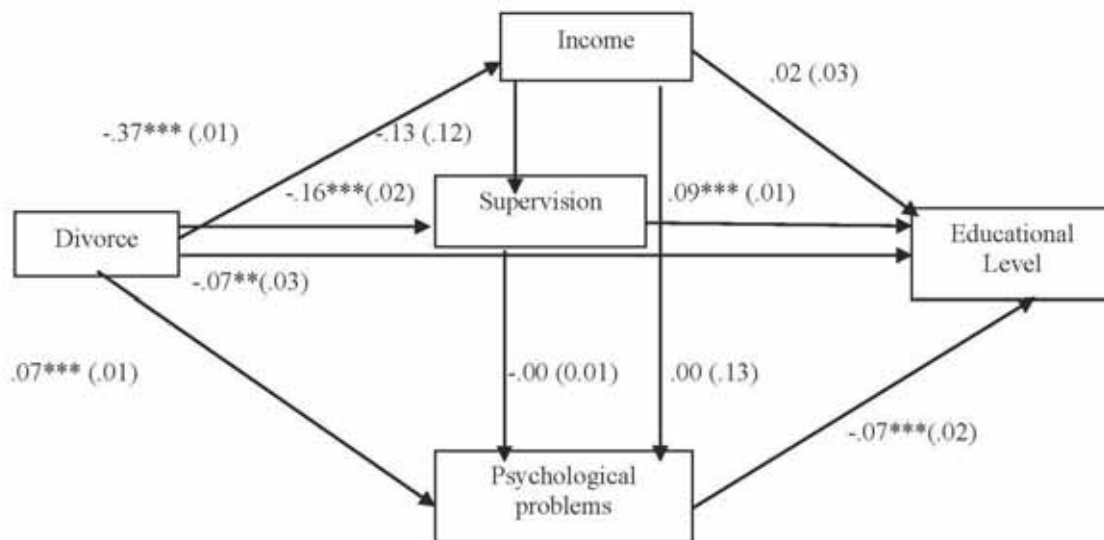
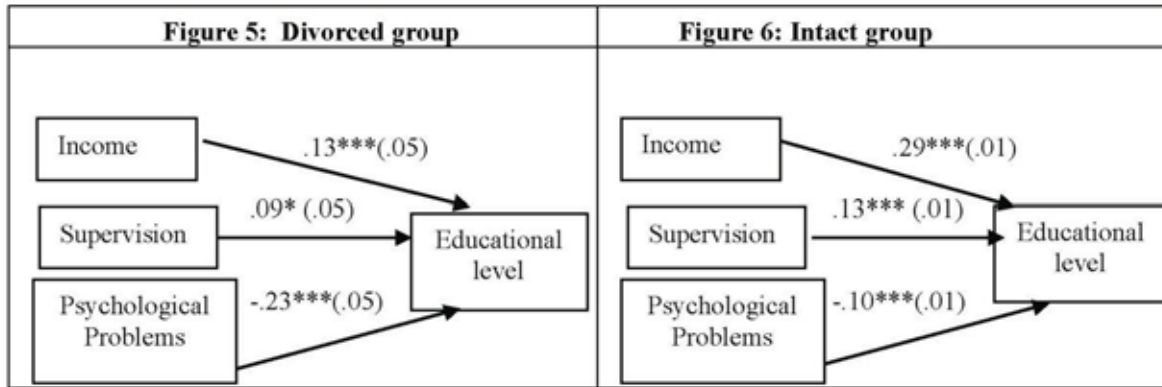


Figure 4. Mediated structural equation model considering all mediating variables.  $\chi^2 = 10.90$  d.f. = 29, p-value = 1.00, CFI=1, GFI=1, RMSEA = .0000. N=7967. Unstandardized coefficients are shown, with standard errors shown in brackets.

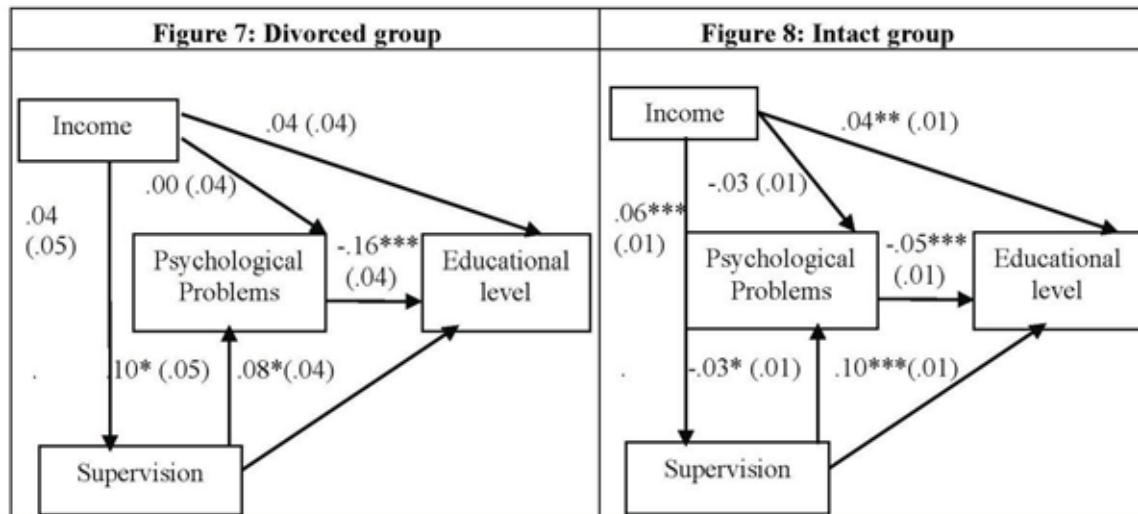
### 3.3 Do the Effects of Family Income, Quality of Parenting and Children's Psychological Well-Being Differ by Family Type?

As mentioned above, the previous analyses are based on 7,531 children whose parents lived together until the cohort members were 21 years old, and 436 children whose parents divorced when they were aged between 5 and 10 years old. Due to the large difference in sample size between the groups, the effect of the mediating variables on children's education mainly reflects the effect of children from intact families. In other words, for children that have experienced parental divorce, the effect of family income, quality of parenting and children's psychological well-being on educational level might be different. To test this, we ran a multi-group comparison to see whether the effect of these mediating variables differed between children from divorced families and those from intact ones.



Figures 5 and 6. Multi-group structural equation model.  $\chi^2 = 0.00$  d.f. = 12, p-value = 1.00, CFI=1, GFI=1, RMSEA = .0000. N=436 for the divorced group and N=7531 for the intact group. Unstandardized coefficients are shown, with standard errors shown in brackets. There are several correlations between income, children's psychological problems and maternal supervision.

Figure 5 shows the effect of the mediating variables on children from divorced families, while Figure 6 shows these effects for children from intact families. Control variables and the indirect effects between the mediating variables are not included in these models. There are significant group differences for income ( $\chi^2 = 11.17$ ,  $df=1$ ,  $p < 0.001$ ) and psychological problems ( $\chi^2 = 7.92$ ,  $df=1$ ,  $p < 0.01$ ). The impact of income on children's educational level is stronger for children from intact families ( $b = 0.29$ ) than for children from divorced ones ( $b = 0.13$ ). In contrast, the effect of children's psychological problems on educational level is lower for children that do not experience parental divorce ( $b = -0.10$ ) than for those that do ( $b = -0.23$ ). The path from maternal supervision to educational level is comparable for children from intact ( $b = 0.09$ ) and divorced families ( $b = 0.13$ ) ( $\chi^2 = 0.050$ ,  $df=1$ ). However, it is unclear from this data whether these group differences remain when control variables are included in the model.



Figures 7 and 8. Multi-group structural equation model.  $\chi^2 = 19.32$  d.f. = 29, p-value = 1.00, CFI = 1, GFI = 1, RMSEA = .0000. N = 436 for the divorced group and N = 7531 for the intact group. Unstandardized coefficients are shown and standard errors are shown in brackets.

Figures 7 and 8 represent the coefficients of the mediating variables on children's educational level when control variables and indirect effects between the mediating variables are added to the model. Figure 7 shows the effect of the mediating variables for children of divorce only, and Figure 8 highlights this effect for children from intact families. A comparison of Figures 7 and 8 shows that the impact of children's psychological problems on their educational level is still higher and significantly different ( $\chi^2 = 6.00$ ,  $df = 1$ ,  $p < 0.05$ ) for children from divorced families ( $b = -0.16$ ,  $p < 0.001$ ) than for those from intact ones ( $b = -0.05$ ,  $p < 0.05$ ). In contrast, when control variables are included, group differences in the link between family income and children's educational level are not significant ( $\chi^2 = 0.00$ ,  $df = 1$ ). This effect, however, is only significant for children from intact families ( $b = 0.04$ ,  $p < 0.01$ ). Further examination of the data indicates that this difference is due to the different sample sizes of these two groups. When we performed a multi-group model in which we used the same sample size of intact group ( $n = 7531$ ) for the divorced group ( $n = 7531$ ), we found that the effect of family income on children's educational level for the divorced group was also significant ( $b = 0.04$ ,  $p < 0.01$ ). Finally, the path from maternal supervision to children's educational level is similar for the divorced group ( $b = 0.08$ ,  $p < 0.05$ ) and the intact group ( $b = 0.10$ ,  $p < 0.001$ ). The inter-group differences in the link between maternal supervision and children's educational level are not significant ( $\chi^2 = 0.00$ ,  $df = 1$ ).

There are also some indirect effects among the mediating variables. Maternal supervision has a significant impact on children's psychological problems in both groups. For the intact group, the effect is negative ( $b = -0.03$ ,  $p < 0.05$ ), meaning that when children are supervised less, they have more psychological problems. For the divorced group, in contrast, the effect is positive ( $b = 0.10$ ,  $p < 0.05$ ), indicating that for children from divorced families, more supervision is related to more psychological problems. This finding is unexpected, since as noted above, maternal supervision is positively related to children's educational level in both groups. Moreover, no group differences appear in the link between family income and maternal supervision. Although Figures 7 and 8 show that this parameter is significant only in the intact group ( $b = 0.06$ ,  $p < 0.001$ ), it is also significant in the divorced group when the sample size of the divorced group is increased ( $b = 0.04$ ,  $p < 0.001$ ). Furthermore, the effect of family income on children's psychological problems is not significant for either group.

#### 4. Discussion

Although the literature on divorce strongly emphasizes an understanding of the mechanisms and protective factors of the divorce process, some limitations are still present. These limitations influence the type of policies and programs developed to help children through the divorce process. First, family income has received far more attention than the quality of parenting or other mechanisms. Second, most previous research on these mechanisms has only investigated them in isolation. Few studies have employed statistical techniques such as structural equations modeling, which allows the exact contribution of a mediator to be determined. Third, despite the well-established relationship between children's psychological well-being and educational outcomes, only one previous study has explored the mediating role of psychological well-being between parental divorce and children's educational outcomes (Potter, 2010). Four, only two studies have analyzed whether family income and quality of parenting have a greater protective effect on the educational

success of children from divorced families than those from intact families (Kiernan & Huerta, 2008; Xu et al., 2008). No study has evaluated the protective effect of children's psychological well-being. In this study, we have attempted to overcome these shortcomings by investigating the importance of these variables, measured at age 10, on the relationship between parental divorce and a long-term outcome, specifically, offspring's educational level, using structural equations modeling and the British Birth Cohort Study 1970.

The first goal of this study was to provide additional evidence to existing research on the mechanisms of the effect of parental divorce on children's educational level. Family income mediates this relationship in the models without the control variables as it has been shown to do in most previous studies. In fact, it is the most important mediating variable when compared with maternal supervision and psychological problems (Francesconi et al., 2009; Jonsson & Gahler, 1997; McLanahan & Sandefur, 1994). Contrary to previous research, when controlled by factors present in the family before parental divorce, family income is no longer a mediating variable, since it is not related to educational level despite continuing to be strongly link with parental divorce. This finding does not mean that family income is not an important factor in predicting the educational level of children from different family types, but that it is not a mediating variable of the effect of parental divorce. In addition, the structural equation models with and without control variables used in this study show that quality of parenting mediates a substantial part of the effect of parental divorce and that this mediating effect is independent from that of family income. These findings are important for two reasons: previous research showed mixed evidence about the mediating role of quality of parenting, and no study has evaluated the contribution of this mechanism while controlling for the effect of other mechanisms such as family income (Astone & McLanahan, 1991; McLanahan & Sandefur, 1994; Painter & Levine, 2004). Finally, although the importance of children's psychological well-being as a mechanism of the effect of parental divorce on educational level has been recognized theoretically, this study is the first to demonstrate empirically that it is not a negligible mechanism. This result is also in accordance with that obtained by Potter (2010) for test scores.

The second goal of this study was to evaluate the protective effect of quality of parenting, family income and children's psychological well-being for the different family types. We found that the effect of quality of parenting on educational level is comparable for children from intact and divorced families. Xu et al. (2008) obtained similar results for children's academic achievement, while Kiernan and Huerta (2008) obtained different results for cognitive development of children at age 3. Despite the important differences on income level between children from intact and divorced families, we have shown that the effect of family income on educational level is greater for children from intact families than for those from divorced families when control variables are not included in the model, while in the model with control variables, there are no significant group differences. Xu et al. (2008) also obtained unanticipated findings, since they showed that family income is negatively related to the academic achievement of children from divorced families, while the opposite is true for those from intact families. Unlike previous studies, the results obtained here also demonstrate that children's psychological well-being is a very important protective factor for children of divorce. The effect of psychological problems on educational level is significantly higher for children from divorced families than for those from intact ones. In other words, in the former group, having psychological problems at age 10 leads to more long-term consequences than for the latter group. Additionally, in all models, the variable most determinant for the educational level of children from divorced families is psychological well-being, while this is not the case for those from intact families, since family income and quality of parenting are more important for this last group of children.

However, the findings of this study should be taken with caution due to its limitations. First, important information needed to determine the effect of parental divorce, such as parental conflict and family income before the event, was not available in the British Birth Cohort Study 1970. Second, this study has considered only one dimension of the measure of quality of parenting, in this case, parental supervision. However, other variables, such as parental support or quality of parent-child relationship, are also important (Bastaitis & Mortelmans, 2016). Third, information about the non-custodial parent, which is a very important mechanism and protective factor to be considered, was also missing in our data (Amato, 2010).

Despite these limitations, there are several policy implications of this study. Although, as mentioned above, most family policies and policy recommendations aimed at divorced families are targeted to improving family income (Breivik & Olweus, 2006), our results suggest that, while income is important, it is not the only factor. Several programs and interventions for helping children from divorced families are designed to improve children's psychological well-being and quality of parenting and it has been demonstrated that they are effective in United States and Western countries such as Netherlands (Pedro-Carroll, 2011; Velderman, Pannebakker, van Vliet, & Reijneveld, 2016; Vélez et al., 2011). However, in most countries, only a very small number of children benefit from these programs. Our findings confirm their importance and suggest that governments should ensure that all children who experience parental divorce can have access to them. For these reasons, taking into account the substantial increase in parental divorce in all western countries, universal access to these programs might not be only beneficial for children and families that experience this event but for society as a whole.

Overall, the main contribution of the present study is that it provides additional evidence to that obtained by Potter (2010) regarding the importance of children's psychological well-being for educational outcomes of children of divorce. This finding gives support to the hypothesis of scholars (Emery, 1999; McLanahan, 1997) who suggest that poorer educational outcomes of children from divorced families are due to factors other than cognitive ability. In this respect, this study also extends the divorce-stress-adjustment perspective developed by Amato (2000), which does not include psychological well-being as a mediating effect or protective factor for children through the divorce process. Future research should continue to pay attention to Amato's (2010) advice on focusing less on mean differences between different family types and more on understanding the mechanisms and protective factors related to the divorce process. In this regard, Potter (2010) remarks that "consideration of the many factors involved in the divorce process will provide the best opportunity for continued growth in knowledge and understanding (p.944)".

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# Factors Affecting the Demographic Compositional Change of Transoxiana in the Early Islamic Centuries

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## Abstract

Despite the frequent attacks of Nomad tribes of the northern plains, the demographic composition of Transoxiana had remained Iranian in ancient era; nevertheless, after Muslim Arabs prevalence until the Mongol invasion, the demographic composition of this area completely changed under the influence of different factors. In addition to identifying the demographic composition of Transoxiana in the first Islamic centuries, this study is intended to introduce the factors affecting the transformation of the demographic change of this area. This study shows that in the Early Islamic centuries, the political structure and ethnic-racial of Transoxiana changed under the influence of different factors as Arab Conquests, Geographical Location of Transoxiana, Refuge of the opponents of caliphs, Commerce, *Ghaza*, The Religious Importance and Prosperity of Scientific Schools, Political Centralization in the Region by the Samanids, conversion of Turk Nomads to Islam, Migration of Turk Tribes to the region and Migration of that Inhabitants.

**Keywords:** Ethnic texture, Demographic composition, Transoxiana, Arabs, Turks, Samanids

## 1. Introduction

In each of the human societies, like many other social characteristics, demographic composition is changed and transformed over time. As some areas where is the birthplace and housing of a specified ethnic, becomes the home of another ethnic and group after a period. Thus, studying these transformations of demographic composition of different areas over centuries is one of the most important and considerable issues in the social history. Among Iranian areas that have experienced transformation in their ethnic texture and demographic composition over time, Transoxiana has a special position.

During the ancient period until the first Islamic centuries, this area now the home of Turk and Mongol tribes (including Uzbeks, Kyrgyz, Kazakh, Turkmen, Tatar, Uyghur, Qaraqalpaq, etc.) and is called by their names Uzbekistan, Kyrgyzstan, or Turkmenistan has been the center of the establishment of Iranian tribes and groups and considered as the largest and the most eastern Iranian state. The great role that this area played in the revival of scientific-literature life of Iran in the 9<sup>th</sup> and 10<sup>th</sup> centuries, the genesis and development of Persian literature, as well as the emergence and expansion of Iranian-Islamic culture and civilization makes us to study and review its deep transformations; especially since there was a close relationship among the changes of that region with the other places of Iran. As the transformation in political and social structure of Transoxiana was the introduction and beginning of this series of developments in all western parts of Iran. With locating in the major trade routes of Asia, in addition to benefitting from the possibility of commercial and industry development, this area was exposed to the passage of groups and individuals of different societies; consequently, there was a continuous change in its demographic texture. The process of this transformation of ethnic groups in Transoxiana became more intense over the first Islamic centuries; so that in the early Islamic centuries and under the influence of various factors such as distance of the area from the caliphate center, the commercial importance of the region, growth and prosperity of *Ghaza* operations, prosperity of religious sciences schools in the area, and finally, Islamism of Turks living in the Northern Plains on the Yaxartes, the context of transformation in the fully Iranian ethnic texture and demographic composition of this region was provided.

### 1.1 Literature Review

So far, several and various studies have been conducted on the history and society of Transoxiana in the early Islamic centuries; and the author has used most of these papers in writing this text. Most of these studies have been focused on explaining the political history or the status of the social classes of the region and the ethnic texture change has been less paid attention to. Only Spuler has briefly focused on the ethnic texture change all over Iranshahr (Iran Land) from Euphrates to Yaxartes and described this change without explaining the reasons of the issue.<sup>1</sup> Given the wide scope of his

discussion, it is natural that his data on Transoxiana is very few. Therefore, the aim of the current study is to clearly answer the question that: “why and how have the ethnic texture and demographic composition of Transoxiana changes in the early Islamic centuries?”

## 2. The Demographic Composition of Transoxiana on the Verge of Islamic Conquests

Our first knowledge of Transoxiana dates back to Achaemenid era when the eastern borders of that government stretched to Yaxartes. However there is almost no information about the domestic events of the region in Achaemenid era, but the geographical names of this region mentioned in the inscriptions of the Achaemenid kings confirms its political affiliation with Iran.<sup>ii</sup> This political integration and loyalty of the residents of Transoxiana continued until the last days of Achaemenid Empire (Toynbee, 685-686) all political-administrative arrangements of Achaemenid era in the region continued in the era of Alexander and Seleucids.<sup>iii</sup> The weakness of Seleucid Empire in this region provided the field for the movements of the northern emigrant tribes in the 9<sup>th</sup> century. A group of Iranian emigrant tribes called Takhars exorcised the Scythians around Yaxartes to Transoxiana and Khorasan and then established Kushan Empire in the Eastern Khorasan and Transoxiana.<sup>iv</sup> The general belief is that also these tribes had an Aryan root. According to the clear historical evidence, by the predominance of the Sassanid kings on Kushan Empire, Transoxiana was put under the command of the Sassanid Kings;<sup>v</sup> and with all its rise and falls, this dominance of Sassanid Empire on Transoxiana remained at least until the end of the fifth century.<sup>vi</sup> Nevertheless, at this time, with the massive invasion of the last group of Aryan emigrants called Heptalians, and half a century after them, the first non-Aryan emigrants called Turks overwhelmed the resistance of Sassanid Kings and local independent peasantries and this region was put under the domination of invaders. The kingdom of Heptalians and Turks was so transient and unstable that left no lasting effect and did not have any serious critique to the [status of] commerce and the increasing advancement trend of Transoxiana. Like Kushans, Heptalian gradually settled in the Iranian population. In our resources, there is no sign or indication of the wide migration of Turks to the overwhelmed territories. In general, the intervention of Turks in the administrative system of the princes under their command in that land was first limited to the appointment of sheriffs and gathering of tributes.<sup>vii</sup>

Thus, when capturing the Transoxiana in the early 8<sup>th</sup> century, Arabs faced small, independent and numerous political units<sup>viii</sup> that in addition to internal competitions, were in challenge against the desert masters of the region (i.e., the Turks' remnants) that appeared well to Arabs and this was one of the main factors of facilitation of Arab conquests in that area.<sup>ix</sup> At the beginning, the emigrant desert tribes created a complete turmoil; nevertheless, it seems that they were rapidly attracted by the indigenous elements and settled in the Iranian demographic texture of the region. During all centuries that the attacks of desert tribes continued, the base of the demographic texture of Transoxiana remained Iranian with preserving its language and customs. Therefore, until the Arab conquests among the inhabitants of Transoxiana and Khorasan, there were significant interactions and in spite of the political differences, there were common elements for a cultural and ethnic unity among them.

## 3. Factors Affecting the Transformation of Demographic Composition of Transoxiana

This evolution in the ethnic texture and demographic composition was generated under the influence of specific factors and conditions whose affection will be addressed and expressed in the following:

### 3.1 Arab Conquests

after the death of Yazdgird in the year 651, Khorasan was dominated by Muslim Arabs; however, the consolidation of this domination was achieved only after the migration and establishment of a group of Arabs by Ziad Ibn Abih (664-672) in that area.<sup>x</sup> By consolidation of the domination of Arabs on Khorasan, the first military groups of Arabs under the command of 'Obaidollah Ibn Ziad passed Oxus in the year 672 and started attacking Transoxiana.<sup>xi</sup> Given the existence of Oxus as well as the unfavorable political and social conditions in the Islamic territory in the second half of the first Islamic century, the establishment of Arabs in Transoxiana and final conquest of it were not possible. Hence, up to a half century later, these attacks continued in seasonal form and with a predatory approach. That is, in the war seasons of the year, they attacked there and after achieving the spoils, they returned to Khorasan in autumn.<sup>xii</sup> Thus, the final conquest and permanent attachment of this area to the Islamic territory was only dependent to the permanent residence of a group of Arab tribes in Transoxiana; hence, Qutaiba Ibn Muslim Baheli (704-714) made it possible for a significant population of Arabic tribes in Transoxiana area to provide the preliminaries of this affair. He also put a group of Arab fighters as Garrison in the cities of this area.<sup>xiii</sup> So that, after the certain conquest of Transoxiana, the entrance to that area became possible for the Arabs.

Therefore, Arabs' conquests affected the demographic composition of Transoxiana in two ways; in one hand, by the extensive establishment of Arabs in the area, the base of an Arabic demographic core was founded there; Transoxiana, especially Bukhara was from the areas that were paid attention to by Arab when their conquests and many Arab tribes migrated to these areas and resided around them.<sup>xiv</sup> As according to Ya'qubi, in the middle of the 9<sup>th</sup> century, Ushrawsna was the only area in Transoxiana where Arabs had not resided, unless, many Arabs had resided in all parts of

Transoxiana.<sup>xv</sup>

On the other hand, with the establishment of Arabs in the area, a large number of local noblesse and powerful people that were dissatisfied with the domination or even proximity to the Arabs preferred to leave their country instead of residence in there and migrated to the eastern parts of the country collectively.<sup>xvi</sup> So that, a large part of the Iranian noblesse (Sughdi) of the area migrated to Semirchie region and resided there. Some other noblesse went from the cities to the rural areas around the cities and left the cities for the Arabs.<sup>xvii</sup> Therefore, a significant change occurred in the demographic composition of the region after the Islamic conquests in the area.

### 3.2 Geographical Location of Transoxiana

Transoxiana was indeed the most eastern province of the Islamic territory that was important due to its lack of access to the caliphate as well as two other reasons; one was its proximity to the wide deserts of Turkestan from the north and east and the other was its location in the communication path between west Asia and India and China. Therefore, during the early Islamic centuries, the geographical location of Transoxiana affected the transformation of the demographic composition of the region in several ways that are investigated in the following, respectively:

#### 3.2.1 Refuge of the Opponents of Caliphs

The proximity of Transoxiana with non-Muslim tribes, as well as lack of access to the caliphate provided a favorable place for the refuge of the opponents of the caliph. The most important opponents of the Caliph were Shiites and Kharijites whose focus was in Kufa and its adjoining areas, but they went to the eastern regions due to pursuing and bother of the caliphate system. In the meantime, although the Kharijites generally went to Sistan and the borders of India, some of them went to Transoxiana and settled around Oxus in the Termidh area.<sup>xviii</sup> The Shiites turned more extensively to Transoxiana and immigrated to the eastern regions of the Transoxiana around Ilaq, Fergana and Chach.<sup>xix</sup> In this process, Sadat Alavi was the most important ethnic group that migrated to Transoxiana. Those who regarded the caliphate to be the true right of their ancestors, Ali Ibn Abi Talib (AS) and considered the caliphs of the Umayyad and Abbasid as usurpers of this right, during the early Islamic centuries were under different pressures, persecution and torments from the caliphs of Umayyad and Abbasid.<sup>xx</sup>

Even some caliphs had considered some spies for themselves in order to see the apparent and hidden activities of Sadat through them.<sup>xxi</sup> 'Alid Sadat migrated to far areas for their safety from this persecution.<sup>xxii</sup> Due to its specific geographical location, Transoxiana was paid attention to by 'Alid Sadat from the beginning of the 8<sup>th</sup> century. Delicate behavior of the people and rulers of that area (especially, Samanids) to Sadats also added their reasons and consequently, that area and its proximate lands became as one of the centers of Sadats.<sup>xxiii</sup> This extensive dispersion of 'Alid Sadat in the area can be deduced from their active presence in the political-military events of Transoxiana in the fifth and sixth centuries as well as the detailed list of Alavi elders and paterfamilias in the cities of this region provided by Abu al-Hasan Baihaqi. This area was also a place for refuge of the other political opponents of Abbasid caliphate system, even for the members of (their own) family who claimed for the caliphate.<sup>xxiv</sup> So that, in the shadow of such position, a large number of Sadats and other Arabs came to Transoxiana and permanently resided there.

#### 3.2.2 Commerce

Commerce has been always one of the main factors of demographic displacement. In the early Islamic centuries, Transoxiana region has been also considered as the only large commercial center among Khorasan, India, China, Turkestan, Qipchaq Plain, and through that to the Eastern Europe and the coasts of Baltic Sea. Due to the suitable communicative location, many residents of that area were engaged in commerce and distributed around for business.<sup>xxv</sup> Moreover, many merchants travelled to this region from different areas. Many of these merchants either resided in cities of Transoxiana or established their agents in these cities for doing their commercial works; as during the time of Chingiz Khan's Attack to Bukhara, when they listed the rich people of Bukhara, 280 persons were selected of which 90 persons were merchants.<sup>xxvi</sup> In addition, just in the small city of Shalji around Taraz, in the east of Yaxartes, there were ten thousands merchants of Ispahan (apart from the merchants of the other cities).<sup>xxvii</sup> As it is clear, this condition has intensively connected Transoxiana to Khorasan, Turkestan, and Qipchaq Plain and had numerous economic advantages for its inhabitants.

In addition, as we know, slave has been one of the greatest exchanged goods in these ages. The slave trade boom cause that many individuals of Turk tribes be sold as slaves (including bondman and bondwoman) in the slavery markets of the area and sent to the other parts of the world.<sup>xxviii</sup> In the fourth century, the preparations of absorption and maintenance of these slaves were made in Transoxiana; i.e. while transferring and selling a large number of Turk slaves to the west areas of Islamic territory, Samanid court absorbed many of these slaves and gave them administrative and military works. The presence of these slaves gradually accounted for a significant percentage of the demographic composition of this area.

### 3.2.3 Ghaza

The issuance of Islam and Jihad with non-Muslims has been always considered as a godly act by Muslims. Attachment of Transoxiana to the Islamic territory put the Muslim Arabs in the proximity of non-Muslim tribes living in the northern and eastern Yaxartes plains. Since the common border of Muslims and non-Muslims was in Transoxiana and the lands around Yaxartes, fight with these non-Muslims had gradually influenced the area and Transoxiana has become a border area (*Thaghr*) and the place of gathering of *Ghazi* Muslims from the other Islamic territory areas. The necessity of fighting with the attacks of these desert tribes required the permanent presence of these Ghazians in the borders.

Thus, the many welfare facilities like *Ribats*, placing drinking water in the cities, free night-time catering to these *Ghazis*, and donating places for administering these welfare centers were considered and consequently, many other Muslims of the other areas went to Transoxiana as Ghazi and got engaged with fighting with the desert tribes.<sup>xxxix</sup> As a result, in this period, many Ghazian and *Mutawa'a* (idol breakers) gathered there from different areas of the World of Islam and engaged in Jihad with the non-Muslim tribes of the northern deserts.<sup>xxx</sup> Therefore, in one hand, *Ghaza* (Fighting with non-Muslims) brought many Ghazians from the other areas of the Islamic territory to Transoxiana and changed the demographic texture of the area; and on the other hand, as a result of these fights, many Turk slaves were entered Transoxiana. As mentioned, the entrance of these Turk slaves also affected the demographic texture of the area.

### 3.3 The Religious Importance and Prosperity of Scientific Schools

Another one of the attractions of the area contributing the demographic composition change of the region was the prosperity and plurality of religious sciences schools. All of the people of the region were Sunni and congregational and were generally the followers of Hanafi and Shafei parties. Shafeis presented around Chach and some villages of Bukhara, and most of inhabitants of the region were Hanafis.<sup>xxxix</sup> From the very beginning of the second century, a significant number of scientists and scholars of the region travelled to Hijaz and Iraq and trained before Hadith Imams and followers and consequently, many of these scientists became the religious leaders of Hanafis of the World of Islam.<sup>xxxii</sup> Through the compilation of great Hadith Books such as "*Şihāh al-Setta*", these leaders obtained the spirituality of all Sunni people. In addition to consolidating the authority of the religion of their followers, the presence of great Sunni leaders in Khorasan and Transoxiana helped the prosperity of the religious sciences schools in the region; so that many science fans from different parts of the World of Islam went to this area to educate religious sciences and they generally resided there temporarily or permanently.<sup>xxxiii</sup> Thus, science educating was also another factor of changing the demographic composition of the region.

### 3.4 Political Centralization in the Region

In ancient era, the administrative-political structure of Transoxiana was influenced by the ancient Aryan traditions and the geographical location of the area had a poly-rulers structure. This means that the Iranian of Transoxiana traditionally were in under Aryan dominance of their indigenous bosses (called *Zantopats*) or local kings.<sup>xxxiv</sup> In one hand, regarding the geopolitical position of the region and its proximity to the desert tribes, and on the other hand, due to the geographical dispersion of its units, Achaemenid Empire that had created a central political power around the capital, with political tolerance and in addition applying its high comments, accepted the existing local political order or the same poly-rulers system and only by foundation of Satrapi of Bactria and appointing one of the members of royal family to its government, Achaemenid Empire put the responsibility of ruling there, full monitoring of tax collection, preparation of the troops, and coordination in the general policies of the empire in the eastern region on his shoulder.<sup>xxxv</sup> In addition to monitoring the southern Oxus, this Satrap supervised the Basin of Marghab River, Transoxiana, and United kingdoms of the Empire.<sup>xxxvi</sup> So that, a kind of administrative-political structure has been created that was the desired and interested method of the future rulers of that region; and more than fifteen centuries, the next powers including Maqdonian, Parthian, Kushanian, Sassanids, Heptalian, Turks, and even Muslim Arabs continued this political administrative structure. This means that by applying their high comments and collecting taxes, they maintain the internal independence of these indigenous kings that were ruling the different parts of Transoxiana as *Dehqan*.

After overcoming Khorasan, with the idea of imitation of the Sasanid Kings and changing their rule into Kingdom, Samanid Emirs that were from the same *Dehqans* and obtained their power from the same political structure changed the political structure through creating political centralization, got the power of the *Dehqans*, and started a long-lasting competition with them. As a result of this process, the Samanid Government dismissed many of these local *Dehqans* and seized their estates.<sup>xxxvii</sup> By comparing the number of powerful *Dehqans* in Bukhara oasis when the Arab conquests with the time of Emir Ismail that no powerful *Dehqan* remained, we can realize the intensity and depth of this political centralization. As in the distance between Yaxartes River and Oxus River that had been sometime full of independent small emirates, now there was only one rule and that was the rule of Sasanid Emir. Even Samanid Emirs dismissed some of their brothers and family members ruling around Yaxartes and attached their territory to their own direct territory.

This political centralization that threatened the interests and political position of *Dehqans* made them to oppose the

Samanid Emirs that appeared over several stages and in the form of several revolts against Sassanid Emirs including provocation of the slaves to murder Amir Ahmad, participation in the revolt of Hussein Ibn Ali Marwrudi, revolt of Ahmad Ibn Sahl Marwrudhi.<sup>xxxviii</sup> Hence, to get rid of the dependence to the military force of these Dehqans, Samanid Emirs tried to decrease their authority while inhibiting the power of these competitors.<sup>xxxix</sup> This tension of interests between Dehqans and Samanid Emirs made the Emirs to tend to the power of Turk slaves in order to compete the Dehqans and their powerful military force. Hence, by employing and disciplining a large number of Turk Bondmen and Bondwomen, they gradually freed themselves from dependency to the military force of Dehqans. On the other hand, by assigning shares and lands to the other social classes such as jurists, merchants, and slaves, as well as expansion of endowments,<sup>xl</sup> they tried to reduce the aristocratic privilege of these Dehqans. Thus, the Dehqan Class lost its importance as an excellent class; and naturally, with tyranny of the Turk slaves and subsequent turmoil, some of them left their lives in Dehqans Class in Transoxiana and migrated to other areas.

### 3.5 Embracing Islam by the Turk Nomads

One of the main problems of Iranian Kingdom over centuries was to maintain the borders of the Northeast from the emigrants' attacks. During the ancient era, these emigrant tribes were generally from Iranian groups; nevertheless, in the late sixth century, the first group of non-Iranian peoples under the name *Tukiu-e* (or in Islamic references: Turks) with forming a desert empire, could dominate the tribes living in the northern plains from Baikal Lake to near the Black Sea; soon, it was divided into two parts and the plains in the vicinity of Yaxartes were put under the control of Western Turk Khaqan. Hence, the Muslim Arabs became the neighbor of this Turk Khaqan after overcoming Transoxiana. In the early 8<sup>th</sup> century, Western Turk Khaqan broke down and power emptiness created in the plains around Yaxartes allowed some tribes living near Baikal to migrate to these plains.<sup>xli</sup> With the arrival of new tribe groups and the domination of the remnants of Turk tribes, the Tribe Union under the titles of Qarluqs and Oghuz that dominate all eastern and northern plains of Yaxartes, respectively. In this way, from Tarim River to Taraz River, i.e. all Turkistan area of China and Semirchie area were under the control of Qarluqs Union and the plains located in the west of Taraz River to Volga got under domination of Oghuz.<sup>xlii</sup>

In ancient times, conflict between the Iranian of Transoxiana and these migrating tribes was often based on the living and economic differences; but after the Muslim Arabs overcame Transoxiana, the religious differences were added to these living differences and this changed the process of confronting Turk nomads from a defensive to an aggressive process. In this sense, attempts to issue Islam as well as "*Nafye Sabir*"<sup>xliii</sup> Principle (it is an Islamic principle that allows no domination of Non-Muslims over Muslims) encouraged and motivated the Muslims to fight with these tribes. In the shadow of such a great religious motivation, not only the remnants of Turks were driven out of Transoxiana, but also the Muslim *Ghazis* forced them to issue Islam in deserts of east Yaxartes. This religious differences contributed to consolidate the eastern borders more than anything, because Non-Muslims (except *Dhimmi*) had no place in Islamic society; thus, these tribes could not enter the Islamic Territories was not possible unless they accept Islam. However both Qarluq and Oghuz Tribe Unions resisted against Islam for more than two centuries and with the support of their military force, finally, from the middle of the fourth century, under the influence of various factors such as commerce, political interactions, the activity of Muslim preachers, and refuging of the Shiites and Sadat Alavi in their territory, they gradually accepted Islam.<sup>xliv</sup> Nevertheless, this phenomenon, that is to say the Islamism of Turks affected the demographic texture of the region in three ways:

Until the fourth century, *Ghazis* were one of the most important strata of the area who were considered as one of the main pillars of Samanid army while fighting with the northern non-Muslim tribes.<sup>xlv</sup> With the influence of Islam among Turk tribes in the middle of the 10<sup>th</sup> century, *Ghazians* become unemployed. This unemployment provided the context for their disruptive behaviors and consequently the social disturbance there. Samanid government directed *Ghazis* to migrate to the other border areas and other Islamic borders in order to cope with this problem.<sup>xlvi</sup> Therefore, by collective migration of Ghazians from Transoxiana, in addition to reduction of the defensive force of the region and weakening the power of Samanids, a part of the demographic composition of the area changed.

#### 3.5.1 Migration of Turk Tribes to Transoxiana

As it was said, by the fourth century, in addition to deep living, civil and ethnic differences with the residents of Transoxiana, the desert tribes of northern plains also had religious and ideal differences and this was the most important obstacle for influential passage and presence of these tribes in Transoxiana. Muslim geographers have given many details about the Islamism of Turk tribes around Yaxartes River in the middle of the fourth century.<sup>xlvii</sup> With the prevalence of the Islamic teachings among these tribes, an ideal common has been created between them and the residents of Transoxiana that eliminated the obstacles of their passage and presence in the Islamic society. Therefore, Islamism of these tribes was equal to destruction of the eastern gate of Iran (and more precisely, the Islamic Territory).

As Istakhri announces the presence of some converted Turk tribes in the pasturelands around Farab and Konjideh in the

middle Yaxartes Basin in 950 who did not obey the Muslim Sultans.<sup>xlviii</sup> This narrative has been quoted by almost all of the next geographers.<sup>xlix</sup> Therefore, obviously the Islamism of Turk tribes had been associated with the permission of their travel to Islamic territory without the need of obeying the Muslim rulers. The tightness of the place and attempts to find a place for the added population and their livestock made the new-Muslim tribes and the force of eastern and northern tribes pushed them to migrate to Transoxiana. These converted tribes who succeeded to form the first Turk Muslim Government under the title of Qarakhanids in Semirchie area started to go to Transoxiana in the continuous attacks of desert-residence to presence (in Transoxiana) and in order to meet their livelihood needs. They first created some problems for the Samanid Emir through supporting his opponents in Farghana.<sup>l</sup> Then, they continued their advancement by overcoming the silver mines in Ilāq region from the year 975.<sup>li</sup> Provocation of the opponents of Samanid Government for the attack of Qarakhanids to Bukhara added the intensity of this problem;<sup>lii</sup> finally in 989, after overcoming the Samanid Army under the leadership of Hajib Inanj, Bughraqhan Harun attached all areas in the east of Yaxartes River to his own territory and then defeated the Samanid Army again under the leadership of Fāeq al-Khaṣṣa in Samarqand and consequently seized the Samanid Throne in 991.<sup>liii</sup> However Bughrakhan returned to his headquarter in Semirchie after appointment of Abdul Aziz Ibn Nuh Ibn Nasr (one of the dissatisfied members of Sasanid Family),<sup>liv</sup> but a few years later, in 999, Ilak Khan entered Bukhara pretending to support them and by imprisoning the nobles and great rulers and Samanid princes expanded the domination of Qarakhanids to the Oxus Coasts.<sup>lv</sup> Therefore, the last Iranian Government was collapsed in the region and Transoxiana was opened for the settlement of tribes under his command. The Samanid Emir who had faced the revenge and rebellions of the slaves that were the mainstay of his power,<sup>lvi</sup> united with some converted tribes of Oghuz to compensate his weakness and gave them pasturelands in the south of Qizilqum and the northeast Bukhara, i.e. Nūr Region.<sup>lvii</sup>

With the arrival of tribes to the sedentary areas, a new style of social life was created in Transoxiana. This means that along with the urban and rural sedentary society that had included almost all population of Transoxiana in the early Islamic centuries, the independent and moving communities were formed. Increase in these tribes in the following decades changed them to one of the important social classes affecting on the society's process and the form of the political system. Invasion, traffic, and migration of the early tribes has been always followed by damaging economic and social results for the civilized areas and certainly the arrival of converted Turks to Transoxiana has not been an exception. However with the effectiveness of the Islamic and Iranian culture and under the direction and advices of the Iranian bureaucrats, these tribes could preserve a valuable and considerable scientific, literary, cultural, and civil heritage, but at the very beginning, they caused much damages to the economic and social life of Transoxiana.

### 3.5.2 Migration of the Inhabitants of Transoxiana

The dominance of Turk slaves in Transoxiana and their domination and consolidation to the Samanid court shattered the social status of Transoxiana. This phenomenon as well as the prevalence of the majestic courts of Khawrazm and Ghazna, and support of the scholars and scientists led to the migration of some of the citizens of Transoxiana such as scientists of that region.<sup>lviii</sup> This migration wave intensified with the victory of Qarluq and Oghuz tribes that dominated Transoxiana society after the collapse of Samanids. This intensity was so much that even some of the members of Samanid family intended to go to their city and migrated to neighbor the court of the rulers of Khwarazm and Khorasan.<sup>lix</sup> Clearly, by migration of these Iranian groups, the space was provided for further establishment of the ethnic Turk and Mongolian Groups and increase in the settlement of Turks led to the change of the ethnic texture of this region.

## 4. Conclusion

Over many countries, Transoxiana has been always the most eastern and one of the most important states of Iran. Despite the fact that it has been exposed to the continuous invasion of desert tribes, this region has yet had a (basically) Iranian social composition at the begging of Arab conquests. With the victory of Muslim Arabs and during the first Islamic centuries, this demographic composition changed. The Attacks of Nomads has been one of the main factors of change in the pillars of political and civil society of Transoxiana in previous centuries. The location of this state in the eastern borders and its proximity to the Eurasia steppe has a major mission for them to confront Nomads. Presence of and expanded settlement of the Iranian tribes in the separated and independent units of this area led to the emergence of poly-rulers system (the desired system of Aryans). After the emergence of Kingdom (imperial) system in the west of Iran and their centralization of power, regarding the Iranian way of governing the country that one of whose fundamental characteristics was granting internal independence to the border states to consolidate the borders, not only this political system did not change, but also given the major role of Transoxiana in coping with Nomadic attackers, it was stabilized and developed. With this strategy, the path of progress of Eurasia tribes to the Iranian territory was blocked. Although in a few cases, the invader non-Aryan tribes succeeded to overcome this region, the power remained in the hands of the indigenous aristocracies of Iran. The entrance of Muslim Arabs that ended up the life of Sassanid Empire and subsequently the ancient era disturbed the political structure balance and the demographic composition of this region.



Along with the gradual progress of Arabs to the East and Transoxiana, a large number of aristocrats and elders affiliated to the Caisson court also migrated to this area and took a large part of the Iranian political-cultural heritage with them. Moreover, the necessity of maintaining the captured lands and continuity of conquests made many Arab tribes to migrate and collectively settle in these areas.

In addition to the active commerce of Transoxiana and traffic of different merchants to there, the enthusiasm for participating in the religious operations of *Ghaza* and preaching Islamic religion also attracted many Muslims from different parts of the Islamic Empire to this area. Consequently, (indeed) a global society was created in Transoxiana. This also contributed to mix the cultural Aryan (eastern Iran), Sassanid (western Iran), and Islamic-Arabic Effects with each other and provided the context for the emergence of Iranian-Islamic culture and civilization. In addition to the expansion of Islam's territory, the expansion of *Ghaza* operations (especially in the third century) entered many of Nomads under the title of slaves to Transoxiana and Islamic society. retreating Nomads and their gradual familiarity with the Islamic teachings eliminated the necessity of keeping the previous orders in addition to eliminating the cultural barriers of the presence of Nomads in Transoxiana; subsequently, the gates of Transoxiana (and consequently Iran) was opened for the invasion of Nomads in the late fourth century. With ending the life of the last Iranian Dynasty, this led to the basic transformation of the political structure and ethnic-racial change of Transoxiana.

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<sup>i</sup>. Bertold Spuler, *Iran in Früh-Islamischer Zeit: Politik, Kultur, Verwaltung und öffentliches Leben Zwischen der arabischen und Seldschukischen Eroberung 633 bis 1055* (Wiesbaden: Frank Steiner Verlag, 1952), 347-372.

<sup>ii</sup>. R.N. Sharp, *The Commands of the Achaemenid Kings* (Shiraz: The Center Council of Imperial Celebrations, 1967), 33, 76-77, 79, 83; Albert ten Eyck Olmstead, *History of Persian Empire* (Chicago: University of Chicago press, 1948), 66, 211, 240-241.

<sup>iii</sup>. Hasan Pirnia, *The Ancient Persia* (Tehran: Donya-ye Kitab, 1983), 3: 1976, 1993, 2103.

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# Improving Roadway Navigation and Safety of Older Age Drivers

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## Abstract

Motor vehicles are the primary mode of transportation worldwide, but drivers must simultaneously utilize various skills and perform multiple tasks at the same time to safely operate the vehicle. As people age, however, physical changes can affect daily life, possibly contributing to declining driving skills. These changes affect vision, hearing, reaction time, and cognitive and motor ability, thus complicating driving. This paper discusses the importance of driving for people of age 65 and older, age-related physical changes, and methods of improving overhead guide sign visibility on roadways. Suggestions to improve navigation and safety on roadways, especially for older people, are presented, including the use of autonomous vehicles fleet.

**Keywords:** Safety, Older Driver, Driving, Autonomous Vehicle

## 1. Introduction

Motor vehicles are essential modes of transportation worldwide for drivers of all ages. To safely operate a motor vehicle, however, drivers must simultaneously utilize various skills and perform multiple tasks while accounting for factors such as other roadway users, traffic signals, signs, and environment (Dukic & Broberg, 2012). Based on road statistics, the most important driving skills include the acquisition and processing of information and the ability to make appropriate decisions when needed (Dewar & Olson, 2007).

Despite the age of drivers, more driving difficulties are faced during nighttime driving. Several driver's issues may affect roadway visibility such as driver's contrast sensitivity, visual acuity, judgment on distances, and discrimination of colors (Lagergren, 1987). In the U.S., green signs located along roads are called guide signs. These signs are essential for boosting driver's guidance and safety by providing guidance and information regarding destinations (Obeidat M. S., Rys, Russell, & Gund, 2014a).

Currently, the elderly population, age 65 and older, in the U.S. has increased dramatically. Population projections report that the number of U.S. seniors, ages 65 and older, is expected to more than double between 2012 and 2060, from 43.1 million to 92 million (U.S. Census Bureau, 2012). In 2060, the older population will represent more than one in five U.S. residents compared to one in seven in 2012 (U.S. Census Bureau, 2012). In addition, the increase in the "oldest old" number will be even greater: residents 85 years and older are projected to more than triple, from 5.9 million to 18.2 million, reaching 4.3% of the total population in the same time interval (U.S. Census Bureau, 2012).

An important focus of the Federal Highway Administration (FHWA) in the U.S. is to increase road safety. Based on the National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS), 37,461 people were killed in motor vehicle traffic crashes in the U.S. in 2016 (National Highway Traffic Safety Administration [NHTSA], 2017). Despite the fact that 25% of all vehicle travel occurs during night, about 50% of traffic fatalities occur during night (Federal Highway Administration [FHWA], 2008), (Obeidat & Rys, 2017).

As required by the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), overhead roadway guide signs should be manufactured from retroreflective sheeting materials or illuminated (FHWA, 2009). Departments of Transportation (DOTs) in the U.S. are considering two options: adding light sources to the currently installed overhead guide signs on roadways or replacing old signs by new retroreflective sheeting material to increase sign visibility to drivers, especially old age drivers, at night to decrease the potential crashes possibility, which resulted from driver confusion and improper maneuvers.

This paper discusses the importance of driving for older people and corresponding age-related physical changes. Suggestions to improve navigation and safety on roadways, especially for older drivers, are presented for DOTs and transportation agencies, including the use of autonomous vehicle fleets.

## 2. Literature Review

### 2.1 Importance of Driving for Older Populations

For an independent, active elderly person, maintaining mobility outside the home is essential (Born, et al., 2010). A private vehicle connects seniors to services, goods, and other activities for which they must have a high level of independence. Motor vehicles are the main transportation media among senior people in the U.S. (Foley, Heimovitz, Guralnik, & Brock, 2002). This travelling trend is becoming increasingly popular in Europe, as well (Talbot, et al., 2005). The most reliable and convenient media of transportation is driving, especially in areas with little or no public transportation (Born, et al., 2010). In addition, driving can provide physical and social benefits of personal transportation and mobility for seniors. Conversely, loss of personal mobility, especially for seniors, may lead to depression and physical and mental illnesses (Phillips, Rousseau, & Schwartzberg, 2006). Driving cessation can also lead to negative economic and psychosocial consequences (Born, et al., 2010). For example, the loss of driving privileges can cause difficulty for former drivers to obtain required services and goods, such as, doctor's appointments, groceries, and their frequency of social opportunities with friends and relatives may be reduced (Born, et al., 2010).

People over 65 years of age utilize private vehicles, either as drivers or passengers, for approximately 90% of their daily errands (Houser, 2005). Approximately 44% of these errands are for shopping, 27% are for meals, social activities, and recreation, 13% are for school, religious issues, and family, 5% are for medical issues, 4% are related to work, and 7% are as passengers (Houser, 2005).

### 2.2 Age-Related Driving Issues

As people age, physical changes occur which can affect daily life, including functions that may reduce driving skills. These changes affect vision, hearing, reaction time, and cognitive and motor ability, thus complicating driving or walking (Houser, 2005). While many senior drivers are able to compensate for declined functions with experience and safe driving habits, aging uniquely affects each individual (Houser, 2005).

Studies related to senior drivers have shown that crash rates associated with increasing age are most likely related to declining driving abilities and medical conditions that can affect and impair driving (Bayam, Liebowitz, & Agresti, 2005). According to (Zhang, Lindsay, Clarke, Robbins, & Mao, 2000), although physical health and medical conditions did not predict fatality risk for drivers aged 65 to 74, medical conditions, such as diabetes mellitus, epilepsy, and chronic heart disease, were found to significantly increase fatality risks for drivers over the age of 75.

The act of driving presents many challenges for drivers of all ages. At night, signs and roadway markings are difficult to see and small lettering on roadway signs may be difficult to read even during the day. Large roadway intersections with multiple lanes and access roads can be complicated and confusing for any driver, especially for older drivers (Houser, 2005). In addition, seniors typically prefer to drive older vehicles, most of which lack advanced safety features found in modern vehicles. As a result, driver safety is reduced (Houser, 2005). The following sections provide details regarding age-related driving issues.

#### 2.2.1 Visual Acuity

Declining vision can significantly affect seniors' driving, causing difficulty in seeing roadway signs, traffic signals, pavement markings, and pedestrians or passing animals. Nighttime driving is especially challenging because of interference of low-level lighting and glare from other vehicle headlights with a driver's vision (FHWA, 2003). Vision changes for older drivers often affect the distance at which they can detect traffic signs and recognize sign lettering. These changes may also affect the ability to see and detect pavement markings (Amparano & Morena, 2006). Because of these visual deficiencies, senior drivers are often hesitant to make decisions regarding lane changes or exiting, thus affecting their safety and the safety of other roadway users.

Contrast sensitivity is defined as "the ability to discern brightness differences between adjacent areas" (Phillips, Rousseau, & Schwartzberg, 2006). Declining contrast sensitivity prevents older drivers from noticing faded pavement markings during nighttime driving. Visual declines are a prominent cause of driving problems for seniors. Elderly drivers often feel a decline in their capability to clearly distinguish stimuli under various driving conditions, and many seniors experience visual field narrowing (Bayam, Liebowitz, & Agresti, 2005). In addition, senior drivers commonly fail to notice objects in motion (Bayam, Liebowitz, & Agresti, 2005).

According to Phillips et al. (2006), the function of the lens in the human eye is to focus light onto the retina. Two key changes occur to an eye lens with age: flexibility reduction and yellowing. Flexibility reduction causes difficulty in shifting focus from near objects to objects farther away. In fact, Presbyopia, or nearsightedness, is a vision deficiency in which the crystalline lens of the eye loses its flexibility, making it complicated for the person to focus on close objects (American Optometric Association, 2006). Eye lens yellowing causes older adults to require more light to detect objects clearly. Although seniors' eyes benefit from additional light, they are sensitive to glare. Glare "stems from excessive

contrast between bright and dark areas in the field of view” and is a serious concern for roadway safety because it may limit adjustments to brightness differences at nighttime for pedestrians and drivers (Avrenli, Benekohal, & Medina, 2012). Another change that occurs as a result of increasing age is declining peripheral vision (Phillips, Rousseau, & Schwartzberg, 2006).

Visual acuity is defined as “the ability to resolve detail” (Owsley & McGwin, 2010). The World Health Organization classifies different categories of visual disability, including low vision and blindness. Low vision is defined as “visual acuity between 20/60 and 20/200 or corresponding visual field loss to less than 20 degrees in the better eye with best possible correction” (Steinkuller, 2010). Blindness is defined as “visual acuity of less than 20/400 or corresponding visual field loss to less than 10 degrees in the better eye with the best possible correction” (Steinkuller, 2010).

Visual acuity screenings performed for first-time driver’s license applicants and drivers’ periodically seeking re-licensure is reasonable. In the U.S., roadway sign design is based on sight distances which assume that binocular visual acuity for drivers is at least 20/30 (FHWA, 2009). Drivers with less visual acuity experience difficulty in reading directional road signs at safe distances in order to make common driving decisions such as changing lanes or exiting (Owsley & McGwin, 2010).

Visual acuity test in the U.S. is almost the same among all states. For unrestricted licensed drivers, states have similar visual acuity requirements for licensure (either first time or re-license), and most states have determined the minimum best-corrected visual acuity (BCVA) requirement at 20/40. European Union have established a standard that dominates the minimum visual acuity requirements for driving license in Europe (Born, et al., 2010). Vehicle and motorcycle drivers in Europe must have binocular visual acuity of at least 20/40 with or without correction, and standards of binocular visual field are specified no less than 120° (Born, et al., 2010). In the U.S., some states have shortened the period of driving license validity for certain ages for one or two years in order to test the driver vision. For example, Connecticut and Pennsylvania have a two years option of driving license for people of 65 years, Hawaii issues a two years driving license for people of 72 years and over, Rhode Island issues a two years driving license for people of 75 years and over, Illinois permit two years driving license for ages between 85-86 years and one year for age 87 years and over, and Texas issues a two years driving license for people 85 years and over (Highway Safety Research and Communications, 2018).

### 2.2.2 Increasing Reaction Time

Another problem faced by senior drivers is a decline in reaction time, defined by the response speed of a person to an event (Green, 2000). Reaction time is a measure of the processing speed of the central nervous system of the body (Der & Deary, 2006), (Madden, 2001). According to Der and Deary (2006), reaction time is strongly associated with age; as age increases, reaction time increases. Older drivers typically respond more slowly to traffic control devices and changes in traffic or roadway conditions, such as a motor vehicle accident or a detour.

Reaction time consists of several components according to occurrence sequence. The first component is mental processing time, defined as “the time it takes for the responder to perceive that a signal has occurred and to decide on a response” (Green, 2000). For example, mental processing time is the time spent by a driver to detect that the traffic signal directly ahead has become yellow and decide that the brake should be applied. This segment of time is referred to as perception reaction time (Warshawsky-Livne & Shinar, 2002). The second component of reaction time is movement time: This requires the performance of certain muscle movements after determining an appropriate response (Green, 2000). For example, movement time includes the time required to lift the foot off the accelerator pedal, move it to the brake pedal, and then depress the brake pedal. In general, movement time increases with more complex movements (Green, 2000). The third component of reaction time is device response time. After the responder acts, the mechanical devices require certain time to engage (Green, 2000). For example, when the driver depresses the brake pedal, the car does not stop immediately because the stopping is controlled by gravity and friction (Green, 2000). Time is required for the devices within the car to overcome those forces and stop the vehicle.

### 2.2.3 Physical Limitations

Physical changes to senior drivers often contribute to difficulty in head movements to scan right and left sides at intersections or interchanges or look over their shoulders for lane changes (FHWA, 2003). McKnight stated that senior drivers often experience difficulty when backing up because elderly drivers encounter physical limitations in upper body and head motion related to backward driving (McKnight, 2003).

A primary reasons why old age drivers make accidents during lane changes and left turns is because of the physical limitations in their upper body motion including neck and back pain, which make looking behind before reversing extremely difficult, or they may fail to carefully check vehicle blind spots before changing lanes (Bayam, Liebowitz, & Agresti, 2005).

A decline in hearing is another physical limitation due to increased age. Hearing is essential for safe driving because it

allows drivers to react properly to emergency vehicles such as ambulances or police sirens. Hearing also allows drivers to respond to honking horns of other drivers when warning of dangers or mistakes. As a result, seniors' hearing decline reduces driver safety.

#### 2.2.4 Cognitive Functions

Cognitive ability is “the ability to acquire, store, and apply knowledge, including short-term and long-term memory as well as performing mental operations” (Bayam, Liebowitz, & Agresti, 2005). Older drivers often have difficulty cognitively sorting the huge amount of roadway information incurred while driving. This difficulty is especially dangerous when encountering critical zones on roadways, such as navigating a temporary traffic control zone because of a detour (FHWA, 2003). Cognitive ability declines as age increases (Bayam, Liebowitz, & Agresti, 2005), and cognitive functions and visual attention measures have been shown to be accurate accident frequency predictors for senior drivers (Daigneault, Joly, & Frigon, 2002).

The ability of senior drivers to share attention while driving also declines with age. Certain driving situations can be especially challenging, such as making left turns at intersections in which drivers must split their attention between oncoming traffic and pedestrian traffic on either side of the vehicle (Bayam, Liebowitz, & Agresti, 2005). Other situations requiring shared attention involve interaction with traffic control devices such as red light traffic signals or stop signs (Bayam, Liebowitz, & Agresti, 2005).

In addition to senior drivers' deficiency in attention-sharing, impaired judgment regarding traffic gaps may result into indecisive passing traffic at intersections (Bayam, Liebowitz, & Agresti, 2005). Senior drivers often have difficulty judging the location of approaching traffic relative to their ability to accelerate into gaps (McKnight, 2003). Older drivers often resolve the conflict created by their inability to handle the situation they faced while driving by slowing down or stopping, which can cause additional dangers (Bayam, Liebowitz, & Agresti, 2005). Most traffic accidents occur when senior drivers operate their vehicles at a slower speed than the flow of traffic (Bayam, Liebowitz, & Agresti, 2005).

#### 2.3 *Visibility Improvement Methods for Overhead Guide Signs*

Guide signs should be clear and visible to drivers to allow a proper response time. High visibility and legibility are essential attributes for guide signs. Legibility is defined as “the readability of a particular writing style, or font” (Amparano & Morena, 2006). Many required standards regarding signs are mentioned and explained in the MUTCD. The visibility of overhead guide sign could be increased either by using retroreflective sheeting materials or adding light sources to illuminate the sign.

##### 2.3.1 Retroreflective Sheeting Materials

The American Society for Testing and Materials (ASTM) specifies the requirements of sheeting materials used in manufacturing retroreflective guide signs. ASTM D4956-11a standard describes types of retroreflective sheeting materials that can be used on traffic signs, including eleven types of retroreflective sheeting and their various applications (ASTM, 2011). These eleven types are categorized into three categories of sign sheeting: Engineering Grade, Diamond Grade, and High Intensity.

Retroreflective sheeting materials are commonly used on U.S. highways by some DOTs (Bullough, Skinner, & O'Rourke, 2008). According to national surveys, the most used retroreflective sheeting material for overhead guide sign legends in the U.S. is Diamond Grade (type IX, followed by type XI), and High Intensity (types III and IV) is the most common retroreflective sheeting material used for guide sign backgrounds (Obeidat, Rys, Russell, & Gund, 2014a). An important advantage of retroreflective sheeting is that they do not rely on electrical power, their concept is based on retroreflection in which illuminance from oncoming vehicle headlamps reflected back toward the vehicle.

The use of retroreflective sheeting materials makes the signs more visible, especially in high visual “noise” areas (Amparano & Morena, 2006). Results of a project conducted at the University of South Dakota showed that the required time by older age drivers to detect signs in complex backgrounds can be decreased excessively by using super-high-intensity sheeting material (Amparano & Morena, 2006).

A field experiment was conducted to evaluate guide signs manufactured from three retroreflective sheeting materials (Obeidat, Rys, & Rys, 2014b), (Obeidat, Rys, Rys, & Du, 2016). The researchers studied Engineering Grade (type III), High Intensity (type IV), and Diamond Grade (type XI) retroreflective sheeting. They found that Diamond Grade (type XI) provides the highest visibility for drivers. Researchers also performed cost analysis for the three retroreflective sheeting materials. Their study concluded after merging decision criteria of sign visibility and cost of retroreflective sheeting, that High Intensity (type IV) retroreflective sheeting to be used by DOTs in order to improve guide sign visibility (Obeidat, Rys, Rys, & Du, 2016).

### 2.3.2 Illumination

Roadway lighting is a public amenity that participates in providing a safer environment for roadway users. Safety, security and traffic flow operations could be increased by efficient road lighting (Medina, Avrenli, & Benekohal, 2013). Roadway conditions and geometry are easily recognized when a proper roadway lighting is existed.

A light source is a device that converts electrical power into visible light. Light sources associated with little short-wavelength light are less effective for vision than light sources that produce greater short-wavelength (blue), even if the measured light level is similar, because of the human eye's shifted response to light at some nighttime light levels, this is true for certain locations in the field of view and for certain light levels (Bullough, 2012a). Wavelength is defined as the distance between two consecutive points of the same wave. Light sources used for road lighting purposes include incandescent lamps, electric discharge lamps, induction lighting and Light Emitting Diode (LED).

In incandescent lamps, an electric current passes through a wire, causing it to heat to a certain level which allows the wire to glow and emit light (Lopez, 2003). Two types of incandescent lamps are available: common incandescent and tungsten halogen (Lopez, 2003). Both types are low in cost but have low efficacy (lumen per watt).

Electric discharge light sources produce light through by passing an electric current through a gas or vapour (Lopez, 2003). Five types of electric discharge light sources are commonly used: Fluorescent, Induction Fluorescent, Mercury Vapor (MV), High Pressure Sodium (HPS), Low Pressure Sodium (LPS), and Metal Halide (MH) (Lopez, 2003). For MV light sources, phosphor-coated and clear light exist. MV light sources also contain a phosphor-coated light source used primarily in sign lighting applications (Lopez, 2003). Light is produced in HPS light sources by an arc in a ceramic tube that contains sodium and additional elements (Lopez, 2003). Light in LPS light sources is produced by an arc in a long tubular glass bulb that contains sodium only (Lopez, 2003). The MH light source is similar to the mercury light source, but, in addition to mercury, MH contains various metal halides which provide excellent color rendering resulting in a white light (Lopez, 2003). Induction lighting is a modern fluorescent lamp that relies on radio frequencies to stimulate lamp material to produce light, (Bullough, 2012b). LEDs are "semiconductors that emit light when electrical current runs through them" (Avrenli, Benekohal, & Medina, 2012).

Obeidat and Rys (2015) studied five light sources that are used for illuminating overhead guide sign. The studied light sources were the 62 watt LED, the 85 watt induction, the 250 watt MH, the 250 watt HPS, and the 250 watt MV. Several criteria were considered in comparison including light distribution of each light source, annual cost, and if the light source can be legally used in U.S. They recommended using the 85 watt induction light source to DOTs.

## 3. Solutions for Improving Roads to Enhance Population's Safety

Navigating U.S. roadways is somehow confusing and challenging for drivers of different ages when driving routes are not clearly understood or easily marked, especially when the driver is unfamiliar with the area (Amparano & Morena, 2006). This problem is extremely enormous for senior drivers, especially those who have physical and cognitive disabilities (Amparano & Morena, 2006). However, engineering opportunities such as retroreflectivity, sign placement, legibility of sign lettering and sign size can improve a driver's capability to detect signs and comprehend their messages. Solutions for improving roadway navigation and increasing safety are discussed in the following sections.

### 3.1 Reducing the Impact of Vision Decline

Based on research conducted by Phillips, Rousseau and Schwartzberg (2006), a number of infrastructure measures could be utilized to decrease the impacts of vision decline for senior drivers (Phillips, Rousseau, & Schwartzberg, 2006). One direct step is to increase the size of roadway signs and lettering. If drivers are able to read sign information from a greater distance, they will have enough time to make navigation decisions, thus enabling increased focus on safe maneuvers. The Manual on Uniform Traffic Control Devices (MUTCD) recommends minimum sign and font sizes for various types of signs: minimum upper case letter size is 8 in (200 mm) and lower case letter size is 6 in (or 150 mm). These sizes are used for multi-lane streets with speed limits greater than 40 mph (or 65 km/hour) (FHWA, 2009). To enhance guide sign visibility for nighttime driving, a light source may be installed or guide sign sheet metal material can be replaced by a bright retroreflective material which has the effect of enhancing sign visibility at night.

Several font types including Series A (discontinued), Series B, Series C, Series D, Series E, Series E (Modified), Series F, and ClearviewHwy™ font can be used on signs. ClearviewHwy™ font (hereafter referred to as Clearview) was developed by Donald Meeker and Christopher O'hara of Meeker and Associates, Inc.; Martin Pietrucha, Ph.D., and Philip Garvey of the Pennsylvania Transportation Institute; and James Montalbano of Terminal Design, Inc., along with research supported by Paul Carlson, Ph.D., and Gene Hawkins, Ph.D., and research design advice by Susan Chrysler, Ph.D., of the Texas Transportation Institute (Holick, Chrysler, Park, & Carlson, 2006). Recent studies on guide signs have shown that Clearview's alphabet legibility facilitates a 16% improvement in distance recognition by senior drivers and a 12% increase in legibility for all drivers when compared to the series E (modified) font (Amparano & Morena, 2006).



Clearview font results in faster reading, comprehension, recognition and reaction times for drivers, especially older age drivers. Many states have used Clearview font as a part of their transportation system such as Arizona, Iowa, Kentucky, Maryland, Michigan, Pennsylvania, Texas, and Virginia.

Roadway curves represent another major visual challenge. A majority of fatal crashes occur on U.S. rural roadways, and a wide portion of these crashes occur on horizontal curves (Momeni, Russell, & Rys, 2015). Older drivers have difficulty detecting sharp curves, especially during nighttime driving. However, many countermeasures can increase safety on curves. These countermeasures vary from low to high cost. Examples of low cost countermeasures include centerline, edge line, horizontal alignment signs, advisory speed signs, chevrons and one-direction large arrow sign, combination of horizontal alignment and advisory speed sign, curve speed sign, alignment sign, delineators, profile thermoplastic and raised pavement marking, reflective barrier delineation, speed limit advisory marking, optical speed bar, and rumble strips of all types (Momeni, Russell, & Rys, 2015). Other medium and high cost countermeasures include flashing beacons, dynamic curve warning system, paved and widening shoulders, shoulder drop-off elimination, installation or lighting improvement, and skid resistance pavement surface (Momeni, Russell, & Rys, 2015). Several studies were performed on these countermeasures to show the benefits of each for safety improvement on curves. All these techniques increase detection of roadways and improve safety, which is beneficial to all drivers, including older drivers.

### *3.2 Improving Roadway Navigation*

The use of redundant street name signs could increase the chances of a driver remembering critical navigation information (Phillips, Rousseau, & Schwartzberg, 2006). Often, when drivers see a road sign, they are quickly distracted and forget the required intersection (Phillips, Rousseau, & Schwartzberg, 2006). This distraction initially deletes necessary navigation information from working memory (Phillips, Rousseau, & Schwartzberg, 2006). Because working memory capacity declines with age, these memory lapses are more common for older drivers. Providing roadway navigation information several times to a driver (using redundant street name signs) helps limit this issue.

Seniors commonly prefer driving on familiar roadways (Phillips, Rousseau, & Schwartzberg, 2006). Unfortunately, even familiar areas often change, as in work zones or required detours. Changeable message signs are an important method for transportation agencies to alert drivers to new road situations. However, appropriate design of these signs is crucial so that drivers of all ages can easily navigate roadways.

One smart-modern solution to improve safety for older people on roadways is to implement autonomous vehicles' "self-driving cars" service. Google has begun building a fleet of electric power vehicles to be used for experimentation in California (Markoff, 2014). According to Markoff (2014), these vehicles were based on a principle of completely removing driver responsibility from the vehicle; no steering wheel, gas pedal, brake pedal, or gear shift is necessary. The only element available in the vehicle is a red "e-stop" button that can be used by the passenger in emergency stops and a separate start button. These vehicles are requested via a smart phone application. The speed limit of these vehicles is limited to 25 mph, though, these vehicles are designed for urban and suburban areas, not on highways. One potential use for these vehicles is driverless taxi cabs.

Based on Markoff (2014), Google's autonomous vehicle had sensors that can detect approximately 600 ft in all directions. This vehicle had a rear view mirror according to California code. A foam-like material will be used in the construction of the front of the vehicle in case the vehicle's computer fails and the vehicle hits a pedestrian. Google's vehicle differs from vehicles introduced by Mercedes, BMW, and Volvo because those vehicles were able to travel within limited circumstances without a driver but they did not completely eliminate the driver as in Google's vehicle.

Comparing to the other modes of transportation, autonomous vehicles are better in terms of time, safety, convenience, and peace of mind (Burns, Jordan, & Scarborough, 2013). Based on Burns, Jordan and Scarborough (2013), initial estimates of the new autonomous vehicles are \$4 per customer per day, or \$2 per customer per trip (Burns, Jordan, & Scarborough, 2013). The fleet system of autonomous vehicles can be an alternative transportation media, competing with taxicabs and public transportation. Yellow taxicab fare in Manhattan, New York is approximately \$5 per mile, while initial estimates of the fleet fare of a shared, driverless vehicle are approximately \$0.50 per mile. In addition, the autonomous shared, driverless vehicle service is more convenient and less expensive than the bus or subway, resulting in the reduction of empty miles and labor costs and increased energy efficiency.

#### 4. Conclusions

Motor vehicles are an efficient method of transportation for a majority of people. As people age, physical changes occur which can affect their daily life, including functions that may cause driving skills to decline. These changes affect vision, hearing, reaction time, and cognitive and motor ability and may complicate driving.

Improving roadway safety can be accomplished through various methods such as: Using brighter retroreflective sheeting materials, illumination signs, and using the autonomous vehicle fleet. The future of autonomous vehicles fleet is considered a modern and a smart solution to increase safety on roadways, especially for older drivers. These vehicles appear to be more efficient than other transportation methods such as private vehicles, taxicabs, and public transportation in terms of cost, time, and energy saving.

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# Niger Delta Conflict, Social Egoism and the Ethics of Civility

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## Abstract

The paper re-examines the problem of violent conflict in the Niger/Delta region which threatens the mono-economy and corporate existence of Nigeria. It seeks to navigate beyond the common causes of the problem to include a frequently excluded cause, which is, the social-egoism of the groups that constitute the major stakeholders in the conflict. The paper, therefore, argues that the pursuit of group's interests devoid of concomitant consideration for others, (including future generations) and the environment would continue to impact negatively on resolution efforts and consequently, impede on peaceful co-existence. Therefore, it proposed the display of the ethics of civility on the part of the stakeholders in handling the conflict constructively. The paper employed the quantitative method of research in Philosophy, it specifically adopted the analytic and prescriptive approaches of the method. The analytic approach clarifies concepts such as ethics of civility, stakeholders, social egoism, etc. so as to remove ambiguity. The prescriptive approach proposed the inculcation of the ethics of civility in inter-personal relations, including human dealings with the ecosystem.

**Keywords:** Civility Ethics, Multinational Oil Corporations, Social egoism, Stakeholders, Violent conflict

## 1. Introduction

Literature abounds on the prevalence of violent conflicts in contemporary world, including the oil resource-based Niger Delta region of Nigeria. Like many of the major social challenges confronting the nation, spontaneous efforts were made to nip the problem on the bud. In this regard, institutions were established to address the developmental needs of the oil bearing communities, poverty alleviating programmes were designed, amnesty programme were emplaced for the militant youths who voluntarily surrendered arms, militarization of the region to impose peace and occasional review of revenue derivation principle. These have yielded marginal success in ensuring lasting peace in the region largely because the approaches toward implementation of the resolution techniques are undermined particularly by, the pursuits of group interests devoid of sense of civility by each of the major parties in the conflict.

The three major groups in the conflict, namely the Indigenous people of the oil rich Niger Delta region, the Multinational Oil Corporations (MNO), operating in the region and the Federal Government of Nigeria (FGN) pursues interests that are inimical to effective resolution of the conflict; the interests pursued are essentially group-based interests rather than general interest. Suffice it to say, intra and inter group relations foster better and, peaceful co-existence enhanced when personal interests of members of a group or interests of smaller groups within a larger group are sufficiently reconciled with those of other groups in the socio-political sphere. The pursuit of self or group interests devoid of the consideration for others is a negation of the existentialists' notion of *being* with others or *being* in the world.

Two major relations necessary for the enhancement of human race are discernable in society, these include: relation among humans and between humans and the environment. Both relations date back to time immemorial. In the case of the former, recourse could be made to the Hobbesian hypothetical state of nature where interpersonal relations were essentially egocentric largely because of the immoderate appetite and aversion of the human persons. The individual man in this state strived to appropriate all that are beneficial in the society to himself alone, even at the detriment of the survival of other individuals thereby threatening the continuous existence of human society. In spite of this, the reality is that, "man's biological configuration, psychological state and the peculiarity of his faculty" made him a social being that does not only require the company of others but also better actualises his potentials within human society. (Muyiwa Falaiye & Anthony Okeregebe 2016: 151). Unfortunately, incessant violence in contemporary human society made it controversial if truly, human society has transcended the state of nature because it continually drifts more on the pendulum towards the state than being better position to harness the benefits of civil society. In contemporary Nigeria for instance, security of lives and properties constitute serious challenge to individuals, groups and institutions. Cases of rape, assassination, theft, abduction are on the increase. The law and its enforcement institutions are centuries behind the geometric progression of

contemporary crime against humanity by humans themselves. In other words, like the hypothetical state of nature, where “life is solitary, nasty, brutish, poor and short,” (Thomas Hobbes 1962:80), victims of crime in contemporary Nigerian society are deprived of properties and often times, lives by “the fittest” and “strongest” thereby compounding the complexity of the society. In other words, the complexity of the society is a reflection of the nature of the human elements and the socio-political arrangements under which they lived. These impose varieties of need and desperate desires to satisfy them at the face of scarce resources on the people. Aptly put, “the complexity of human being generates in him, therefore, a multiplicity of purposes or goals which he pursues” either as individuals or as groups (Dipo Irele 1998: 39). In the pursuit of these goals, more often, recognition is not given to the feelings, interests and aspirations of others a typical of the situation in the Niger Delta: where inter personal and group relations lacked adequate recognition for the feelings and aspirations of others.

In the case of the later, especially if the creationist account is anything to go by, the environment preceded the emergence of humans. At the early stage of human existence, humans and the environment relate with one another with reasonable modicum of compassion and care. Aggressive and reckless exploitation of nature by human beings to meet basic and existential needs were not too pronounced. In return, occurrences of natural calamities such as volcanic eruptions, storms, ocean slides and boisterous wind were minimal particularly in Africa. However, colonialism and industrial revolution heralded an environmentally unfriendly industrial development with its attendant creation of capitalist world economic order. This was aided and abetted by the advancement in science and technology that increased man’s capacity to dominate and control nature even beyond initial comprehension of man: Man’s basic and existential needs were relatively met through their control, domination and exploitation of the environment. These, as experience has lamentably shown are devoid of adequate consideration for the coming generations of humans and non- humans in the environment. Exploitation of the environment is particularly directed at satisfying immediate needs of present generation. Thomas Meginns (1982: 705) aptly captured this scenario when he writes that, “contemporary man has lost sense of respect through his philosophy of exploitation”. This brings to the fore the care- free attitudinal display towards the environment as well as the grave implications of such treatment on both the present and future generations of human beings. Suffice it to say, the treatment of the Niger Delta environment is critical to the analysis of the conflict that constantly ravage the region and threaten the social and political fabrics of Nigerian society.

## **2. The Niger Delta Region and the Question of Resource Control**

Nigerian society is a pluralistic society with numerous ethnic nationalities, traditions and belief systems. The mainstay of the country’ economy is oil. Oil derived from the Niger Delta region, contributes immensely to the nation’s revenue. “Statistics hold that 95% of the total revenue for the Nigerian government is generated from oil and gas” (Paul Haaga 2015: 199). The Niger Delta region which is the focus of this paper is situated on the continental margin of the gulf of Guinea on the west coast (equatorial) of central Africa. It lies between Latitude 3<sup>0</sup> and 6<sup>0</sup>N and Longitude 5<sup>0</sup> and 8<sup>0</sup>E (Olugbenga Ige 2017: 22), specifically, in the south-south and south-west of Nigeria, It covers a land area of about 75,000 square kilometres (UNDP 2000:15), comprising of nine states of Akwa Ibom, Bayelsa, Abia, Cross Rivers, Rivers, Edo, Delta, Imo and Ondo. Oil discovered outside these aforementioned states in Nigeria are yet to be explored. The area under reference in this paper is mainly populated by the Ijaws, Urhobo, Ogonis, Edos, Isoko, Yorubas and other sub-groups. Apart from the human resource and oil, the region is naturally endowed with large deposits of resources that includes; bitumen, forestry and wildlife. Given the terrain of the area, the traditional occupation of the people is farming and fishing. But these sources of livelihood are threatened by environmental pollution caused by oil exploration and exploitation: there is reduction of arable land, destruction of wild life and fish reserves. The assaults on the communities’ natural environment, abuse of the rights and deprivation of the means of livelihood of the people in the region strained the relationship between the oil bearing communities and the staffers of the Multinational Oil Corporations. These have consequently resulted into incessant conflicts manifesting in the forms of abduction, arson, oil production disruption, pipeline vandalization and ransom requests by the aggrieved and disenchanting youths from the region. In essence, three groups namely; the Multinational Oil Corporations represented by Shell BP, Mobil, Exxon, Chevron, Total etc., the oil bearing communities in the region visibly represented by the militant youths and the Federal Government of Nigeria, the supposedly arbiter between the first and second groups are discernable in the Niger Delta crisis. Each of the groups pursues interests and values that seem irreconcilable. It is the egoistic pursuits of these diverse interests by members of each of the parties that the author refers to as social egoism. I shall return to this shortly.

## **3. The Visible Activities of the Major Stakeholders in the Niger Delta Conflict**

The stakeholders are referred to in this paper as those that have legitimate interest or concern in what goes on in the Niger Delta region. Broadly speaking, all Nigerians could be said to be stakeholders in the Niger Delta project by virtue of the direct or indirect concern or impacts which the activities in the region have on their existence. However, the major stakeholders in the Niger Delta conflict can be categorized to include “the voluntary, involuntary and unknown stakeholders.” (ICAN 2014: 286-287). The unknown stakeholders include the ecosystem represented by the aquatic lives,

animals and plants of different kinds who are at the receiving ends of the degradation and pollution orchestrated by the activities of the oil and gas industries. The involuntary stakeholders are the indigenous people of the oil bearing communities of the region. This category of people become a major stakeholder not necessary by choice but by exigencies of nature and technological development. Perhaps, if they had another chance they would prefer to be on the other side of the divide. Finally, the Multinational Oil Corporations and the Federal Government of Nigeria are voluntary stakeholders.

The activities of the Multinational Oil Corporations operating in the Niger Delta region of Nigeria remains the core issue in the violent conflicts prevalent in the region. The activities of the corporations are alleged to have, among other things, violated the traditional environmental ethics of the people, which encourages one “not to take more than one needs from nature...” (Segun Ogungbemi 2010: 169) . The relation between Multinational Oil Corporations and the Niger Delta environment is detrimental to the existence of the ecosystem and human inhabitants of the area. The resort to violence is seen by the indigenous people of the oil producing areas as a means of checkmating the reckless exploitation and pollution of the environment, which they believed impacted negatively on the survival of the present as well as the future generations of humans and non-humans in their environment. The people seem to be too passionate about the environment because land, which is one of the components of the environment, traditionally among Africans is held in trust by the living for the present and future generations, the rationale being that, it bonds human and ancestral communities as well as sacred forces of the universe. (Magessa 1997: 244). Plants of medicinal value, rivers of traditional significance and some species of animals have either gone into extinction or polluted by spillage thereby depriving younger generation the practical description or benefits of such plants, animals and rivers.

Scholars such as J. Meginns (1982: 705) and Paul W. Taylor (1986) have emphasized the need to respect the natural world by dealing with nature with caution. According to them, we should nourish nature the way we nourish ourselves because when we harm nature we either directly or indirectly harm ourselves. To Taylor, the natural world constitutes a community of biological life, where there exist an interdependence relation of humans with the environment that is capable of establishing liveable lives for both human and non-humans. He further observed that all organisms are teleological centre pursuing their own good and that, human beings while possessing inherent worth are partners in a natural world where other beings and entities also possess inherent worth so that humans cannot claim to be inherently superior to other living things (99-100). As much as the author of this paper shares the sentiments of these scholars on the need to treat nature with utmost care and respect, the author is equally more concern about the future generations of human and non-humans in the Niger Delta environment. The environment should not be depleted for present complacency devoid of consideration for the future.

It is true that opinions differ among ethicists on whether or not the non human elements in the environment deserve any obligation concerning how it should be treated by the humans. For instance, Thomas Aquinas, Aristotle and Immanuel Kant argued that, *rationality* does not only differentiate the humans from non-humans, it is the basis for determining the scope of those to whom the humans have moral responsibilities towards. In the same vein, Bentham, J.S. Mill, Louis Pojman and Peter Singer argued in favour of sentience as a veritable factor in assessing what humans ought not to inflict harm on.

Beyond rationality and sentience parameters of western philosophers, traditional Africans *cum* indigenous people of the Niger Delta believed that animals, plants and mountains needed to be treated with care; some of them possess healing power and constitute metaphysical links between the living-dead (ancestors), deities, spirit and the people, hence, they are revered rather than destroyed.

Without prejudice to the debate, what is good and capable of enhancing the well being of the present and future humans and non human elements of the environments can be rationally derived. When the environment suffers degradation, as the case in the Niger Delta, it endangers the survival as well as the continuity of generations of humans and non-humans. It threatens the naturalness of the air they inhale, the water they drink, the food they eat above all; it makes them dependent rather than being self sufficient in the supply of basic existential needs like food since farmlands, crops, water sources and economic trees are destroyed. It is instructive for the Multinational Oil Corporations to be more sensitive to the degradation of the environment, devise means of replacing devastated components of the environment and to be more committed to compensating for whatever is loss to environmental degradation. It is true that, the traditional goal of any business is profit maximization but business organization that pride ethics in its operations tend to run smoothly and profitably than others that relegates the roles of ethics in business. Distributive justice requires that those that are responsible or that benefit from injury should bear the burden of rectifying whatever has been damaged. This is the upshot of Olanrewaju's argument when he writes that, “oil companies should take account of the social, ethical, and environmental perspectives of their operations (Olanrewaju, 2014) .In the case of the Niger Delta region, it is the communities rather than the Multinational Oil Corporations that shoulder the burden of pollution.

Given the alleged violation of the traditional ethics of the indigenous people in the oil producing communities of the Niger

Delta, the obvious cases of unemployment, deprivation of means of livelihood, abject poverty and neglect of the region by the Federal government, the *contretemps* culminated into frustrations and grievances hence, the aggrieved Youths formed militant groups, which are united in the promotion and protection of the oil bearing communities' interests. Such groups include; Movement for the Emancipation of Niger Deltans (MEND), Movement for the Survival of Ogoni People (MOSOP), the Niger Delta Avengers (NDA). This does not suggest that the formation of some of the militant groups were devoid of ulterior motives. The initial non-violent agitations of some of these groups metamorphosed into violent agitations for the control of the oil resource. Suffice it to say, the Ogoni Bill of Right of 1990 and the Kaiama Declaration by the Ijaw Youth in 1998 were premised on the belief that through the control of the oil source by the indigenous people of the Niger Delta the social, political and economic dislocations of the region would automatically transmute into fortunes for the people and the region. This vision for resource control gained momentum and expanded to include agitation for political right of self determination. Consequently, allegiance of the people drifts from the Nigerian state to their respective minority groups, a position considered by the government as inimical to the sovereignty of the state and constituted authority.

In response to the agitations of the region, Commissions and Development Committees were set up at different times in the nation's history, these include; The Niger Delta Development Board, (NDDDB), Okigbo Revenue Commission, (ORO), Oil Mineral Producing Areas Development Commission, (OMPADEC), Niger Delta Development Commission, (NDDC), Presidential Panel on Amnesty and Disarmament of Militants and, the Ministry of Niger Delta Affairs to mention these few. The rationale for these programmes was to fast-track the development of the region and ameliorates the hardship the people are exposed to. However, the implementation of the programmes leaves much to be desired as corruption, politicization and ethnicity combined to undermine the success of the programmes.

The contestations over resources became pronounced due to the politicization and ethnicization of the proceeds from oil, as well as the "pursuit of developmental paradigm that further polarised the different social and economic groups "in the country by the Nigerian state. (Adedeji 1999:32) To this end, the Niger Delta minority groups believed the arrangement favours the dominant ethnic groups to their detriment. According to Nwankwo O.N, (2015) the principle of derivation which was intended to resolve the developmental quest of the region was a mere palliative. Although, the derivation principle improved over the years from 1.5 % to 3% and currently is at 13%. But, it was recalled that when agriculture was the mainstay of the Nigerian economy, the derivation principle was 50% of a state's income but with the advent of oil-boom this was changed. The change was based on the government's argument that oil is an accident of geographical location. This lopsided treatment resorted to loss of faith and hope in the Nigerian federation hence, agitations for regional autonomy, greater allocation of revenue derivable from oil or the re-negotiation of the agreement underlying the existence of Nigeria as a corporate entity. Very recently, one billion United States of America Dollars was approved by the Buhari led administration from the excess crude account to combat insurgency in the North Eastern part of the country, the Niger-Delta militants have demanded the release of equal amount by the government to tackle development challenges in the Niger Delta region or they will begin massive destructions of oil pipelines and facilities. Obviously, the actions of the government which is predicated on patriotism and the threats of the militants anchored on social justice raised some moral questions that border on the ethics of civility.

The questions are multidimensional: is the approval by government in conformity with natural justice by using the resources derived from a neglected region to combat insurgency in another region? Is the Niger Delta region averse to the use of benefits accruable from oil to develop other regions of the federation or it is concern with the neglect of its region in terms of developmental projects? How precisely should benefits and burdens be distributed such that it could be morally defended? Has the oil bearing communities of the Niger Delta region sufficiently shown understanding to the nature and processes involved in oil exploration? Are there no constructive ways for channelling the grievances caused by pollution and other hazards they are exposed to because of the activities of the oil firms? Will control of oil resources automatically transmute the region into *eldorado*? Will the control of oil resource by the oil bearing communities guide against deep rooted corruption of Nigerians including the host communities? What happened to the chunk of funds released to the region for development overtime?

Has successive governments in Nigeria genuinely introduced/ executed poverty alleviating / developmental programmes directed at addressing the degradation, pollution and underdevelopment occasioned by oil exploration, exploitation and gas flaring by the Multinational Oil Corporations in the Niger Delta region? Or put differently, is Nigeria government sufficiently committed to the welfare of the inhabitants of the region? Has the government adequately implemented the laws protecting the oil communities? Can it be said that the Government has justly distributed the resources generated from the sale of crude oil? Does the environment of the Niger Delta region has rights that the Multinational Oil Corporations must respect and protect?

These catalogue of questions constitute the grouse that each of the parties in the Niger Delta conflict continually raised while defending their group's actions and inactions. The choices and decisions of each of the parties in the Niger Delta



conflict are dependent on the answers they have to those catalogue of questions. More importantly, the choices and decisions go contrary to each other because the interests pursued are group-centred; they are devoid of general interests. These underscore the necessity of the ethics of civility, which has objectivity, faithfulness and truthfulness as prerequisites to constructive handling of the Niger Delta debacle. This ethics would ensure that the interests of the oil bearing communities, the Multinational Oil Corporations and the state are secured and protected.

#### 4. The Social Egoistic Conflicts

In Philosophy, when human action is motivated solely by the agent's interest or when the goal of an action is directed towards the promotion of the agent's desire such action is describe as egoistic. In egoism, therefore, emphasis is on the "self" or the "I". Egoism, strictly construe emphasizes individualism or the ethics of the self; it is a reference to a person's action, particularly when such action is motivated by the ego or self interest. In a broader perspective, action(s) of a group can also be *group-centred* in the manner in which the action of individual is self-centred, this is the case when a particular group sees its own good as first and superior. When emphasis is on the promotion of what advances a group's interests and, perhaps at the detriment of other group within a larger group, such group manifests social egoism as against social ethics. This suggests that egoism has the individual and group psychology that both relate to social relationships.

In *Leviathan*, Thomas Hobbes argued that humans are by nature egocentric; they pursued what fosters their survival as individual entity. In the same vein, humans are by nature social beings, it is within the community of persons that the individual's potentials, goals and aspirations could be actualised. The ruling class in a pluralistic state like Nigeria, for instance, is populated by members of different ethnic groups but, as a class her interests are geared towards the protection and promotion of the economic, social, and political structures that would foster their dominance of the national sphere. In the community of persons, there are groups that share things in common and there are groups with different goals. In other words, groups within a larger political group whose views on issues is stronger than that of the larger group or other groups could exist. One or more of ethnicity, political ideology, class, race, profession, or economic interests could be the uniting thread of members of a particular group. In the case of the Niger Delta, members of the indigenous people of the oil communities are not strictly bond together by primordial ethnicity but by the concern they have for economic injustice allegedly meted out to them by the combined forces of the Federal Government of Nigeria and the Multinational oil Corporations. The group alleged gross neglect even at the face of environmental devastation of their communities. The common interest of the group, therefore, is to control the resource in their domain or be allocated revenue that commensurate with the level of destruction and deprivation as compensation. Unfortunately, the violent pursuance of these interests does not give due consideration to the overall interests of Nigerians; the adoption of a technique reminiscent of terrorism in the pursuit of the group's interest is inimical to the region and the country's development. Investors would be scared away, the existing but inadequate social infrastructure in the region would be destroyed and socio-political instability entrenched in the country.

The microscopic lens through which the Federal Government of Nigeria assesses economic justice is such that there should be parity in the entitlements to federating states in the revenues derivable from the nation's resources. The Federal government proclaims, at least in principle, the doctrine of interdependence of states and citizens as the foundation for national development h; it has a duty to ensure that citizens' obligations are beyond their immediate environment to accommodate all Nigerians irrespective of region. In other words, the government believed that any state in the federation should not be excluded in the scheme of development on the ground that nature does not bestow resource on the state or that the available resource (s) of the state has not been exploited. In the light of the above, successive governments in Nigeria see the Nigerian state as a group whose interests and survival must be prioritize above any sectional or parochial interest. In this wise, what constitutes economic justice to the government would pass as economic injustice to the oil producing communities of the Niger Delta region whose conception of justice consists in giving each region its dues from the contributions and sacrifices made to the country. A wide gap exists, therefore, between what constitutes the interest and responsibility of the Federal Government of Nigeria and the oil communities. Until the gap is bridged, peaceful co-existence in the region would remain a mirage.

It will be recall that part of the functions of government is to create enabling environment for the exploration of oil and Gas flaring. It also has a primary duty to protect the lives and properties of the inhabitants of the oil communities, the expatriates and the generality of Nigerians. Furthermore, it has the mandate to make the multi-cultural, multi-ethnic and multi-linguistic constituents a homogeneous country. In achieving these promises some basic things such as minerals are "communally owed". Aptly put, the power of exploration and exploitation of mineral resources including oil is constitutionally and exclusively vested on the government. It also distributes revenue accruable from the resources among the federating states, with the mind-set of ensuring even development among the federating states. However, this has engendered the problem of distributive justice: the oil producing areas alleged the government of marginalization and deliberate exclusion. Three major criteria are opened to the Government in addressing the problems associated with the distribution of social goods, these include; the need, merit and equality criteria. It is not very clear the criterion adopted by

the Nigeria government but the emphasis of the oil bearing communities has been that benefits in the Nigerian society should be shared according to the amount the regions have contributed to the social goods of the society.

In another development, the principle that underlies the activities of any business organization, especially of capitalist extraction is profit maximization. The Multinational Oil Corporations operating in the Niger Delta is no exception to this principle. The firms often set aside the globally recommended standard of treating the environment as well as its inhabitants in order to maximise profit. Corporate Social Responsibility initiatives that will contribute to sustainable community development, address local grievances and improve livelihood (Idemudia, U. 2009) are carried out just to fulfill all righteousness. The practical commitment to the development of the host communities seems to be considered as limitation on the profit margins of the firms. Although, it is on record that some social services and development programmes were embarked upon by the corporations to ameliorate the suffering of the host communities. Unfortunately, there seems to be a gulf between what the firms have done and what the oil producing communities expected of them: it is either the communities were not carried along in the plans and execution of the programmes or the interventions by the firms are dysfunctional or inadequate hence the continued antagonistic attitude of the host communities. The Multinational Oil Corporations operating in Niger Delta region must strive to ensure that the perceived oppression of the oil communities with the backing of the Federal Government of Nigeria is halted. This is achievable when fair play and justice becomes the guiding principle of operation in the region. The globally recommended standard of treating the environment should not be jettisoned while ideal Corporate Social Responsibility initiatives should be executed. All of these seem to be absent in the relation between the Multinational Oil Corporations, the environment and the inhabitants of the oil producing communities yet smooth oil exploitation and exploration are envisaged .

The actions of the oil bearing communities represented by the oil militants are to prevent smooth operation of the oil firms if employment opportunities cannot be provided, degradation of environment halted and the development of the region prioritize by the government. However, the Niger Delta militants seem to have shifted focus considerably from these goals to agitation for resource control perhaps, because due recognition was not given to their grievances by the appropriate institutions. The militants who were at the fore-front of the agitations harbour some personal motives beneath the region's motives. Politicians who know the strategic importance of the region to the nation's economy and political stability exploit the situation in the region to their advantages. The militant youth are surreptitiously encouraged to disrupt oil production processes abduct oil workers, scare away investors and cripple the nation's economy.

From the above it is cognitively appropriate to say that each of the parties in the Niger Delta conflict pursues the positions that favours own group interests without concomitant consideration for the interests of others. The interests of the oil producing communities does not adequately accommodate the interests of the Federal government, that of the Federal government does not captured completely those of the oil producing communities above all, the interests of the Multinational Oil Corporations is at variance with the environment where they operate and, the interests of the inhabitants of the oil producing communities

In other words, this tendency of members of a group to act or wanting to act so as to promote and protect the interest of their group is what this paper referred to social egoism. What is therefore required to synthesize these diverse interests and enhanced peaceful co-existence among the stakeholders in the Niger Delta crisis is the ethics of civility.

## **5. Ethics of Civility**

By the ethics of civility, therefore, reference is to the caring commitments to the well-beings of the self, others and the environment such that it promotes present complacency devoid of compromise for future generations. Put differently, it is the intelligent and objective concern that restrains man from destructive activities on the self, others as well as its environment in the bid to enhance immediate survival. In this sense, the ethics of civility is all encompassing; it countenanced the moral principles of enlightened self interest that involves the trust and understanding that what is done to enhance the quality of life of others, including the ecosystem also enhances one's wellbeing. It also includes the moral duties of gratitude and malfeasance that we owe others as individual or corporate entities in society. Like ethics of nature-relatedness or .ethics of care, ethics of civility is averse to the unrestricted freedom to destroy nature simply to satisfy needs and interests but beyond ethics of nature-relatedness, ethics of civility is concern with our interpersonal relations namely; the relationship between inhabitants of the oil producing communities and others within the territorial space called Nigeria, as well as the relationship between them and the staffers of the Multinational Oil Corporations operating in the Niger Delta region. It also includes the relation between the firms and the ecosystem. It, therefore, differs from the ethics of nature-relatedness or care that emphasizes the human relation with the environment alone

The foundation of any peaceful society must recognized the vital roles of the virtues of tolerance, trust, truthfulness, empathy, respect for the rights and dignity others. These virtues are conspicuously absent in the inter group relations between the Multinational Oil Corporations, the oil bearing communities in Niger Delta as well as the Federal government of Nigeria. Peaceful co-existence would have been better enhanced if they interact with one another on the

basis of these virtues that constitute the ethics of civility in contemporary society.

The ethics is diametrically opposed to that of incivility. In incivility, interpersonal relations including the relation with nature are predicated on immediate benefits, self or group-centeredness. We act as if today is all we have, no consideration for tomorrow in the dealings with others as well as the environment. It relegated to the background the virtue of care, considerate appropriation and sustainability that underlies the ethics of civility but rather pride self or group-centredness.

The oil bearing communities have been marginalised in the scheme of things in Nigeria. The goose that lays the golden eggs needs to be properly nourished. The Federal government of Nigeria needs to draw out and faithfully implement feasible plans of actions that would address the developmental needs of the region. The author concedes that the country does not lack good development plans, what it lacks is faithful execution of those plans. In surmounting this challenge, the ethics of civility; doing the needful with commitments is instructive. Sincerity of purpose rather than politics should guide the actions of government.

In the same vein, the activities of the Multinational Oil Corporations in the region should reflect best global practices, bearing in mind that “organizations whose cultures respect ethics and civility are more successful” (Aloke Chakravarty 2017: 39) . Part of what escalates the crisis in the Niger Delta region is the absence of “Good oil field practices” (Oyebode Akin 2000: 59) in the operation of the Multinational Oil Corporations. In addition, Ideal Corporate Social Responsibility designed by the oil firms in conjunction with the host communities would address the grievances of the people.

Finally, civility is at variance with violence. The militants and the oil bearing communities of the Niger Delta region should engage in dialogue as a civilised approach in resolving conflict rather than take to violence. The wisdom in the choice of dialogue is overwhelming. According to Julius Nyerere cited in Diana E Axelsen, “Violence is a short cut only to the destruction of institutions and power groups of the old society; they are not a short cut to the building of the new... For violence cannot be welcomed by those who care about people” (1979:193)

The government should not construe the choice of dialogue as weakness on the part of the aggrieved or an opportunity to foot drag in the implementation of policies that will bring the embattled region out of the woods rather, it should be seen as a right step in a civilised and enlightened society and must be appreciated and reciprocated. History has shown that successive administrations in Nigeria pay lip-service to dialogue, sadly, portraying government as good listeners to violent acts rather than non-violent methods. For instance, The United Nations Environmental Programme (UNEP) in its environmental assessment of Ogoni land in August 2011, recommended to the government, the oil and gas industries and communities a clean up of Ogoniland, so as to restore polluted environment and put an end to all forms of ongoing oil contamination in the region. In the last quarter of 2017, Mosop, Pandef and other concerned individuals are lamenting the slow pace of work in this regard. Thus, confirming the alleged insensitivity of the government to the plight of the region. In the words of (Aloke Chakravarty 2017: 41), the government should play a larger role in advocating and shepherding industry governance to articulate meaningful, self imposed ethical standards and to commit to creating cultures of ethics and civil behaviour at all levels of organizations.

## 6. Conclusion

The paper re- examined the incessant violent conflict in the Niger Delta region of Nigeria. It noted that the causes of the crisis included the pursuit of interests that advanced the well-being of members of the different groups that constitute the major stakeholders namely: the Multinational Oil Corporations operating in the region, the oil bearing communities represented by the militant youths and, the Federal Government of Nigeria. In the pursuits of the group-centred interests, less commitment is given to what promotes the general well-being of the society as well as the environment that is being devastated by oil exploration and exploitation. The paper argued for positive attitudinal change directed towards the environment, future generations and the host communities by the Multinational Oil Corporations. It also enjoined the choice of dialogue by the militants as a civilised approach to resolving conflict rather than the resort to violence. Finally, the Federal Government of Nigeria should be guided by fairness, justice and other principles of civility in the design and execution of policies that will facilitate development, ameliorate poverty and enhance peaceful co-existence in the region.

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# The Democratic Values of the Student Movement in Kosovo 1997/1999 and Their Echoes in Western Diplomacy

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## Abstract

After the fall of east orientated political system and coming of the pluralistic system in the Yugoslav federation, the nationalisms that claimed to dominate Yugoslavia, such as Serbian, Croatian and Slovenian nationalism came to the surface, which also led to the overthrow of Yugoslavia. Following the abolition of Kosovo's limited autonomy of 1974, in March 1989, the Milosevic Serb regime during the 1990s imposed violent measures in all Kosovo institutions by removing Albanian workers from their jobs. Thus, Kosovo, Albanians were expelled collectively from the education process in the Albanian language, and left school and university facilities. Efforts to reach an agreement between Albanians and Serbian representatives for education during 1992 were unsuccessful. In these difficult contexts, the parallel education system of Kosovo Albanians was organized. In these difficult circumstances, students and Albanian students continued learning outside school facilities. After ignoring the Kosovo problem in the peace agreement reached in Dayton for Bosnia, the dissatisfaction with the peace policy led by Dr. Ibrahim Rugova grew all over Kosovo. In these circumstances, professors and students with vision began to talk about the organization of peaceful protests against the Serbian regime. After a long process, a new student movement took place at the University of Prishtina, which marks the beginning of the great protest on 1 October 1997. In this paper, we analyse the attitudes of international diplomacy with a special emphasis on the West in relation to this movement following the 1 October 1997 peace protests in Kosovo.

**Keywords:** Student Movement in Kosovo, Protest of October 1, Western Diplomacy for Kosovo

## 1. Introduction

The history of the student movement in Kosovo starts with the 1968 demonstrations. It has been two decades since the return of the dignity and hope for Kosovo's freedom began with the undeniable sacrifice of professors and students of the University of Prishtina who organized the peaceful protest for returning to school facilities. The student protests of 1997 are the continuation of the protests of 1968 and 1981, which marked the decisive turning point that changed the course of political developments in Kosovo, making great international echoes.

Although the year 1968 was recognized as a year of student movement in Europe, where the most popular universities of France, Germany and England were involved in the wave of student's ruiction of the "new left", yet they did not reflect the Albanian student movement. That was because the European student movement had a social character; it was social movement and aimed for a better social order, while the student movement of Kosovo had a national character, a character of resistance against a centurie-old wild bondage. The 1968 demonstrations were of great importance to the Albanian people because they were a priority for raising awareness among the Albanian people that international diplomacy understood that the Albanian people were being crushed from Serbia.

At this time in the reports of the US Embassy in Belgrade, Kosovo's economic and political situation was described as very severe and differentiated from other Yugoslav's1 regions. In the 1968 Special Report of the United States, the American Information Service, the demonstrations of the 1968 presents as a revolt of denial of the political and economic rights of the Albanian minority living in Kosovo. "Kosovo and Metohija are the poorest in the region and the most excluded from the Yugoslav's political system, where economic and cultural pressures have created significant differences of up to six or seven in per capita income between Kosovo and Slovenia, both of which belong to the territory of the Yugoslav Federation" 2with other regions at the Document taken from the archives of President London XHanson in Austin TX.

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<sup>1</sup> 1 London B. Johnson Presidential Library, Folder Title Albania, Volume1, Form of Document Memo Doc, Number 1 ½ from Dawis to Rostow, Collection National Security File, Box Number, 163.

<sup>2</sup> Lyndon B. Johnson Presidential Library, Folder Title, Yugoslavia, Form of Document CIA, Document Number 106 Document Description is Central Intelligence Agency. Yugoslavia-The Fall of Rankovic, Box Number: 232.

It is important that in the chronology of the history of student demonstrations we also dwell in the Demonstrates of 1981. The student movement in Kosovo continued its unresolved resistance for their demands that always were denied by the Serbian conqueror. In the midst of these efforts, the massive spring demonstrations of '81 (March-April) are considered as the main events in Yugoslavia after Tito's death. Initially, the student revolt at the university environments, they quickly escalated into nationwide protests throughout Kosovo. The 1981 spring events brought to the surface unexplained problems in Yugoslavia - for many, they constituted the prologue of the destruction of the socialist experiment that tried vainly to overcome ethnic antagonisms. With the election of US President Ronald Reagan, an aggressive policy towards the East and the socialist and communist political system was established. In the foreign policy of the United States, all social and class, political turmoil in the north-eastern world was in the function of American politics that was determined on the destruction of the political system of East. In addition, all the developments and moves that fell into conflict with the political system of the East camp were in favour and support of the US to prove that the political system of East that was in conflict with respecting human rights and jeopardized peace and global security had to be changed. In this perspective should also be seen the 1981 student demonstrations that were organized by Albanian nationalist groups that had leftist ideologies with the purpose of establishing the political status of Kosovo in the Yugoslav Federation. All political developments in the east that were in conflict with the political system were in function of justifying US policy for necessary changes of the political system that jeopardized peace and security in the world<sup>3</sup>. These can be testified by the documents of the Presidential Library of the President Ronald Reagan.

After the imposition of violent measures during the 1990s and the removal of Albanian professors and students from school facilities followed attempts to mediate by Europeans, Americans, and the failure of these talks. The protest of professors and students for returning to their school facilities that was held in 1992, the Serbian regime used violence to disperse the peaceful protest<sup>4</sup>. The reactions of international institutions were in support of the protests and their legitimate demands. In the letter that President Bush informed the French president, describes as a very serious situation for human rights, especially in the field of education and culture for Albanians in Kosovo. In the letter that President Fransua Mitrean's returned, besides expressing concerns about the information from Kosovo, he emphasizes that it is unbending for Europe to deny the right to the education system for a collective community. -Taken from the archive of the President GJ.H Bush-

The Dayton Agreement completely changed the attitude of Kosovo Albanians. After this agreement, it noted that peaceful resistance was not supported by Western diplomacies, and that their serious engagement was only in places where violence detonated, such as Bosnia and Croatia. The dissatisfaction with the political parties in Kosovo was growing all over Kosovo, but the culmination was when an agreement signed between S. Milosevic and I. Rugove for returning to school facilities and the normalization of education did not implement.

## **2. Student Protests October 1, 1997**

After the violent takeover of Kosovo's limited autonomy (the 1974 Constitution), the Serb conqueror in his education legislation designed injustice, institutionalizing educational and cultural genocide over Albanians. The Serbian invasion government in July 1990 decided to put violent measures in all Kosovo institutions by removing all Albanian workers from their jobs, including Kosovo's elementary and university education. At the end of the 1990 in Kosovo, Albanian pupils, students, and professors violently left their school facilities, denying them the most basic right to education. With these discriminating decisions of the Serb invaders, Albanians did not agree and organized protests to oppose these unfair decisions. For these Serbia's discriminatory actions had also reacted many international institutions condemning Serbian government's decisions to stop the education of two million Albanians in Kosovo. In October 1992, were the peaceful protests by students, professors and citizens to release school facilities where Serbian police exerted brutal violence against peaceful protesters<sup>5</sup>. In January of 1992, concerned about the closure of school facilities in Kosovo, the US embassy In Belgrade began a dialogue on the normalization of education in Kosovo. With the initiative of the Americans, a meeting was held between representatives of the Serb pair for education in Pristina and the Albanian delegation for the

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<sup>3</sup> Ronald Regand Presidential Library, Director of Central Intelligence ID ,Decal 943054,40 Prospects for Post – Tito Yugoslavia National Intelligence Estimate.

<sup>4</sup> Amnesty International,Report,1992, f,279, Yugoslavia (the Socialist Federal Republic of),Publications, London Wc1x8dj United Kingdom,1992.

<sup>5</sup> National Archives and Records Administration, George Bush Presidential Library Record ID 9209012,Doc Date: 07 Dec 92 From: Francois Mitterrand, Subject: Ltr From: Pres Mitterrand to Pres Bush, Action: Prepare Memo for Scowcroft Date:17 Dec 92 Staff officer: Wayne.

normalization of education, but the meeting did not produce results, it did not succeed<sup>6</sup>. Later also with the mediation of Gert Arens, leader of the Contact Group of the Geneva Conference, held talks on Albanian education in Kosovo, but did not yield results<sup>7</sup>. However, the efforts of Albanian students and professors to return to school facilities never quenched. It was a constant demand, but until 1997 there would be no significant action to separate, but there were only statements and resolutions of various international institutions which supported the right of Albanians to education and return to the school buildings that were occupied, and opposed the difficult situation and discrimination created by Serbian forces. In October 1997, mass protests were organized by UP students and professors as well as thousands of non-violent citizens in Pristina. They wanted the right to go back to university. They simultaneously demonstrated against the pacifist politics of Rugova, who had done an educational agreement on the normalization of the lessons with Milosevic, which did not change anything in the education system of Albanians. The Serbian regime, with the exception of some sporadic actions before October 1, 1997, committed by the KLA, did not recognize and did not experience any other civil resistance. The Drenica area in the meantime had become one of the main bases of the KLA. Student protests of October 1, 1997 as a continuation of the student resistance of the 1968-1981 year.

The suppression of Kosovo's autonomy in 1989 by the Serbian regime created unfavourable circumstances in all areas of life in Kosovo, including the higher education system. The organization of the work of the University of Prishtina and its survival in the home-schools was a special and unprecedented event in the history of universities. "Even during this organization, the Serbian regime of Milosevic barely hindered the work of the University of Prishtina"<sup>8</sup>, which was the only institution of higher education in Kosovo.

During the new academic year, the violent leader, dominated by Serbo-Montenegrin cadres, increased the number of students to 923 students, mostly Serbian students brought from different parts of Serbia and Montenegro. On August 21, 1991, the Helsinki group in Vienna issued a statement stating that Albanian education in Kosovo no longer existed and that it had been destroyed by Serbia.<sup>9</sup> In the reports of the US Embassy in Belgrade that they send to the US Department of State for the organization of demonstrations in October 1992, organized by Albanian teachers and professors for returning to their facilities, wrote: "The demonstrations were peaceful and according to the witnesses were approximately 50,000 participants who had requested to return to their school facilities, Serbian police forces violently intervened and scattered demonstrators in front of the square where they gathered to demonstrate, using tear gas and other violent means, the police had begun in all the ways of controlling and harassing the Albanian population, in general, the situation in Pristina remains tense, this is also said by the Yugoslav official news agency Tanjug... "<sup>10</sup>. In the description of the demonstrators by US diplomats it is shown that basic human rights in Kosovo were violated. Despite the attempts to return to the school facilities Albanian professors and students, the Serb conqueror denied them this elementary right. But, in the beginning of 1992, the aim is to find opportunities and forms for the Albanian school to begin to be active.<sup>11</sup>

On February 14, 1992, the University of Prishtina announced that on February 17, 1992, it would start teaching at the university level. On 17 February 1992 begins the academic year at home-faculties. On 10 June 1992, the UP Assembly decided that in the academic year 1992/93 7 thousand and 99 young students would enrol. On July 1, 1992, the new leadership of the UP was elected. Rector with a two-year mandate, "Professor Ejup Statovci" was elected, who became the symbol of intellectual invincibility in UP's protection".<sup>12</sup>

The University of Prishtina was the generator of Albanian patriotic movements in the areas of Yugoslavia, and especially the student youth was always at the forefront of protecting national interests. After the elections of ISUPU (The Independent Student Union of the Albanian Pristina University UPSUP) held on 4 February 1997, and the election of the leadership and the chairperson of ISUPU, Bujar Dugolli came to the dynamism of the student movement with fair requests

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<sup>6</sup> National Archives and Records Administration, George Bush Presidential Library. Electronic Message – Yugoslavia – January 1992 [OA/ID CFO1401].

<sup>7</sup> Kosovo's Center of Information, 13.10.1992, Prishtina.

<sup>8</sup> 3 Council for the Protection of Human Rights and Freedoms in Pristina, Report of February and March 1992, Pristina. 8 Bush Presidential Library, Record ID 9209012, Doc Date: 07 Dec 92 From: Francois Mitterrand, Subject: Ltr From: Pres Mitterrand to Pres Bush, Action: Prepare Memo for Scowcroft Date: 17 Dec 92 Staff officer.

<sup>9</sup> National Archives and Records Bush Presidential Library, Record ID 9209012 Keywords: Yugoslavia, Albania, Subject: Reply to Rep Zeffire Situation in Kosovo.

<sup>10</sup> National Archives and Records Administration Georg H. W. Bush Presidential Library, National Security Council, Memorandum For: subject, Kosovo VMS Mail User Bleicken 13 – Oct – 1992.

<sup>11</sup> Bujar Dugolli, 1 Tetori i kthesës 1997-1999, Univerziteti i Prishtinës, 2013, 25.

<sup>12</sup> Newspaper "Bujku", 2 July 1992, Prishtina, 1.

for peaceful protests for the release of school facilities. The decision for peaceful protests found support both in the internal and international opinion, and especially in the professors and students of the UP, that for the entire Albanian society the brutality of the Serbian invader had become impatient. Thus, all the circumstances were created so that students make a historic decision to protest for their return to school facilities.

As noted above, student youth, on October 1, 1997, came to the forefront of a nonviolent movement, applying the active methods of a civil resistance, which echoed in the domestic and international public. Milosevic's regime, stamping violently the protest of October 1, 1997, and other protests, was subsequently discredited badly in the eyes of the international factor, who realized that the discrimination and systematic violation of human rights and freedoms of the Kosovo Albanian population had come to the critical point. Following these recent events before Kosovo's rescue resistance led by the Kosovo Liberation Army began, international diplomacy tried to give peace a chance to encourage students from the University of Prishtina to continue with the resistance and with peaceful protests and on the other hand, encouraging the process of interethnic dialogue to resolve the Kosovo issue.<sup>13</sup>

The idea for starting student demonstrations was born at the end of 1996 and early 1997 by frequent conversations and analyzes by the students, "Bujar Dugolli, Muhamet Mavraj, Driton Lajçi and Nazmi Muzlijaj."<sup>14</sup> In January 1997, the students had written a petition of 550 signatures to President Ibrahim Rugova, but instead of getting answers, many of the students that had signed were arrested by Serbian police under various charges.<sup>15</sup> However, these signatures had their own effect, as students were electrified by their views on and against the petition. Then no one knew that the students had links to the KCL and the KLA, which helped them with their own double challenge, both against Serbs and pacifist politics.<sup>16</sup>

In August 1997, students in Pristina started organizing protests, because Serbian authorities had not implemented the 1996 education agreement signed by Serbian's President Slobodan Milosevic and Kosovo's President Ibrahim Rugova with the mediation of the association "St. Egidio" by the Vatican.

In September 1997, Ibrahim Rugova had tried to divide students and stop holding their protests, but students lost trust in political parties and when he asked in September to stop the demonstrations, the students did not listen to the words his. Ibrahim Rugova was even against peaceful demonstrations organized by the students of the University of Prishtina, reasoning with the famous slogan "we must be careful not to strain the situation without need, so as not to 'We give Serbia a chance for any massacre'.

At a meeting with students, Rugova had not backed them for holding protests and had begged their protests to postpone for an indefinite period. However, the students had rejected his request, saying that they were determined to hold the protest on October 1. Driton Lajçi, vice president of UP's USD on BBC's journalistic questioning whether a protracted postponement of protests can be talked about, Driton Lajçi said, "We can listen to President Rugova only if there is a great excuse, any major reason for postponing the protests." The American diplomat Robert Gelbard had given students support, "peaceful protests are completely acceptable".<sup>17</sup> Also, the Albanian Embassy in Belgrade, Artan Begolli and Florian Nova, the Democratic Party of Albania and its chairman Sali Berisha, hundreds of electronic support messages from Tirana, Skopje, European countries, Canada, USA etc., as well as many professors of UP, who encouraged students to endure.

During this period, the Student Movement had begun to reorganize and oppose the policy of waiting against the Serbian invaders. It, led by Mayor Bujar Dugolli, Muhamet Mavrajt, Driton Lajçi, Albin Kurti, etc., also found support from Professor and Rector Ejup Statovci, who with his experience and the spirit of an intellectual patriot led them on the right road of resistance and freedom. The people had already started thinking differently. On October 1, 1997, some 20,000 students managed successfully to face the Serbian police, who beat and arrested many of the students and their professors. There were similar demonstrations in other parts of Kosovo. The protests in 1997 continued on the schedule of the Organizing Council on October 29 and December 30, 1997, for students of resistance.<sup>18</sup>

Local press, "Koha Ditore", "Bujku", separately, Albanian Political Weekend "Zëri", etc., gave strong support to students protests, which awakened from the lethargy to the settlement centres, the Serbian invader, but also the political factor

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<sup>13</sup> Bujar Dugolli, 1 Tetori i kthesës, vep. e cit. 9.

<sup>14</sup> Intervistë e Driton Lajçit, ish-udhëheqës i studentëve në vitin 1997, "Epoka e re", 1 tetor 2005, .8.

<sup>15</sup> Komunikatë e LPK-së, 1 tetor 1997, Prishtinë.

<sup>16</sup> Tim Judah, Kosova, luftë dhe hakmarrje, vep. e cit. 172.

<sup>17</sup> Newspaper "Bujku", 1 September 1997, Prishtina, 1997.

<sup>18</sup> Tim Juda, Kosova, luftë dhe hakmarrje, vep. e cit. 172.



Albanian.<sup>19</sup> To echo the demands of UP students, the editorial board of the "Zëri i Kosovës" newspaper made an agreement with the newsletter of the "New World" newspaper to come up with the same material.

On October 1, 1997, some 20,000 students of the University of Prishtina flooded the streets of the capital protesting the wild violence used by the Serbian government over the people of Kosovo.

Armed to the teeth, the students managed to withstand numerous beatings and arrests. October 1, 1997 remains a date marking the first step towards political movements, but also liberating. Against the brutality that Serbian forces used on peaceful protesters reacted all Western governments, condemning Serbian violence against peaceful protesters. "The United States strongly condemns the use of violence in Kosovo against peaceful protesters by Yugoslav and Serbian police", said in a statement by State Department spokesperson James Foley<sup>20</sup>. Foulli called on Serbian authorities to respect the rights of citizens for peaceful protests. On October 6, 1997, the US Special Envoy for the Balkans, Robert Gelbart at the US Embassy in Belgrade after meeting with Milosevic, hosted Kosovo's political representatives and held a one-hour meeting with the Independent Union Student Delegation, showing determination to continue peaceful protests until the release of school and university facilities. In a press release after meeting with political representatives and independent Union of students of the University of Prishtina, he expressed the satisfaction for having a meeting with Albanian political representatives and expressed delight because of student behaviour in the recent demonstration in Pristina when they did not respond violently to violent police intervention.<sup>21</sup> After the demonstration of October 1, 1997, organized by the student youth of those years, come the massive mobilization and expansion of the Kosovo Liberation Army, which included Albanians in all their areas, whose epilogue we all know.

Bujar Dugolli, the charismatic leader of UP students, later on in his memoirs will say about the demonstrations that after about 20 years of successful work of the University of Prishtina, 1989-1990 marked the beginning of unstoppable Serbian efforts for destroying higher education in Kosovo. With the advent of Slobodan Milosevic to Serbia, an ultranationalist figure of the Serbian politics, which prompted the Albanian national politics against Albanians, first among Kosovo Serbs, then in Serbia and beyond, the Albanian school in Kosovo, in particular The University of Prishtina took great strides that led to serious risk, with the size of the destruction of Albanian education. Serbian nationalist power was committed to changing and stopping the Albanian language in Kosovo.

The people disagreed with Serbian actions and mobilized themselves in defence not only of Kosovo's political, but also in the defence of Albanian education. In 1989, tens of hundreds of demonstrations and protests were organized, in which, were killed and injured. This situation continued during 1990 with the organization of demonstrations, protests, strikes, etc., where students, teachers, professors, workers and citizens of all categories were almost daily on the street to defend the Albanian school.

The state of the university came to deteriorate, alongside the situation throughout Kosovo. The University Centre was no longer the shelter of students and of the Albanian professors.

In the contemporary history of Kosovo, the year 1997 presents a stage in itself, it is characterized in the first place by the dynamism of the political and diplomatic life of the internal factor as well as the external factor for solution of the Kosovo's issue. During September 1997, Ibrahim Rugova had a visit to Germany and after returning to Kosovo, he had warned of "the German-American initiative to resolve the Kosovo issue that will begin in October 1997".<sup>22</sup> German Foreign Minister Klaus Kinkel declared to "Rilindja" that with Rugova it was discussed mainly about intensifying high-level dialogue between Pristina and Belgrade as well as for the joint US-American initiative, which should begin in October, with a tour the joint Gilbert-Ishinger in Kosovo. Even though it was hoped that this diplomatic initiative of the two influential countries would not have an impact on the Kosovo problem or at least in the realization of the education agreement this did not happen and this initiative did not produce results and was used only as a reason not to protest on October 1st, 1997. The peaceful protests gave a turnaround to the events in Kosovo in general and in particular, the Kosovo issue began to impose on international diplomacy to turn all projectors out of the unresolved Kosovo problem.

Leaders, ideologists, and organizers of peaceful protests for returning to the occupied buildings by Serb invaders faced the brutal violence of Serbian police forced on peaceful demonstrators. The organizers of the 1 October peaceful protests, faced with the opposition of the DLK leadership (Democratic League of Kosovo), which also organized a group of students who held a meeting with the leader Ibrahim Rugova, supporting the idea that protests should be postponed at a

<sup>19</sup> "Koha ditore", 30.9.1997, Prishtinë; "Bujku", 3.10.1997, Prishtinë; "Zëri", 4.10.1997, Prishtinë.

<sup>20</sup> National Archives Unatet State, William J. Clinton, Presidential Library, and Museum, Fund Kosovo FOIA2006-1186-F, 1997, Department State Briefing Kosovo, 11, 01.

<sup>21</sup> Newspaper "Bujku", 7 October 1997, Prishtina.

<sup>22</sup> Newspaper "Bujku", 10 September 1997.

time another and insisting on the division of students for daily political purposes.

This divisive approach had no effect on the student's youth who had the courage to stop the peaceful protests up to the most basic right to education in their university facilities.

The peaceful protests of 1 October 1997 played a very important and historic role in the dynamism of political developments in resolving the Kosovo's issue. The protesters' exit in an organized manner to realize the rights to education was a message to the international public that the student's youth had lost patience. Also the protest was a warning to the political parties in Kosovo how much dissatisfaction had been made and suggesting that the Albanian youth can not agree with the passivity in the political organization of the Albanians and the difficult state of Kosovo. After the announcements of the protests of the students of the University of Prishtina, pressures began as well as by some foreign diplomats and some local political circles. On September 28, 1997, following the warning of students for protests, the Ambassadors of Contact Group and the representative of Russia came for the first time in Pristina. The diplomats had held talks with Kosovo leader Ibrahim Rugova and were notified on the latest developments in Kosovo and for determining for "independence with an international oversight as a transitional stage".<sup>23</sup> The American Office had sent an invitation to the Independent Student Union of UP. At the meeting with student representatives at the US Office in Pristina, there was a request for postponement of the protest and the risk and responsibility of students in escalating the violence in Kosovo, saying, "The international community is interested in a peaceful solution to the Kosovo's problem".<sup>24</sup> At this meeting it is important to note that the most vocal for not holding the fair protest of the students of the University of Prishtina for returning to school facilities were the Russian and French ambassadors.<sup>25</sup> They were stubborn in their attitudes that the announced protest on October 1, should not be kept because "because they will aggravate the already fragile situation in Kosovo". Students during the talks with ambassadors expressed their concern that the agreement did not include higher education in Kosovo and about the curricula and showed pessimism that Milosevic did not understand the language of dialogue, but that of enforcing the implementation of agreements that he himself signed them and did not respect them. Some of the ambassadors were fierce in the demand to attract students from peaceful protests and the right to release school facilities, by duly accountable students for destabilizing the situation and not becoming the cause of bloodshed in Kosovo. The student delegation showed determination in their attitudes and showed that they would not withdraw from the peace protest on October 1, 1997, the students told the ambassadors that we have nothing to lose and pray to observe the peaceful protests of students and citizens on October 1st. The elementary right guaranteed by many international conventions for the expression of free thought and peaceful protests was demanded by students to respect the Contact Group ambassadors. The US ambassador, Richard Miles, addressing the chairperson of ISUPU said: "Mr. Dugolli, we have not come here to pressure you not to keep the protests and not to express your thoughts with the dissatisfaction you have with the Belgrade government, but we suggest you to put them off for a while."<sup>26</sup> "Contact Group Diplomats faced a rejection of students who began a new era of intolerance for the grave condition in Kosovo. Politics in Pristina had been very audible to foreign diplomats and had not been known for any action that was in conflict with diplomacy, especially the Western. Therefore, the student movement took the courage to oppose the sleep diplomacy of some of our friends that the Albanian people do not intend to disagree with and submit to the Serbian criminal conqueror. Ibrahim Rugova's objection and request for postponement also had the same justification to give a chance to a dialogue that for a year had failed to implement the education agreement signed on September 1, 1996 on the release of school facilities. Students showed determination and began not to listen to diplomats' suggestions for the postponement of peaceful protests, marking a new step for Prishtina's submissive politics as obedience to the international factor. That has never been rewarded for this move, for five years up to the warning for peaceful protest of students; they had not found time to listen to the difficulties experienced by the Albanian youth in Kosovo at the end of the 20th century, denying them the most basic right for education.

Peaceful protests by students and citizens of Kosovo begin to be supported after October 1 by diplomats from Western and American countries as well. This is evidenced by the meeting organized after the protests at the US Embassy in Belgrade and the reception given to the student delegation by the US envoy for the Balkans, Robert Gellbard, who "congratulated the students for the peaceful protest", supporting their demands as legitimate and promising that there will be greater

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<sup>23</sup> Kosovo Information Center, Press Release, after President Ibrahim Rugova's meeting with the Contact Group ambassadors, 28 September 1997, Pristina.

<sup>24</sup> Archive of the Independent Student Union of the University of Prishtina, Meeting with the Contact Group Ambassadors, September 28, 1997, at the American Office in Pristina. 1997.

<sup>25</sup> Bujar Dugolli, 1st of October turning, University of Prishtina, Pristina, 2013, 140.

<sup>26</sup> Archive of the Independent Student Union of the University of Prishtina, Meeting with the Contact Group representatives, Pristina, September 1997.

diplomatic engagement in resolving these problems.<sup>27</sup>

1. Supporting the fair demands of students of the University of Prishtina for returning to school facilities, protesting peacefully and without violent behavior, by the representative of the US President for the Balkans, Robert Gellbard was a proof that without a resistance active it was difficult to change the difficult state of Kosovo. Peaceful and fair protests to release school facilities were of particular importance in engaging, powerful diplomatic factors to intervene in resolving the Kosovo's issue in diplomatic ways before escalating any open conflict between the efforts of Albanians for independence and Serbian invaders, who insisted on keeping Kosovo in a Serbian colony at the end of the XX century. Statements and some resolutions by international institutions that had been passed for violating human rights by the Serbian conqueror did not change the grave and tense situation in Kosovo that only went to an armed conflict.
2. The former US ambassador to Yugoslavia rightly recalled in his memoirs in the beginning of the conflict and efforts for independence of the Yugoslav republics, such as Slovenia and Croatia, in his memoirs of Serbian politics led by Slobodan Milosevic wrote, "Serbian nationalism under Milosevic became more and more aggressive."<sup>28</sup>

The efforts of Serbian politics, failing to realize the education agreement that were its signatories, wanted to take time to open the case of Kosovo, its political and legal status.

It was the opinion of many analysts of the time that the education agreement and any agreement with Serbia will not matter if the final status of Kosovo is not resolved. For this, the students of the University of Prishtina were aware of it, and it was not by chance the change of goals from the massive student protests of students and citizens on October 1, where by slogans and requests was priority the release of educational facilities and the right for education.

With the public appearance of representatives of the Kosovo Liberation Army in the burial of Halit Geci, in the village of Llaushë / Drenica, there were hopes that freedom would come to Kosovo. Even if the diplomatic efforts at this time failed to bring about all sorts of plans Kosovo's status, from the special status of extended autonomy or as some Western diplomats called substantial autonomy that guarded Serbian sovereignty over Kosovo.

Student protests, adapting to circumstances created after the KLA public outreach, began to be in support of Drenica, which at this time had become a powerful warrior core of Kosovo's freedom. The student movement was of historical importance after a long time of empowering and installing the Serbian invader in Kosovo, showing hope for massaging all forms of opposition to the Serbian invader, chanting and supporting the Kosovo Liberation Army as well as in front of many joined students and political support for a just war for freedom.

### 3. Resources and Literature

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<sup>27</sup> "Koha Ditore", 10 September 1997, Prishtina.

<sup>28</sup> Warren Zimmerman, *Origins of a Catastrophe Yugoslavia and its Destroyers* W.Z. American's Last Ambassador to Yugoslavia, With an updated Preface and Epilogue on Bosnia and Kosovo, Times Books, New York 1996, 13.

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# The Vocational and Psychological Guiding and Counseling Needs of Students at Al-Balqa Applied University

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## Abstract

The study aims to expose the vocational and psychological guiding and counseling needs of students at Al-Balqa' Applied University (BAU), and the study tool was implemented; after confirming the sincerity and stability of it, which consists of (60) articles, that represents the vocational and psychological guiding and counseling needs for its sample of (291) BAU students for the second semester of the academic year (2016-2017). The study results showed that level of vocational and psychological guiding and counseling needs of students at BAU is medium, where (28) articles of needs came at high level, while (32) came at medium level. It showed the existence of statistically significant difference at ( $\alpha = 0.05$ ) level between the arithmetic means of study sample members estimation on the articles of vocational and psychological guiding and counseling needs scale, as a whole, due to the sex variable of female, and the existence of statistically significant difference at ( $\alpha = 0.05$ ) level between the arithmetic means of study sample members estimation on the articles of vocational and psychological guiding and counseling needs scale, as a whole, due to the study phase variable of diploma compared with the bachelor degree, and it also showed the existence of statistically significant difference at ( $\alpha = 0.05$ ) level between the arithmetic means of study sample members estimation on the articles of vocational and psychological guiding and counseling needs scale, as a whole, due to the major variable of humanity and occupational compared with the science major.

**Keywords:** Al-Balqa' Applied University (BAU) students, psychological guiding and counseling needs, vocational guiding and counseling needs

## 1. Introduction

The world goes through cultural, technological, and educational changes and developments, since the beginning of the 21st century, which affects all aspects of life, such as economical, social, educational, especially the university education, therefore the importance of identifying vocational and psychological guiding and counseling needs arose for the University students, as an urgent need to help universities' students face the challenges that posed by the educational quality and labor market requirements (Rida, 2006; Al-Dulaim, 2011), where the University mainly; participate in building the student personality through providing advance and developed curriculums, and by providing the human relations and social interactions, while the student personality develops and shows during the University preparation period, which reveals the students prospective, directions, values, and mental abilities, in addition to their multiple needs and motives (Kolone, Scanlan, Karen, and Christine, 2006).

University students considers the backbone of nation and the foundation of its advancement and development, where building and developing the society rest on their shoulders and lies upon them, and caring about this element and paying attention to them considers of great importance, since the process of preparing and rehabilitating them is the foundation for building society and its distinction, especially the students of technical and vocational majors, where the world turns today to the process of vocational education, due to increase in unemployment rates in the world, especially in the non-developing countries, where the political and governmental plans always refer to the interest in vocational and technical education and encourage its followers (Fogel & Melson, 2004).

The student's personality cultivates and refines during the university period, and this includes student prospective, directions, needs, and multiple motives, also the stable social conditions provide wider opportunities to achieve a high

level of achievement and ambition, and satisfy the basic needs of individuals, not to mention that current culture and evolution circumstances plays a large role in satisfying the individual needs, therefore the non-developed societies cares continuously about satisfying the physiological and security needs more than satisfying the other needs of its members, while the developed societies cares about satisfying the self-actualization needs (Galassi & Akos, 2012), and Maslow sees that distress and frustration about dissatisfaction of the need is the main factor in the personality growth lack of integration, and is also the main reason for the occurrence of abnormalities or defects types in the formation of individual personality through his life (Al-Swailem, 2002 & Morsi, 1997).

College students at this stage have a real need to discover themselves, achieve independency and personal identity, prove themselves, and gain the social and vocational status they aim to achieve, and all of that puts them in the face of vocational and psychological guiding and counseling needs (Hatch, 2008), which they may fail to meet and satisfy due to their study duties and homework's, and the problems they face in the fields of family, social, economic, or future planning, where the university educational system considers directly responsible for the development and refinement of student's personality, and satisfy those needs (Tashtoush, 2012 & Al-Tahan, and Abu-Eietah, 2002).

The student in the university stage characterized by clear and continuous growth in maturity, in the various aspects of personality, such as mental, emotional, and social (Mansi & Mansi, 2004), gain the social behavioral standards, social independence and carry the self responsibility, create social relationships, the ability to make decisions; in regard to education and occupation, and bear the responsibility of guiding themselves by knowing the abilities and potential, and ability to think independently and plan for their future (Sanatos, 2003).

Needs consider one of the most important concepts, and it's the subject of human being; in all its diverse and renewable requirements and aspects according to the interim changes and the changes of time, besides that human considers exceptional creature and social individual (Al-Shawi, 2012), and the needs reflect itself through the apparent behavior, and in case those needs weren't satisfy, the individual then becomes in a situation that leads to tension , and thus his balance breaks down, then we can say that an individual has a problem, and the need is a situation that leads to instability of human being, and destabilizing its balance, which leads to consult the motivation, and the motivation is the driving force of behavior , in order to get the need satisfied, rebalance, and remove the tension (milhem, 2007& Al-Dulaim, 2011).

The guiding and counseling needs are achieving the alignment between personality aspects, in order to reach the best level of physical and mental health, which is the desire to express the problems in a positive organized manner to satisfy the physiological or psychological needs, that students weren't prepared to satisfy by themselves, either because it's undiscovered or discovered but not satisfied, and in both cases the students need organized counseling and tutoring services to satisfy their needs, and get rid of the problems, to be able to interact with the surrounding environment and adapt to it (Al-Swailem, 2002& Al-Hakamani, 2008).

The guiding and counseling needs of students means students' desire to express their problems in a positive organized manner, for the purpose of satisfying the needs that students weren't prepared to satisfy, either because they didn't discover it themselves, or they discovered it but couldn't satisfy it or get rid of it, and also their desire to have the ability to interact with their environment and adapt to the society that they lives in (Erford, House, & Martin, 2011). (Kaufman, 1972) identified needs as the end result from the contradiction between what really exists and what it should be, and (Good, 1973) identified the guiding and counseling needs as the demands for human beings survival, continuity of their growth, health, social acceptance, and the alignment between the social personality aspects, in order to reach the best level of health.

Therefore, the guiding and counseling need is the desire of students to express their problems in a positive organized manner to satisfy the physiological or psychological needs, that students weren't prepared to satisfy by themselves, either because it's undiscovered or discovered but not satisfied, and in both cases the students need organized counseling and tutoring services to satisfy their needs, and get rid of the problems, to be able to interact with the surrounding environment and adapt to the society that they lives in (Al-Swailem, 2002 & Morsi, 1997).

Therefore, we recognize the importance of searching for the vocational and psychological guiding and counseling needs, as problems which students feel, work to alleviate its effects on their academic achievements, achieve their academic and psychological adaptation, and proceed in their academic and vocational studies.

## 2. Study Importance

This study derives its significance from the theoretical and practical aspects:

### 2.1 Theoretical Importance

1. The importance of guiding and counseling needs for university students, the method used to deal with their problems and alleviate its effects on their mental and psychological health, and their self alignment, as much as possible, to walk with strong and confident steps toward the academic success and scientific excellence or educational and vocational planning. It's no doubt that the University significantly contribute to build student personality, by providing advanced and developed curriculums, and also providing social interaction and human relationships.
2. The university considers a formation and preparation stage of personality, with all its personal, mental, psychological, and social components, and it's the stage where university students face multiple problems, in the various fields, such as the vocational and psychological, which requires finding the appropriate solutions for it.
3. The guiding and counseling needs considers one of the most important educational issues that related to mental health and psychological counseling, due to their special importance of bringing benefit to the students, through helping them satisfying their needs, and achieving the psychological and cognitive alignment, on one hand and strengthen their potentials and upgrading it to a high level of perfection, on the other hand.

### 2.2 Practical Importance

1. Satisfying the vocational and psychological needs of students, considers one of the most important needs for them, with the fact that some of them are unable to select the appropriate major of study, or psychologically adopt with this academic major, and select the future career.
2. Paying attention to the vocational and psychological guiding and counseling needs, which help students assess their preparations, and identify the weak and strong points, by identifying the professional expertise, achieving the professional alignment, and helping the students to decide on their ultimate career, and here it shows the importance of meeting the vocational guiding and counseling needs that helps them gain the right psychological growth.
3. The results of this study consider as a consultation for planning the guiding programs to achieve the vocational and psychological success, and employ the guiding and counseling methods, by holding the seminars and conferences.
4. This study puts in front of the University officials, a comprehensive vision and view for the guiding service levels; where it teach students the vocational and psychological guiding and counseling needs, therefore it will provide database that help student affair officials at the university to expand their guiding and counseling services, thus achieving an integrated development for the university students.

## 3. Study Problem

University students represent an important and supplementary dimension for the society, where they carry responsibilities relate to their future and the future of the country in general, in addition to carrying the personal and social responsibilities in the future. Most university students suffer from the problems they face, after moving from high school to the university stage related to non- satisfaction of professional and psychological needs, which increase since it consider part of the educational program, therefore students are in need of help to improve and promote the guiding and counseling services provided for them, in order to move towards success.

The followers of student issues at the university stage, find them deeply in need of vocational and psychological guiding and counseling, where the majority of them didn't think about selecting their major of study, but believes that selecting major is a difficult matter, and those students who selected a major, you will find them selected an area that didn't align with their preferences and abilities, therefore if those students graduated from the university and entered the job market, you will find them deal with their job without creativity or perfection, or find them work in a field differ from their field of study, which reflect the mental health of students.

**The Study Problem Can be Summarized in the Following Two Questions:**

- What is the level of vocational and psychological guiding and counseling needs of BAU students?
- Are there any statistically significant differences at level ( $\alpha = 0.05$ ) between the arithmetic means of study sample members' estimations, on the measurement articles of vocational and psychological guiding and counseling as a whole, due to the variables of sex, major of study, and study period?

#### 4. Study Objectives

The current study aims to identify the guiding and counseling needs of students, in order to provide the appropriate psychological guiding and counseling services for them and reach the main goals of the educational and teaching process represented in achieving the psychological and vocational alignment, and the academic success, and the study aims specifically to:

1. Identify the vocational and psychological guiding and counseling needs of BAU students, according to their point of view.
2. Are the professional and psychological guiding and counseling needs among students differ, by sex, major of study, and study stage?

#### 5. Previous Studies

(Nicole, 2015) did a study about career counseling sessions method and counselors' preparation, and its effects on career readiness enhancement, and Delphi's method was used to make an agreement between a group of experts about how to prepare school counselors to provide the professional advice before the service, and promote and measure their career readiness in their work with students at all grade levels. The study arrived to a general level of agreement at (79.7), the factors were compared and disagreed with (12) professional practice.

But (Abulaish,2014) did a study that aims to identify the counseling needs of students at the faculty of education, University of Hail, and their relationship to the social situation, major of study, place of living. The results indicated that the sequence of students' needs, according to the point view of female students in the four areas of study were as follow: professional needs, academic needs, psychological needs, and social needs, and the results also showed non-existence of statistically significant differences between the average grades of students, in relation to their counseling needs, according to the variables of social situation, major of study, and place of living.

While (Donohue, 2014) performed a study about executing the interventions and the positive behavioral support of school: school counselors' perceptions about the outputs (student, school climate, and professional effectiveness), and positive behavior support program at the school level (SWPBIS).This study aims to understand the perceptions of educational counselors in the middle and high schools levels about the impact of this system. The results of the study showed in the opinion of experienced school counselors in the schools that implemented the positive behavior support program, who emphasize there are changes that have been identified on students results, school climate, and the resulted effects of school counselors' effectiveness, where it provide proposals and suggestions to the school counselors and school counseling curriculums, based on the results of this study.

The study of (Al-Shawi, 2012), aimed to identify the counseling needs of female students at the physical education college, identify the level of academic achievement motivation for female students, and also identify the relationship between the academic achievement motivation and consulting needs. The study found that level of consulting needs (educational, psychological, social, economical, health, and leisure time) are high among the female students of the physical education college, the level of academic achievement motivation among the female students is also high, and there is a correlation between the academic achievement motivation and the consulting needs.

Where Al-Reweily (2010) did a study that aimed to identify the availability level of consulting needs at the technical colleges in Saudi Arabia, according the students. The study results showed that availability level of consulting needs in the technical colleges of Saudi Arabia came within a low estimation degree, the social needs came in the first rank, followed by professional, then academics, and psychological came in the last place, and there are differences in the availability level of consulting needs, due to the difference between the categories in the sex variable, and in favor of male, and there are also differences due to the different school district variable levels.

And (Al- Hakamani, 2008) held a study that aimed to reveal the consulting needs, from the perspective of private University students at the Sultanate of Oman, and the study results showed that consulting needs fields came in the following order: academic, psychological, occupational, and social, and also showed a non-existence of differences that could be attributed to the following variables: sex, University, academic year, except in the area of social needs, where it showed differences for the second year, and the accumulative average variable.

Where the study of (Nuri & Yahiya, 2008) aimed to identify the psychological,

Social and academic consulting needs of students at Mosul University, and identify the significant statistical differences of consulting needs, according to the variables of sex and study year. The study results concluded there are sharp consulting needs, where six of them are academic, psychological, and social, and showed significant differences in the psychological, social, and academic needs between males and females in general, and the results also showed significant differences between students in the consulting needs, according to their study period.



But (Kolone, Scanlan, Kolone, Pantzer, and Christine, 2006) targeted in their study the discovery of relationship between career decision making self-efficiency, professional identity, and career exploration and behavior among the African American high school students. The results indicated that highest levels of self-efficiency in career decision making, is more linked to the concept of vocational excellence and the excessive effectiveness with the career exploration activities, and also discussed in the study the implications of vocational guiding and the future researches.

While the study of (Al-Riashi, 2004) aimed to recognize the consulting needs of community colleges, and vocational institutes and colleges, and proposed methods to satisfy them. The results of the study showed that students of community colleges, and vocational institutes and colleges have consulting and guiding needs, where the religious consulting needs came first, followed by academic, psychological, social, and health; in that order, then came the economical consulting in the last place, and turned out the existence of statistically significant differences among students of community colleges, and vocational institutes and colleges in the fields of academic, health, economic, religious, and leisure time, while it didn't show any statistically significant differences in the psychological and social field.

In the study of (Al-Osfoor, 2004), the researcher aimed to examine the nature and type of consulting needs of secondary school students at Muscat and interior regions in the Sultanate of Oman. The study results indicated that most important consulting needs of students are: work to improve the academic grades of students, gain parental confidence, develop the academic capabilities and potentials, and learn study time organizing methods. The results explained the sequences of these consulting needs, where the academic came first, followed by professional, psychological, family, and social needs came last, and the results also found statistically significant differences between sexes, in the consulting needs, in favor of females.

## 6. Study Procedures

### 6.1 Study Population and Sample

The study population consists of students at BAU, for the second semester of the academic year (2016-2017), and the study sample selected randomly, from students of Irbid university college, and Huson university college, which amounted to (291) male and female students, and table (1) shows the study sample members characteristics, according to its distribution by sex, major of study, and study period:

Table 1. Distribution of study sample members, according to sex, major of study, and study period variables

Variable	Level/ Category	Quantity	%
Sex	Male	146	50.2
	Female	145	49.8
	Total	291	100.0
Major of study	Academic	99	34.0
	Human	125	43.0
	Vocational	67	23.0
	Total	291	100.0
Study period	Bachelor degree	148	50.9
	Diploma degree	143	49.1
	Total	291	100.0

### 6.2 Study Methods & Tools

The measurement of psychological and professional guiding and consulting needs:

To achieve the goal of the current study, the researchers developed a measurement for the psychological and professional guiding and consulting needs, and this measurement consists of two parts: the first one contain the primary information, such as sex, major of study, and study period, and the second contain (59) paragraphs, where the answer for each paragraph, according to the Likert five scale method dealt with the five following levels, which are feeling the need with a very high degree, high degree, normal degree, low degree, and not feeling the need, and also gave scores ranging from 5 for the "very high degree" and 1 for "not feeling the need".

### 6.3 Study Tool Design Procedures

The researchers designed a measurement for the professional and psychological guiding and consulting needs, based on the following:

- Review the theoretical literatures and previous studies related to study topic.
- View a number of scales and measurements in previous studies.
- Survey students' opinions, by asking them an open question about the professional and psychological needs and problems they face at the University.
- Researchers have the experience and knowledge about students professional and psychological consulting needs, sense they are instructors at the university.
- According to the previous steps, the scale and measurement designed in its initial way to (62) paragraphs.
- Checked and validated the scale sincerity, by representing it to the arbitrators.
- The scale was implemented on the students.

### 6.4 External Sincerity

To verify the sincerity indicators of the study tool, it was presented; in its initial image on (4) arbitrators specialized in the educational and psychological counseling, educational psychology, and measurement and evaluation of faculty members working in BAU, and were asked to give their opinions about the tool structure and paragraphs appropriateness, and its clarity level, and in the light of their reviews, remarks, and recommendations, (3) paragraphs were deleted from the scale, where (80%) of the arbitrators didn't vote on its appropriateness or clarity, bringing the number of paragraphs in the scale to (59), which arbitrators agreed on its appropriateness to measure the professional and psychological consulting and guiding needs of university students, with (90%) approval rate.

### 6.5 Design Sincerity

Design and structure sincerity has been verified for the measurement of professional and psychological consulting and guiding needs, through calculating the corrected item-total correlation of each paragraph of the measurement with the measurement as a whole, as shows in table (2) below:

Table 2. the corrected item-total correlation coefficient for each measurement paragraph of the professional and psychological consulting needs with the measurement as a whole

Number	Corrected correlation	Number	Corrected correlation	Number	Corrected correlation	Number	Corrected correlation
1	.41	16	.61	31	.77	46	.64
2	.42	17	.35	32	.50	47	.35
3	.47	18	.30	33	.50	48	.20
4	.37	19	.35	34	.60	49	.37
5	.57	20	.52	35	.69	50	.44
6	.41	21	.33	36	.78	51	.65
7	.35	22	.30	37	.75	52	.28
8	.68	23	.38	38	.66	53	.60
9	.22	24	.28	39	.77	54	.36
10	.27	25	.39	40	.24	55	.24
11	.28	26	.45	41	.49	56	.66
12	.36	27	.42	42	.62	57	.59
13	.57	28	.43	43	.28	58	.58
14	.20	29	.35	44	.37	59	.62
15	.77	30	.26	45	.39		

It notices from table (2) that all values of the corrected item-total correlation coefficient greater than (0.20), therefore all values are acceptable for the purpose of this study.

### 6.6 Measurement Consistency of Professional and Psychological Consulting Needs

To verify the consistency of the study tool, it has been applied on exploratory sample consists of (56) female and male students from the study population and from the outside of it, and then reapplied it on the same sample, with two-week interval between the two cases of implementation, where the coefficient consistency repetition factor (Pearson) amounted to (0.87), while the internal consistency coefficient factor (Alfa Cronbach) amounted to (0.91), which are acceptable values for the purpose of this study.

### 6.7 Statistical Criteria for the Measurement of Professional and Psychological Consulting Needs

To determine the level of professional and psychological consulting needs of BAU students, and for each paragraph of the measurement, statistical criterion has been used, based on the arithmetic means, shown in table (3) below:

Table 3. the statistical criteria to determine the level of professional and psychological consulting needs of BAU students as a whole, and for each paragraph of the measurement based on the arithmetic means

Arithmetic means	Level
From 1.00 – less than 1.80	Very low
From 1.80 – less than 2.60	Low
From 2.60 – less than 3.40	Medium
From 3.40 – less than 4.20	High
From 4.20 – 5.00	Very high

### 6.8 Study Variables

The study included the following variables:

a) Independent variables, and included:

- Sex: with two categories (Male, Female).
- Major of study: with three categories: (Academic, human, vocational).
- Study period: with two levels (Diploma, Bachelor).

b) Dependent variable: it includes the level of professional and psychological consulting needs of BAU students as a whole, which represented by the arithmetic mean of study sample members estimations on the measurement paragraph of professional and psychological consulting needs.

### 6.9 Study Design

The descriptive approach has been used, due to its scientific steps that examine the professional and psychological consulting and guiding needs of students and its relationship with the studied variables, and then analyze, explain, and interpret that information, and arrive to the results, which can contribute to the achievement of study goals.

### 6.10 Study Terms and its Procedural Definitions

- **Consulting and guiding needs:** It's the needs that University student finds it necessary to assist them in solving their problems, and divided into professional and psychological needs related to different aspects of student life, such as identifying their personal preparations and readiness, measuring their trends, tendencies, and interests, and their general capabilities, in addition to helping them select major of study or appropriate career for their future job, which they aren't qualify to satisfy it on their own, but needs specialized assistance to satisfy it and achieve the academic and psychological adaptation (Al-Swailem, 2002, milhem, 2007), and here a brief definition for the professional and psychological needs:
- **Professional needs:** it's the needs that students find necessary, to help them identify major of study and professional field, vocational interests, capabilities to determine the major of study, and their relationships to select the future career, in order to adapt wisely with the future profession that right for them.
- **Psychological needs:** it's a group of natural desires that work to achieve the balance, stability, and life constancy of individuals, and it's the psychological nature needs, which students see a need to meet them, to help them solve the problems related to the psychological nature and satisfy it, in order to achieve the personal and psychological balance, overcome the emotional conflict, build the successful social relationships with others, and reach deeper understanding of themselves (Morsi, 1997).

### 6.11 Statistical Processes

The arithmetic means and standard deviations were used to answer the first question of the study, to find out the level of professional and psychological consulting and guiding needs of BAU students, as the study sample members, and to answer the second question, the arithmetic means and standard deviations, according to the variables of sex, major of study, and study period, and also perform (Three way ANOVA) analysis to identify the statistical significance of external differences between the arithmetic means, for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, according to the variables of sex, major of study, and study period.

## 7. Study Results

### 7.1 Results Display

The results of first question which stated: What is the level of vocational and psychological guiding and counseling needs of BAU students?

The arithmetic means and standard deviations were used to answer the above question, for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, and all of its paragraphs, as shows in table (4) below:

Table 4. The arithmetic means and standard deviations, for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, and all of its paragraphs, organized in descending order according to the arithmetic means

Number	Paragraph	Arithmetic mean	STDEV	Rank	Level
38	The need to open the required majors by labor market	4.16	0.92	1	High
47	I need someone to help me clarify the relationship between major and professions associated with it	4.08	0.91	2	High
37	Provide no technical and vocational advices for student, and indirect them to the recruitment sources	4.07	0.95	3	High
40	I feel an inability for time management	4.03	1.06	4	High
48	I need someone help to inform me about the required professions in labor market	4.01	0.99	5	High
50	Lack of proper professional majors for both sexes	4.00	0.95	6	High
42	I find it difficult to achieve my study ambitions	3.99	1.06	7	High
46	Non-availability of raw materials in the workshop inside the University	3.99	1.03	8	High
44	I selected my major without any information about its requirements	3.98	0.96	9	High
55	I didn't find someone to help me select the academic or vocational major	3.96	1.00	10	High
39	I don't find anyone to meet my need of measuring directions, desires, and professional preparations.	3.94	0.98	11	High
49	I feel worried about the future	3.93	0.92	12	High
43	I feel insecurity and fear from the future after the graduation from University	3.88	1.08	13	High
57	I need someone to help me select the profession that agrees with my abilities and professional orientations.	3.88	1.05	14	High
58	I don't have enough information about the professions that labor market need	3.86	1.08	15	High
45	Lack of psychological guiding and counseling services at the university	3.85	1.13	16	High
2	I suffer lack of cooperation and understanding from the academic department to solve my study problems	3.84	1.09	17	High
41	Non-existence of professional training and consulting center at the university	3.81	1.09	18	High
56	I suffer from dispersion and lack of focus in the study	3.81	1.11	19	High

59	I suffer from inability to express my opinion freely	3.81	1.09	20	High
52	I suffer emotion loss of psychological comfort	3.77	1.07	21	High
54	It bothers me when one or both of my parents persist and persuade me to study	3.77	1.00	22	High
53	I have fears whenever test dates approach	3.76	1.07	23	High
51	I don't find anyone to help me solve my problems.	3.71	1.11	24	High
1	I have no desire to attend the lectures.	3.55	1.22	25	High
27	The University doesn't motivate and support the gifted and talented students.	3.25	1.18	26	High
16	I feel that the required courses don't fit with my abilities and ambitions	3.47	1.22	27	High
14	Workshops aren't prepare for vocational training inside the University	3.35	1.32	28	Medium
15	Non-scientific skills development about current study majors	3.34	1.36	29	Medium
10	Non-assistance for students in their life and career professionals affairs	3.33	1.28	30	Medium
11	I don't have information about the study opportunities in the future (graduate studies)	3.32	1.22	31	Medium
28	It's hard to get the required references for some vocational materials	3.32	1.37	32	Medium
23	I suffer from leisure time spending problem at the university	3.30	1.33	33	Medium
13	I hesitated when I selected my current major	3.29	1.25	34	Medium
17	I need someone to help me increase the resulting knowledge about appropriate professional aspects for my major	3.29	1.29	35	Medium
29	I feel like I will never find a job after graduation	3.29	1.28	36	Medium
24	There are needs for critical facilities for the supplementary activities inside the University	3.28	1.33	37	Medium
18	I have the desire to change my major	3.27	1.31	38	Medium
22	It bothers me that my family doesn't accept my major of studies.	3.27	1.32	39	Medium
21	I feel that others don't respect me due to my low cumulative average (GPA)	3.26	1.24	40	Medium
12	I don't know what to do after graduation from university	3.21	1.29	41	Medium
32	I feel the fear of making social relationship with others	3.21	1.22	42	Medium
20	I find it difficult to keep friends inside the University	3.20	1.25	43	Medium
3	I feel ashamed and my feelings hurt by the simplest criticism directed at me	3.18	1.18	44	Medium
7	The career path I selected doesn't provide me with the job opportunities in the future	3.16	1.32	45	Medium
8	Lack of specialized instructors in some major courses	3.16	1.26	46	Medium
19	I need someone to guide and consult me about the conditions for changing major of study in accordance with my preparations and abilities	3.16	1.31	47	Medium
5	I need the vocational and psychological guiding and counseling services	3.15	1.24	48	Medium
33	Insufficient field training in my major of study	3.15	1.26	49	Medium
4	I didn't select my major based on my orientation, desires and preparations	3.12	1.20	50	Medium
6	I don't find someone to meet my need about measuring my directions and recognize it in the university.	3.12	1.37	51	Medium
25	Lack of specialized instructors in some vocational majors	3.09	1.35	52	Medium
35	I suffer from inability to align between my study and social relationships	3.08	1.29	53	Medium
34	My current major doesn't meet my ambitions	3.07	1.30	54	Medium
9	I feel ashamed when facing others	3.06	1.33	55	Medium

30	It bothers me the lack of required laboratories, workshops, and training rooms for the study	3.06	1.37	56	Medium
31	I feel anxious, worried, and nervous.	3.02	1.39	57	Medium
26	I didn't select my major freely and with desire	3.00	1.36	58	Medium
36	I feel the lack of reputation, respect, and appreciation with classmates and instructors	2.80	1.25	59	Medium
<b>Measurement as a whole</b>		<b>3.08</b>	<b>0.97</b>		Medium

\* Lower degree (1) and higher degree (5)

It noticed from table (4) that arithmetic means, for the measurement paragraphs ranged between (2.80) and (4.16) at level (medium) and (high), where paragraph (38) which specified on "The need to open the required majors by labor market", came in the first rank with an arithmetic mean of (4.16) level (high), while paragraph (36), which stated on "I feel the lack of reputation, respect, and appreciation with classmates and instructors" came in last place with an arithmetic mean of (2.80) level (medium). It also showed from the table that the level of professional and psychological consulting and guiding needs, at the sample of BAU students was (medium) with arithmetic mean of (3.08), where (28) paragraphs came with high level while (32) paragraphs came at the medium level.

The results of second question which stated: Are there any statistically significant differences at level ( $\alpha = 0.05$ ) between the arithmetic means of study sample members' estimations, on the measurement articles of vocational and psychological guiding and counseling as a whole, due to the variables of sex, major of study, and study period?

The arithmetic means and standard deviations were used to answer the above question, for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the variables of sex, major of study, and study period, as shown in table (5) below:

Table 5. The arithmetic means and standard deviations , for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the variables of sex, major of study, and study period.

Variable	Level/ category	Arithmetic mean	STDEV
Sex	Male	2.82	1.02
	Female	3.34	0.85
	<b>Overall</b>	<b>3.08</b>	<b>0.97</b>
Major of study	Academic	2.73	0.98
	Human	3.16	0.93
	Vocational	3.43	0.88
	<b>Overall</b>	<b>3.08</b>	<b>0.97</b>
Study period	Bachelor	2.88	0.96
	Diploma	3.28	0.95
	<b>Overall</b>	<b>3.08</b>	<b>0.97</b>

It notices from table (5) the existence of external differences between the **arithmetic** means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to sex, major of study, and study period variables, and to identify the statistical significant of these external differences, three way ANOVA analysis was implemented, as shows in table (6) below:

Table 6. The three way ANOVA analysis for the arithmetic means of study sample members estimations on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the variables of sex, major of study, and study period

Variable	SS	DF	MS	F-value	Sig
Sex	12.285	1	12.285	*14.944	0.000
Major of study	11.343	2	5.672	*6.899	0.001
Study period	5.644	1	5.644	*6.866	0.009
Error	235.107	286	0.822		
Modified Total	<b>275.010</b>	<b>290</b>			

\* Statistically significant at the level ( $\alpha = 0.05$ )

It noticed from table (6), the following:

- The value of statistical significance for the sex variable amounted to (0.000), which is lower than the level of statistical significance of ( $\alpha = 0.05$ ) indicating the existence of statistically significant difference at the level ( $\alpha = 0.05$ ) between the two arithmetic means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the variable of sex, and from table (6) the arithmetic means, it shows a statistically significance difference in favor of females.
- The value of statistical significance for the major of study variable amounted to (0.001), which is lower than the level of statistical significance of ( $\alpha = 0.05$ ) indicating the existence of statistically significant difference at the level ( $\alpha = 0.05$ ) between the two arithmetic means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the major of study variable, and to find out in favor of who those statistically significant differences, Scheffe' test for the post hoc comparisons has been used, as it shows in table (7) below:

Table 7. The results of Scheffe' test for the post hoc comparisons arithmetic means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, according to major of study variable

Major of study	Arithmetic mean	The difference between the two arithmetic means	
		Human	Vocational
Academic (scientific)	2.73	*0.43	*0.70
Human	3.16		0.27
Vocational	3.43		

It notices from table (7) the existence of statistically significant difference between the estimations of study sample members related to the academic majors, in comparison with the humanism and vocational majors, and in favor of individuals estimations for the majors of humanism and vocational.

The value of statistical significance for the study period variable amounted to (0.009), which is lower than the level of statistical significance of ( $\alpha = 0.05$ ) indicating the existence of statistically significant difference at the level ( $\alpha = 0.05$ ) between the two arithmetic means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the study period variable, and from the arithmetic means in table (5), it shows a statistically significance difference in favor of study sample members estimations for the study period (diploma).

## 7.2 Study Results Discussion

### 7.2.1 Discuss the Results of First Question, Which Stated: What is the Level of Vocational and Psychological Guiding and Counseling Needs of BAU Students?

The results showed that arithmetic means, for the measurement paragraphs ranged between (2.80) and (4.16) at level (medium) and (high), where paragraph (38) which specified on "The need to open the required majors by labor market", came in the first rank with an arithmetic mean of (4.16) level (high), while paragraph (36), which stated on "I feel the lack of reputation, respect, and appreciation from classmates and instructors" came in last place with an arithmetic mean of (2.80) level (medium). It also showed from the table that the level of professional and psychological consulting and

guiding needs, at sample of BAU students was (medium) with arithmetic mean of (3.08), where (28) paragraphs came at level (high) while (32) paragraphs came at level (medium).

Researchers notices from this result, that professional and psychological needs of the students weren't satisfied or achieved, where it came at a high level, including: The need to open the required majors by labor market, I need someone to help me clarify the relationship between major and professions associated with it, Provide no technical and vocational advices for student, and indirect them to the recruitment sources, I feel an inability for time management, and other vocational, professional, and psychological needs, that combined efforts must be done from the University, family, and society, and they all must seek to fulfill it with the University student.

The researchers see that it's a must to provide students with the consulting services, at all educational levels: elementary school, high school, and colleges and universities, where the vocational and psychological guiding and consulting in universities became associated with any advanced educational system, given that its humanism, social, and educational process, seeks to develop the educational process, raise its efficiency, improve its output, and solve the problems and obstacles that its encounter, according to psychological and educational scientific and academic methods, which adopt the evaluation, assessment, and measurement as a base for it.

In this context, the results of a study by (Gureri et al., 2003), as a college student in one of the Turkish universities, showed that new students expressed their strong need for guiding and consulting service to deal with and solve the academic issues, while students in the higher levels expressed their need to develop searching skills about the job or future career, decision making, and understanding ourselves.

The need to open new majors of study that requires by labor market, came in the first place with an arithmetic mean of (4.16), and at high level between several of the professional and vocational guiding and consulting needs, which researchers see it as logical result, as a result of the job market that suffer from overstocks or piles up of graduate students from the public and private universities, who had a purely theoretical education in the various majors, and particularly humanitarian majors, from one hand and some universities not keeping pace with the needs of labor market in developing new majors required by the labor market, on the other hand, which requires universities to work on developing it and coping with it in their university plans, preparing the laboratories, training, and gaining of students to additional and technical skills, that University didn't prepare its students on it, and this perhaps due to the high cost required by these majors of study, such as building a modern Labs, developing the equipments used in it, or preparing the training workshops that keeps up with the changing labor market, which create a significant financial challenge for universities in the awaking of weak financial support for it, and that what forced many universities to hold on to the old way of teaching, which depends on the theoretical indoctrination, as a key method in education, and not to keep up with the change in the market of different knowledge areas, and that reflected negatively on students' levels, from the technical and professional aspects, where students will find themselves after graduation, not fit with the needs of labor market (due to poor preparation and training), and because the labor market need a high level mastered and trained skills. Instead of that, many universities are still cranking out large numbers of graduates in majors that soaked the local and regional labor market, especially in the humanity major, therefore youth are no longer find a place to work in these major of studies.

The researchers also see that students are in real need for consulting and guiding services in the professional and vocational field, due to the student's interest in what will wait for them in the future; after graduation, where everyone seek to obtain a job opportunity through the development of their professional expertise, their level of learning and training, their physical and mental abilities, and identify the appropriate working fields that match their abilities, preparations, and readiness.

The researchers see after this result, that identifying those consulting and guiding needs of students and meeting it, contribute to facing the difficulties that could meet them, as well as achieving the psychological and academic adjustment and adaptation, especially since the University message requires to help students cope with their problems, identify their professional and psychological needs, and meet it in a way that contributes to helping students pass the University phase efficiently and skillfully, which reveals the need to pay attention to discover, understand, and analyze the students' innersoles (psyches), deal with their problems, and work to address and solve the problems and disorders that they expose, through addressing those issues, studying the reasons for it, its symptoms, and treatment methods, where these issues of great importance, in terms of their impact on the process of psychological alignment and compatibility, and face the pressures of university life, and therefore its impact on the academic achievement among students.

7.2.2 Discussion of Second Question Results, Which Stated: Are There any Statistically Significant Differences at Level ( $\alpha = 0.05$ ) Between The Arithmetic Means Of Study Sample Members' Estimations, on the Measurement Articles of Vocational and Psychological Guiding and Counseling as a Whole, Due to the Variables of Sex, Major of Study, and Study Period?"

The results showed the existence of statistically significant difference between the two arithmetic means for the



estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the variable of sex, and in favor of females.

Researchers attribute the need of females to the vocational and psychological consulting and guiding to the nature of prevailing social upbringing in the Arabic culture, which based on the male stereotypes rule, as well as the nature of the emotional side control in the females' behavior, represented in their excessive dependency on others, and the level of extreme protection for them, in addition to the nature of Arabic upbringing in societies, like Jordan doesn't provide the opportunities for females to go out into the job market, engage in it, and view it, as the opportunity provided for males, but males often engage with parents in their businesses, during vacation or leisure times, or go out and work to cover their needs and expenses, which makes them more informed about the labor market needs, and might formulate a vision of what they want to do in the future. They also put the female in a specific work frame, in occupations such as teacher, nurse, or a doctor, and reject any other kind of job for them, while the field is wide open in front of males, in an areas that females don't go near it, such as technical, constructional, professional, industrial, and agricultural areas of work, in addition to the business service areas, such as hotels and restaurants, or even the areas where you may need to work late sometimes.

The results also showed the existence of statistically significant difference between the estimations of study sample members related to the academic majors, in comparison to the humanism and vocational majors, and in favor of individuals estimations for the majors of humanism and vocational.

In regard to the need of humanitarian and vocational majors to the vocational and psychological consulting and guiding needs, researchers believe this caused by the Ministry of education policies, where the Ministry relies on distributing students on the scientific, literary, and vocational streams, depending on their school average grades, where it will assign the highest averages to the scientific field, while the low and averages go to literary and vocational fields, and this reflects the upcoming students fields of university's academic majors, and often students with the highest averages and cleverness, puts for themselves a future plan to select the majors needed by the labor market, while the students with humanitarian majors will go to university majors, that usually saturated and isn't needed, like Arabic language, history, geography, education, sociology, and other stagnant majors, while students of professional and vocational majors go to vocational training centers, and then to the university colleges, which don't focus largely on the practical aspect of education.

The students in the humanity and vocational majors distributed on the academic majors, according to the admissions unit, where their accumulated average, in high school don't let them choose, but within a very limited range of majors, therefore they enroll in the available major for them, according to the admission unit, and perhaps the available majors don't fit with their desires and ambitions, and students only enroll in them to complete the study and get a certificate, without any interest in acquiring the skills that prepare them to engage in the labor market, which makes them in need of psychological and vocational counseling.

The results also showed the existence of statistically significant difference between the two arithmetic means for the estimations of study sample members on paragraphs measurement of the professional and psychological consulting and guiding needs as a whole, due to the study period variable, in favor of study sample members' estimations for the study period (diploma). It also showed the students in the diploma level are in need of psychological and vocational counseling at high degree, and this may explain selecting a major without basing it on the students' ambitions, desires, tendencies, and readiness, inability to align between their studies and their social relationships, inability to organize the time, low grades or accumulated averages, and perhaps the brilliance of acceptable students in the diploma program, who are incapable to choose the appropriate majors for the current scientific and technological development era, and they don't consider themselves competence enough to be perfect, and also they couldn't find anyone to satisfy their needs, measure their trends and directions, and identify it in the University, therefore their needs appeared for the vocational and psychological counseling and guiding services.

Finally, the researchers see that students must go through two stages, the first is psychological exploration stage, meaning to identify all of the passive capabilities in the inner self and its directions, to learn exactly what it want, then it comes the selection stage from the available potentials and opportunities in the society. This will be done by closely identifying all of the vacant jobs or careers, and learn everything we can about its details, in order to get a clear view about this profession, then alignment will be done between the two stages, between the tendencies and capabilities, and the available opportunities, and then comes the appropriate selection.

It also necessary to look for ways that help students select the correct major of study, by hiring a consultant to help students understand the nature of the job and its requirements, and compare that with their personal preferences and tendencies to achieve the best selection, help them to identify and discover their personal skills, abilities, and their superiority points, their decision making methods and regular ways of thinking, and suitable job search skills, identify the work places, and any other necessary skills.

Professional stability at the job, in the future also generally affect the psychological stability of the individuals, where it

contributes to satisfy the physical and psychological needs, therefore the correct selection of professions and majors prepare the individuals for the psychological alignment, not only in the work field, but in their different aspects of life.

### Recommendations

The study made the following recommendations:

- The importance of providing and satisfying the essential needs, to activate the roles of psychological and professional consultants and guiders, such as vocational and psychological measurement tools, to identify the general and personal capabilities of students, measure their preferences, attitudes, interests, and their social and cultural values.
- Enlighten the students about the available academic majors, its characteristics and the requirements and conditions to register and enroll in it.
- Help students to identify their inclinations, directions, aptitudes, abilities, personalities, and their work related skills.
- Help students to select the academic and scientific majors, which fit their inclinations, directions, aptitudes, and abilities.
- Consult and guide the students who wish to change their academic majors.

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# Journey of Goranis' from Bogomils' to Islam

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## Abstract

The Gora region today is located in the border triangle between Albania, Kosovo and Macedonia. For several decades, the identity of this population is under dispute. There have been numerous attempts by Serbs, Bulgarians and Macedonians, and they continue today, to represent the population of this region as having Serbian, Bulgarian or Macedonian origin. Based on the history of this region and a number of elements of culture, characteristic houses, national dresses, songs, dances, habits and customs that are preserved among the residents, it is unclear because the language is a mixture of Slavic languages while the habits and customs are very close to those of Albanians. One of the versions of ethnic identity of Goranis' is the connection with Torbeshis' as the last remnants of Bogomils', a heretical religious movement. Same as Opojans' also the Goranis' today belong entirely to the Muslim religious group. There are numerous evidences for cult objects such as mosques and shrines built earlier than the expansion of the Ottoman Empire in our region. With the expansion of Ottoman Empire in the Albanian lands, also the population of Opoja and Gora embraced Islam, today this population is entirely Muslim, and in each village, there are mosques of modern architecture and very beautiful minarets.

**Keywords:** Gora, Ottoman Empire, Islam, Torbeshis', Bogomils'

## 1. Gora and Goranis' as Last Torbeshis' of Bogumilism in the Balkans

Gora is one of the geographical and ethnographic areas of Kosovo, which comprises the southern edge of Kosova, which with a part of its territory stretches further into Albania and Macedonia. It is a mountainous area of Sharri mountain which stretches<sup>1</sup> to the east of Kukës, to the north of Xërxe Mountain (1347 m), to the east of Kaçina Gllava (2407 m), to the south of Gemitash (2204 m), to the southwest of Kallabak (2174 m), to the west of Gjallica (2886 m) and to the northwest of Koretnik mountain. It should be noted that these boundaries couldn't be considered as fully precise however they mark its natural and traditional boundary. It borders to the southwest, west and northwest with Luma, to the northeast and east with Opoja and to the southeast with Tetova.<sup>2</sup> Gora Region is comprised of the following villages: Baçkë, Brod, Dikanci, Dragash (older name Krakojshite), Gllaboçicë, Kukolan, Lubovishtë, Mlikë, Orçushë, Radesh, Rapçë, Restelicë, Vranisht e Zlipotok. Administratively all these villages belong the Municipality of Dragash.<sup>3</sup> On the other side, villages: Borje, Cërnavë, Kosharisht, Orçikël, Orgosht, Oresh, Pakish, Zapod, e Shishtavec administratively belong to the Kukës area. Jelovljani and Urviqi are two villages that are located within the Republic of Macedonia.<sup>4</sup> As it can be seen from the earlier traces of the past, almost all the today's villages are located in the same place like the old ones. This clearly shows that on these locations have been present the best geographical conditions for establishing permanent settlements. At all times, the locations of settlements were determined by the main living conditions such as pastures, water, agriculture land and road connections between mountains and settlements. Besides the location of settlements in some villages is noted also the influence of strategic importance. It is understood that for the establishment of settlements not always these conditions had to be met in full. To establish a settlement it was sufficient to have pastures, water and protection from

<sup>1</sup> Qafleshi, Muharrem, (2014), *Goranët dhe identiteti i tyre*, Gjurmime albanologjike, nr. 43/2014, Prishtinë, pg. 25; Instituti Albanologjik – Prishtinë.

<sup>2</sup> Dokle, Nazif, (1999), *Jehona Homerike në Kukës*, Prizren, pg. 50.

<sup>3</sup> Gashi, Skender, (2011), *Gora dhe "boshnjakët" – nërkamëz tjetër për Kosovën*, revista "Sharri", Dragash.

<sup>4</sup> Qafleshi, Muharrem, (2014), *Goranët dhe identiteti i tyre*, Gjurmime albanologjike, nr. 43/2014, Prishtinë; Instituti Albanologjik – Prishtinë, pg. 265.

wind, in Gora for example.<sup>5</sup> Since 1348 when we find it initially in the written documents, in the following centuries and until today, name Gora is unchanged. This word belongs to the Slavic fund and its meaning is Mountain.<sup>6</sup> This happened when Czar Dusan passed the village Brod of Gora with these boundaries to the monastery of Saint Archangel in Prizren in 1348.<sup>7</sup> Hence, the half of 14th century finds Gora villages consolidated with some of them being properties of monasteries.

„село Бродъ и друѣри Бродъ с поповѣи диканонкы и с нихъ родомъ и с нихъ вашинаи и съ заселкомъ Гръмаганѣи а мегѣа моу ѿ планине ѿ прѣкослава на слапъ на овчо врьдо на соуху стоуденць; на модриѣи мѣль. низ рѣккоу на Милачека кошарица и низ рѣккоу кровшеькоу до потока како оупада Зли Потокъ оу рѣккоу. низ рѣке оуз дѣль на Прѣкобращенне. на крть оу стоуденца поурем велинѣ на потокъ на страторию, тере поутемъ како цѣста грѣ оу рѣккоу на вранникѣ, а црѣни гвоздь и чисте дѣ сѣкоу оу опкиноу Орчюша и Глобочица и Бродъ. низ рѣке оу ѣлиѣ. оус потокъ крстовачкѣ како се ставѣ холомъ велинѣ. и оуз вѣли доль како

**Факсимил 1. Хрисовуља цара Стефана Душана, Гласник Друштва србске словесности, XV, Београд, 1862, стр. 181-182.**

According to Turkish registrations during the years 1571, 1591, Gora Region consisted of 38 villages. Although anthroponymy reports of these registers do not reveal exactly the truth about the ethnicity, they speak of Slavic ethnicity of some villages and for Albanian-Slavic coexistence in some other villages, along with the mutual assimilation process. In 1571 in Gora 1355 heads of families were holding pure Slavic anthroponomy, 34 Albanian anthroponomy and 134 mixed Albanian-Slavic anthroponomy<sup>8</sup>. Due to the spoken Slavic language of Goranis' from Gora, different Balkan countries attempted to appropriate this ethnic group, for example, there are Serbian historians and linguists who treat the Goranis' as Serbs, Macedonian historians and linguists call them Islamized Macedonians whereas the Bulgarian state names them as Bulgarians. These attempts are unrelated to the movement of Goranis' that is this does not happen because the Goranis' originate from these countries or belong to their ethnicity, but this is due to their spoken language.

The embedded ideology in the generations of Serbian politicians, which as a founding principle has the occupation of the others' lands, be it with the price of genocide, along with the devotional projecting ideology – Serbian Academy of Sciences, had its spiritual inspiration – the Serbian Orthodox Church<sup>9</sup>. Due to the spoken Slavic language of the Gorani community, Serbian Government during the years 1994-1995 engaged the Serbian Academy of Sciences and Arts (SASA), or more precisely the so called “Sector for Studies related to the Kosovo and Metohija” and the Geographical Institute “Jovan Cvijic” within this academy<sup>10</sup>. Around 20 science institutions with approximately 93 Serbian scientists belonging to different fields of study, participated in the study of the ethnicity of Gorani', as an “old Serbian population”<sup>11</sup>. This academy, with all those institutions and scientists published three printed volumes by SASA related to Kosovo and

<sup>5</sup>Lutovac, Milislav, (1955), *Gora i Opolje* – antropogeografska proučavanja, odeljenje društvenih nuka SAN, Beograd, pg. 51.

<sup>6</sup>Dokle, Nazif, (1999), *Jehona Homerike në Kukës*, Prizren, pg. 50.

<sup>7</sup>Hristovula, 1862, pg. 181-182.

<sup>8</sup>Dokle, Nazif, (1999), *Jehona Homerike në Kukës*, Prizren, pg. 53, 54.

<sup>9</sup>Matoshi, Hysen, (2012), *Hapësira etnike e kulturore shqiptare dhe Kisha Ortodokse Serbe*, Shkup, Prishtinë, Tiranë, pg. 7.

<sup>10</sup>Hahimi, Bedri, (2012), *Goranët*, Prishtinë, pg. 102.

<sup>11</sup>Qafleshi, Muharrem, (2011), *Opoja dhe Gora ndër shekuj*, Prishtinë, 14; Instituti Albanologjik, Prishtinë.

with special emphasis to the regions of Gora, Sredska and Opoja<sup>12</sup>. All three volumes were titled “Zhupas’ of Sharri Mountains – Gora, Opoja and Sredska” (in Serbian, „Šarplaninske Župe - Gora, Opolje i Sredska“)<sup>13</sup>. All these Serbian academics and professors in cooperation with five Goranis’ from the Gora region, Harun Hasani, Behadin Ahmetovic, Orhan Dragash, Vait Ibro and Mesip Dalifi, on these three books conclude that Goranis’ have Serbian origin, who according to them up until a century ago were of orthodox confession. Hence, these Serbian science and political institutions attempted to prove that since their arrival in Balkans during the 6<sup>th</sup> century, south Slavs have ruled the Kosovo region and that Albanians arrived later, by the end of 17<sup>th</sup> century and mostly during the 18<sup>th</sup> century<sup>14</sup>. Serbian authors think that also Albanians from the Opoja region during the 17<sup>th</sup> and 18<sup>th</sup> century were converted from Slav’s into Albanians<sup>15</sup>. In this way, instead of engaging historians to research the ethnicity of Goranis’, it was made even more unclear in part due to the contribution of the politicians living and operating in Serbia along with the scientist of the regional countries at the service of the Slavic politics (Serbia, Macedonia and Bulgaria).

## 2. Torbeshi’s as the Last Remnants of Bogomil’s

Bogomil’s represent one of the medieval sects, the massive heretical movement or the so-called New Heresy<sup>16</sup>. For the first time it was spread in Bulgaria, which for a long time was shaking between the Rome and Byzantine Empire, and the new religion spread fast. This religion’s followers known as Bogomils’ (in Slavic the God’s Beloved), sent their missionaries all over the place<sup>17</sup>, that is throughout Balkans, Byzantine Empire, Europe and Asia Minor and for nearly five centuries had a strong impact in the philosophy, religion, social science, politics, culture and economy of these regions<sup>18</sup>. This movement, which had started during the middle of 10<sup>th</sup> century, during the years 1018 – 1118, had faced an unprecedented persecution associated with the displacement of this population in different directions. In the Balkans, these heretics were called Babuns, Torbeshis’, Patarins’ or Kudugjers’. The nickname Torbesh (beggar) used by the Orthodox Church in contempt of heretics, as those who rose against the beggary, followed them up until this day<sup>19</sup>. Mary Edith Durham cited by Nazif Dokle, speaking of the role of heretics, says: Manichaeism had spread its roots strongly in the Sinisi of Balkans since the times of Justinian and now is covered with a form of Christianity. In the Samosata of Asia Minor emerged a new sect known as Pavlikans’. They united the Manichaeism with a special reference for the sermons of Saint Paul. Persecuted by the Christians, they united with Muslims and organized revolts that disturbed a major part of Asia Minor. The Emperor Kopronymus (741), with the intention to weaken them, sent a majority of them to Thrace to serve as border guards. Gjon Zimicesi (969) displaced another part of them towards the Balkan’s valleys. Since this time their doctrines started to spread fast<sup>20</sup>. Bogomilism was defined first of all as an expression of discontent of oppressed villages against the ruling class and official church<sup>21</sup>. For the Bogomils’ were used other names that also had massive expansion and usage. In the Macedonian regions, and in the Serbian lands, Bogomils’ were called “Babuns”, “Kudugjers” and “Torbeshis”<sup>22</sup>. In Bosnia they were called by the locals as “Christians” and by the foreigners as “Patarens”<sup>23</sup>. Dimitar Angelov has concluded that Torbeshis’ are the last successors of Macedonian Bogomils’<sup>24</sup>. After we explored all the opinions known to us concerning the origin of the name Torbesh, the most reliable one seems to us to be that which relates it to the Bogomil movement<sup>25</sup>.

The journey of this name shows us that Torbeshis’, forced to flee from their country, escaped in three directions: First

<sup>12</sup>Halimi, *Goranët*, pg. 103.

<sup>13</sup>Halimi, *Goranët*, pg.103.

<sup>14</sup>Vickers, Miranda, (2004), *Midis serbëve dhe shqiptarëve*, Tiranë, pg. 24.

<sup>15</sup>Malcolm Noel, (2001), *Kosova - një histori e shkurtër*, Prishtinë, pg. 205.

<sup>16</sup>Shuteriq, Dhimitër, (1980), *Shënime mbi herezinë në Shqipëri*, Tiranë, pg. 199; *Studime historike 2* - Tiranë.

<sup>17</sup>Durham, Edith, (1927), *Bosnja e Hercegovina*, “Njëzet vjet ngatërresa ballkanike”, Tiranë, pg. 148.

<sup>18</sup>Dokle, Nazif, (2009), *Bogomilizmi dhe etnogjeneza e torbeshëve të Gorës së Kukësit*, Tiranë, pg. 9.

<sup>19</sup>Dokle, Nazif, (1995), *Glas Gore*, nr. 7, Dragash, pg.4.

<sup>20</sup>Durham, Edith, (1927), *Bosnja e Hercegovina*, “Njëzet vjet ngatërresa ballkanike”, Tiranë, pg.136.

<sup>21</sup>Dokle, Nazif, (2009), *Bogomilizmi dhe etnogjeneza e torbeshëve të Gorës së Kukësit*, Tiranë, pg. 13.

<sup>22</sup>Osi, Maliq, (1996), *Prizren drevni grad, utvrjenja i njegova najneposrednija sella Jabllanica i Pousko*, Prizren, pg. 142-145.

<sup>23</sup>Panov, Branko, (1985), “*Srednovkovna Makedonija*”, Skopje, pg. 269.

<sup>24</sup>Angelov, Dimitër, (1962), “Bogomilstvoto v’Blgaria, Sofja, pg.150.

<sup>25</sup>Dokle, Nazif, (1999), *Jehona Homerike në Kukës*, Prizren, pg. 60.

direction was through Shkup – Rekë – Gora – Gjakova (as patronim) – Bosnia, where Bogomils ended their journey. Second direction was Shkup – Manastir - Tërbaç (Gollobërdë) – Tërbaç (Vlorë) – Napoli. The third direction was from Macedonia to Asia Minor.<sup>26</sup> In the first direction Torbeshis' survived and established compact settlements whereas in other directions they left behind only the echo of their tragic end in the fire of European hermeticism. Due to their hatred for the Orthodox Church preferred the Catholic Church, and upon the expansion of the Ottoman Empire in these territories it did not take very long until they embraced Islam. Their Opoja and Luma neighbors call the Goranis' as Goran, Torbesh or Poturs'. Their language is called Nashke or Shekniisht (Shkije is a humiliating name given by Albanians to Serbs). They call themselves Gorani, Nashinci and their language Nashinski. For the Goranis' origin and the ethnic background of Gora there is not much information. We may say that history is silent about this problem. On the other side, the Albanian science has been silent almost completely. Even beyond the border, nothing big has been said.<sup>27</sup> (There has been no case when the Gorani national conscience was determined, they do not call themselves either Serbs, Bulgarians, Macedonians or Albanians, only Goranis' or Bosnians'. That part of Gorani population that calls themselves as Goranis' believe that their ethnicity is a Slavic one. The majority part of this community calls themselves as Bosnians' – Muslims who identify their ethnicity with religion. This means that in the same way that Serbs, Bulgarians, Montenegrins and Macedonians are united around the Orthodox religion, the Goranis' and Bosnians' were united around Islam. To enlighten the ethnic genesis of Goranis', we will stop at the name "Torbesh" as one of the names used to call the last remnants of Bogomils'. In this study, we will review the connection between Goranis' with Bogomils'-Torbeshis'.

The Gorani researcher Nazif Dokle in his book "Bogomilism and ethnic genesis of Gora and Kukes Torbeshis'", writes about the etymology of the name "torbesh" which is used to call the residents of this region and has different opinions. The majority of them have the opinion that the name "torbesh" is related to the Bogomil movement and that they are the last remnants of Macedonian Bogomils".<sup>28</sup> Dokle in this book dedicated to the ethnic genesis of Torbeshis' of Gora gives the following evidence: "The clear evidences of Bogomilism in Gora are the names "babun", "kudugjeri", "funda" and "mano" which were used in the middle ages along with the name Torbesh to identify the heretic Bogomils' and which are still found here or around this region."<sup>29</sup> According to the other Bulgarian researcher Jordan Ivanov: "To the Bogomil church belonged also Torbeshis' after which they embraced Islam. They now live in Tikvesh, Kercova, Diber, Shkup and in the Gora region."<sup>30</sup> According to the Gorani researcher Nazif Dokle, the name "torbesh" is to be sought in the centuries as a very old name of Slavic population. This author further continues to say that the others relate the Bogomil movement and the Torbeshis' are considered to be the last remnants of this movement.<sup>31</sup> Jovan Cvijic in his book "Balkansko poluostrvo, juzno slovenske zemlje" writes: "Goranis' have similarities with the Mijakis (Torbeshis') of Reka e Vogel, left branch of Radika".<sup>32</sup> The bridge located between the region of Gora and Radika called "The Torbeshi Bridge" may enforce the idea that Goranis' may have ethnic relations with the Mijakis".<sup>33</sup> It is very probable that Bogomil Torbeshis' while escaping the violence exercised by the Church and Slavic countries of the Balkans have settled with permanent residences in these mountainous regions with good conditions for development of farming, having in mind that Goranis' are good farmers, and they have derived their name from old Slavic name Gora based on the hilly or mountainous configuration of this region and which name itself means Mountain. In a way, Goranis' depending on which countries stretched their powers in these regions embraced their beliefs, during the byzantine-bulgarian-serbian time they embraced Orthodox Christianity and in the 16<sup>th</sup> century when the Ottoman Empire stretched in these territories they embraced Islam.

### 3. Embracing of Islam by Goranis' During the Ottoman Empire

The inscription of the Mosque in Mlike village shows that Islam in this region was present since the 13th century<sup>34</sup> or more precisely since before the arrival of Ottomans in Prizren (1459). Based on the research data from historians it is suggested that this mosque was built by few Arab-Muslim families displaced from Syria and it does not belong to Ottoman

<sup>26</sup>Dokle, (1999), *Jehona Homerike në Kukës*, pg. 61.

<sup>27</sup>Dokle, (1999), *Jehona Homerike në Kukës*, pg. 51.

<sup>28</sup>Dokle, Nazif, (2009), *Bogomilizmi dhe etnogjeneza e torbeshëve të Gorës së Kukësit*, Tiranë, pg. 79.

<sup>29</sup>Ibid, pg.88.

<sup>30</sup>Ivanov, Jordan, (1925), *Bogomilski knjigi i legendi*, Sofia, pg. 36.

<sup>31</sup>Dokle, Nazif, (1999), *Jehona Homerike në Kukës*, Prizren, pg. 59.

<sup>32</sup>Cvijic, Jovan, (1969), *Ballkansko poluostrvo i juzne – slovenske zemlje*, Beograd, pg. 491.

<sup>33</sup>Melqi, Hajriz, (1994), *Opoja dhe Gora*, Prishtinë, pg. 51.

<sup>34</sup>Monography of the south Kosovo region, An EU funded project managed by the European Union Office in Kosovo Implemented by: Arbeiter – Samariter – Bund ASB, Prizren 2012, pg. 57.

constructions. In the meantime, even nowadays the neighborhood where the mosque is located is called Halepovci, while the city of Aleppo at that time was within the Bejlik of the aristocratic family of Dylkadërogullari.<sup>35</sup> According to some Opoja historians the inscription found in the Mlike mosque proves that this mosque is the oldest religious building in Kosova and in Albania in general and shows that Muslim missionaries in Gora arrived in 1353, which dates is much earlier date than the one when in Gora and Opoja was spread the Islamic faith.<sup>36</sup> This inscription translated by Nehat Krasniqi, an expert of ottoman language, has this meaning: “This honored mosque was reconstructed, through allowed (hallall) wealth, by Ahmed Aga, may God show mercy upon him in the year 1238 H/ 1822. Initially (an unreadable word may be was a church in 688 H / 1289 /”.



Also there are traces of Muslim missionary Sari Saltuk such as the Pllava Shrine.

After breaking the resistance of the Balkan nations, Ottoman Turks in the first years of the 16<sup>th</sup> century spread through the larges parts of Albania.<sup>37</sup> This also took place in the regions of Opoja and Gora, in the ancient Dardania. This lead to the embrace of Islam.

Slavic authors Jastrebov and Lutovac about the conversion of Goranis' and Opojanis' into the Islam religion give anti scientific thesis such as their following incorrect conclusions: Jastrebov believes that residents of Opoja during the 17<sup>th</sup> and 18<sup>th</sup> century were converted from Serbs into Albanians.<sup>38</sup> On the other side, according to Lutovac the Ottoman Empire forcibly converted the population of Opoja and Gora, but while the Gora population embraced only Islam and saved their old and pure Serbian language, the Opoja population embraced Islam and also converted into Albanians.<sup>39</sup>

Upon the embrace of Islam, also the tradition of Islamic religious education was developed in Kosova, which is older than six centuries. This activity started from the early years of spreading of Ottoman power in this part of Balkans, where along with the process of embracing the religion of Islam in Kosova, started the process of spreading of Islamic civilization and as a component of this also the Religious-Islamic education. As an outcome of this, in several parts of Kosova, somewhere more and somewhere less, depending on their strategic and economical position, started to be established institutions of religious and educational character such as mosques, madrassas, libraries, etc which were maintained through the system of Waqf. These institutions played a large and positive role within the population, in their wellbeing and religious formation. The role of mosques as an educational and religious institution was and remained huge because from there began the education in these territories. In the mosques', besides completing the religious duties, the Muslims had the possibility to be educated through waz and wazaifs, because these personalities in the largest centers of Kosova were also

<sup>35</sup>Monography of the south Kosovo region, pg.57.

<sup>36</sup>Hajriz Meleqi, *Gora and Goranis'*, manuscript.

<sup>37</sup>[http://www.letersia.fajtori.com/Historia/Timari në shekullin XVI](http://www.letersia.fajtori.com/Historia/Timari_në_shekullin_XVI).

<sup>38</sup>Jastrebov, Ivan, (1995), *Stara Srbija*, Priština, pg. 57.

<sup>39</sup>Lutovac, Milisav, (1955), *Gora i Opolje, Antropogeografska istraživanja, Srpski Etnografski zbornik, knj 69*, Beograd, pg. 51.



among the most educated personalities. Besides mosques a great role in the education aspect was played by the madrassas. Madrassa as an educational institution was initially born within the Arabs, which was then taken by Seljuq Turks and from them by Ottomans who then brought it to Balkans, that is in Kosova as well.<sup>40</sup>

Based on the historical data, construction of Mosques started after the “Kosovo Battle” of 1389. Xhamia e Çarshisë in Prishtina was built in 1440. This activity was further expanded especially during the 16<sup>th</sup> century and in the first part of 17<sup>th</sup> century, when gradually the Islamic population began to take over, especially through the cities.<sup>41</sup> In the same way, also in the territories of Opoja and Gora the religion of Islam started to spread quickly, and according to the evidence of cult monuments, it turns out that the mosque of Shajne village was older than Xhamia e Çarshisë in Prishtina, as it was built in 1413.<sup>42</sup> In the so called Islamic defters, besides the data about the social and economical situation of Opoja and Gora, a special emphasis was given to the data about the registration of population. According to this data, majority of population in Opoja, in 1571 was Islamized and as a result its anthroponomy belonged to the sphere of Islamic anthroponomy. Now it consisted of 84 families and 14 Christian bachelors, 233 married Muslim families with land. There were also 61 married families without land (bennak) and 75 Muslim bachelors. In Opoja and Gora, in these two regions, the Islamic religion was spread since the 16<sup>th</sup> century, and since that time, in these territories of Sharri Mountains, were preserved a considerable number of architectonic monuments of Islamic heritage such as: mosques, shrines, tombstone inscriptions, water fountains and sarays. Monuments of sacral and profane architecture contain elements of oriental architecture and especially of Ottoman architecture. A true treasure of material inheritance represent the Islamic buildings built by Kukli Beg such as the Mosque of Kukli Beg in Bresana village (which is under the protection of the Institute of Culture Monuments of Kosova), the hamam, the shrine and the tombs of his family as well as the Saray and the water fountain near the Saray of Kukli Beg, which until today preserve the rich urban-oriental integrality, surely with some changes, because time by time some repairs were made. There is also the Namasgja in Buzes village, the Plava Shrine which belongs to the time of Sari Saltuk. In this way, Goranis call themselves as Bosnians-Muslims also from the ethnic and religious point of view.

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<sup>40</sup>Feja, kultura dhe tradita ndër Shqiptarët, (1995), Prishtinë, pg .553.

<sup>41</sup>Enciklpodija likovnih umetnosti 2, Zagraeb, MCMLXII, pg. 155.

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# Does Road Investment Really Promote the Export? Evidence from Sichuan County-level Data of China

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## Abstract

Whether road infrastructure promotes export is still a concerned issue debated in the previous studies. In this paper, we conduct a panel data using two data sources from year 2003 to 2013, examining the relationship between road investment and export. The primary results show that road investment significantly restricts local export. A further test indicates that the road infrastructure benefits service sector, 1) abstract more private capital investment on service sector than manufacturing sector, 2) reduce the employee of tradable sector. Then manufacturing sector was constrained. The results are robust when a set test is carried out.

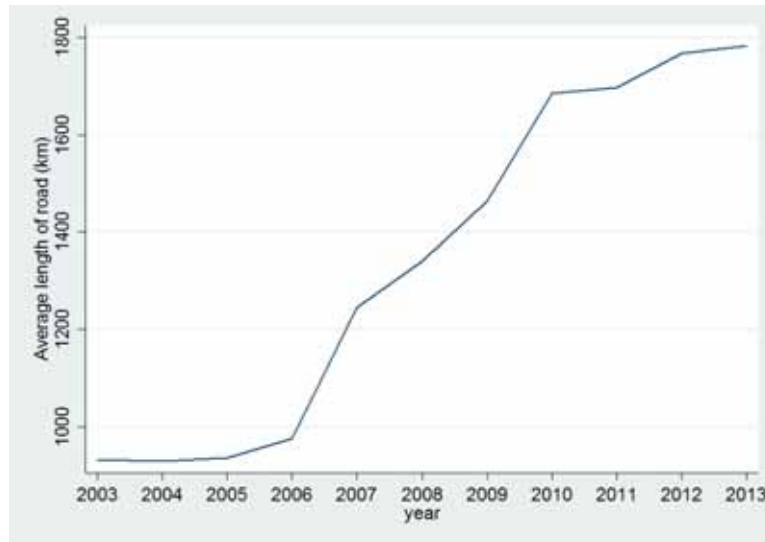
**Keywords:** Road investment, Export, New registered firm, China

JEL: O14, F16, R4

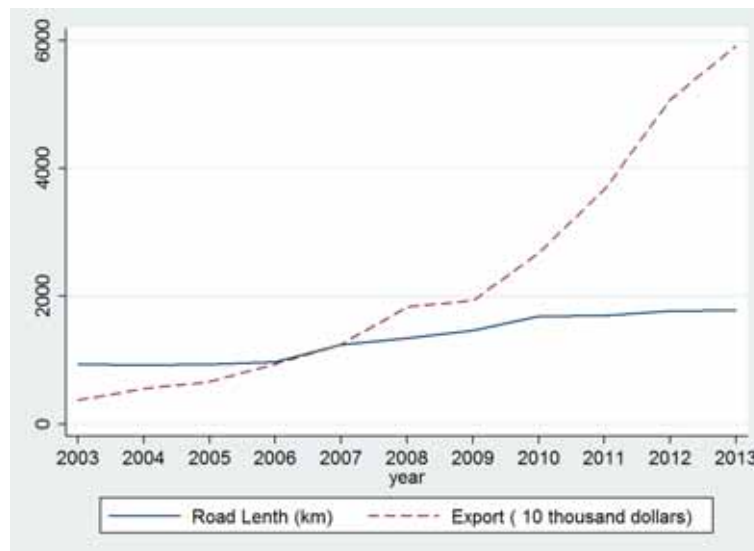
## 1. Introduction

Road infrastructure is often mentioned as a key to promote the export. The argument relies on the simple logic that "market access" or "local road density" may reduce transportation cost, or rise the manufactory productivity directly (Shirley and Winston, 2004; Donaldson, 2010; Li and Li, 2013). However, most of these studies assume that for fixed endowment in better connected or integrated areas, tradable goods move to the market more easily than the capital and labor (eg., Banerjee et al., 2012), ignore its direct or indirect effect on the non-tradable sectors (i.e., construction, transportation, hotel, etc.), which may "crowd-out" the tradable sectors<sup>1</sup>. And limited literature consider that non-tradable sector may react faster than the tradable goods (eg., Song et al., 2014), and non-skill labor may likely mobile between tradable and non-tradable sectors.

This paper contributes the literature by focusing on the mechanism of road infrastructure investments impact on export, which includes both tradable and non-tradable sectoral channels at county-level of Sichuan province in China from 2003 to 2013<sup>iiii</sup>. In other words, besides the road investment effect on the tradable sector directly, we further consider its effect on non-tradable sectors, which may back to impact on the tradable sector indirectly. Sichuan province is under-development area, includes 138 counties local at the southwestern of China. In 2000, China central government began an active program of investment in the development regions called "Western Development Strategy" (also known as "Go West") (see eg., Yao, 2009; Fan et al., 2011). But mostly after 2008, the investment is implement vigorously. Fan et al. (2013) point out: "For Sichuan province, on the other hand, much of policy making is now seen through the prism of the consequences of and responses to the massive earthquake of 2008". Most of investment flow into the road, the average length of each county rises from around 930 km to 1245 km before and after 2007(see, figure 1. (A)). The roughing growth rate is only 1.5% every year before 2007, and after 2007 it reaches to 7.2% every year. Consistence with this patterns, after China entry in to the WTO, only from 2003, the Sichuan county has reported their export information, and it also boom from 2007, rough growth rate is from 50.4% every year to 62.6% before and after 2007, which is more higher than the road investment (see figure 1. (B)). Besides that, the counties within a province share the same language, cultural, policy institute and nature resources, more homogenous than cross province or countries data. These characteristics provide us a "quality data set" to estimation the relationship between road investment and export.



(A) Average road length of Sichuan County in China



(B) Average Road length and Export of Sichuan County in China

Figure 1. Road length and export in Sichuan province, China

To identify the road investment effect on export with directly and indirectly mechanism, we conduct a panel data combine the new register firm data from Administration of Industry and Commerce of Sichuan and fundamental economics' variables. Rather than focus on market access hypothesis, which only consider market integration impact on the tradable sectors through the price convergence in difference areas by trade models<sup>iii</sup>. Follow the previous literature, this paper choose three measurements as proxy of the road infrastructure investment, i.e. road length road to area density, road to population density, to estimate its effect on export through both tradable and non-tradable sectors. And assume that the relative price will change in short run after road investment flow into the local market, that is the price of non-tradable goods may be raised immediately caused by increasing demand of service sector, such as, construction, transport, hotel etc., compared with the tradable goods determined by the international market, then labor and capital will flow to the non-tradable sectors, so the manufacturing may be restricted in short term.

This strategy has a number of advantages. First, it provides us with an estimation of indirect effect export on through non-tradable sectors. Second, this combination mechanism effect can be distinguished by testing the labor and capital flow by sectors. We can therefore ask the short run level effect of better road investment. Third, period 2003 - 2013, coincides with China become a WTO member and export growth. Therefore, these counties are in the good position to exploit the road investment effect on the export.

The primary finds that road investment hinder the local county's export. It means that better road area has less export. To further investigate, we find that road investment have different effect on the two sectors of economics. Because road investment increases higher demand of local non-tradable goods, but the demand of tradable goods is determined by the international market. Hence, the relative price between service and manufacturing sector in short run is rising. During the process of price coverage to the equilibrium level, road investment will first cause a large labor demand in local market (i.e., construction), the average wage is increasing. On the one hand, employee share of manufacturing are reduced by the road investment, more non-skill labor will move from the manufacturing to service sector, such as a worker becomes as builder, waiter or truck driver etc. the manufacturing firms face the shortage of labor because their relative lower wage. On the other hand, the private capital will also flow to the service sector more than manufacturing sector. Because given the wage equal to labor marginal production, service sectors' productivity is increasing caused by the higher demand of non-trade goods. This result consistence with Song et al. (2014)'s finding, which road investment increase the demand for service sector, such as housing, restaurant and so on. Both of these two effects, road investment restrict the local export significantly.

For the discussion, it is important to keep three points in mind. First, we focus on the short term effect. When the road investment in the local area, in short run, it may rise the demand of non- tradable goods, and relative price and labor demand of non-tradable goods is increased, the average wage of local area is increasing at the end. But price of tradable goods is determined by international market, non-skill labor move from labor-intensive manufacturing firm to non-tradable sectors (Bulte et al., 2018). In other word, the price volatility is deference by sectors, and wage gap are exist between two sectors. Second, for all counties in our analysis sample, we assume the county faces the same "market access" opportunity within a same province, but different local road density. Third, our results do not implicate the road investment is worse for the economics, but focus on showing its different effects by sectors.

The remainder of the paper is organized as follows. Section 2 discusses the related literature, and section 3 shows the details of identification, section 4 introductions the data. In section 5, report and analysis the empirical result. Section 6 concludes and discusses limitation.

## 2. Literature Review

There are two literature to test and explain the relationship between road infrastructure investment and export. One is called "Market Access" hypothesis, this studies argue that the road or railroad connected the local area with the global market, the tradable goods can be easily and low-cost to sale to the global market, local area benefit from this market integration (Fogel 1964, Donaldson 2010; Banerjee et al., 2012; Donaldson and Hornbeck, 2012). A lot of empirical papers test above hypothesis and find that that road infrastructure has positive effect using many countries' evidences. Farhadi (2015) find that the stock of infrastructure will promote the productivity in OECD countries in the long run. Donaldson (2010) find the railroad investment increase the export caused by reducing the transport cost and it interregional price gap in India. Michaels (2008) find the similar effect using highway road data of United State. But these effects may not be stable in China. Banerjee et al. (2012) argue that the highway road has moderate effect on the GDP per capita of China, and insignificant effect by sectors. Faber (2014) finds that China's trunk highway has a negative impact on industrial development. However, Most of these studies focus on the estimation strategy to avoid the endogeneity, but little discuss the mechanism which may has more contribute the economic. All of market access hypothesis only focus on aggregate effect of the tradable sectors, and assume the price will converge in the long run between different areas with the better infrastructure connected. In other words, above studies' conclude that infrastructure investment benefit the total social welfare. However, the better connected rural regions to cities may cause the skilled labor migrant from rural to urban<sup>iv</sup>, and rural receive very limited benefits from these effect (Jacoby, 2000).

"Local road density" hypothesis try to test the channel of road effect on economics. There are some evidences, such as, Shirley and Winston (2004) using USA data, and Li and Li (2013) using province -level data of China, Holl (2016) using the data of Spanish have found that the road investment will reduce the firm's inventory and increase the manufacturing productivity of local area. But these concludes are debating, some studies argue that the road density may not only effect on the tradable sector, but also effect on other non-tradable sector, and these two effect may linkage (Banerjee et al., 2012). The labor will flow to the higher wage sectors, and the capital will also flow to the higher productivity sectors, given the wage equal to the marginal productivity, both labor and capital will move to higher productivity sector. Song et al. (2014) point out that the infrastructure investment has positive impact on primary industry firstly, then is the tertiary industry, the last is the second industry. Addition that, non-tradable sector's reaction may "crowd-in" or "crowd- out" the manufacturing development in short run. In other words, labor or capital may move within two sectors, because the relative price may be shaped (Bulte et al., 2018). Better road density counties have the higher productivity of service sectors and more service enterprises (Gao et al., 2015). Hence, deduce these findings, we point out counter-intuitive hypothesis.

Hypothesis 1. Road infrastructure may restrict the local export.

Hypothesis 2. Road infrastructure has higher positive effect on the service sector than manufacturing sector.

### 3. Identification

To capture the above effect, we use a very simple model to test the hypothesis.

First, we use fixe effect model to eliminate the invisible county heterogeneity:

$$\text{Log}(\text{export}_{it}) = \beta \text{Road}_{it-1} + X'_{it} \delta + t + u_i + \varepsilon_{i,t} \quad (1)$$

*export* represents the total export in county *i* at year *t*. *Road* represents the total length. And in order to avoid the heterogeneity effect at difference counties, such as, the far county local at the mountain area may has less population, and distribution of population is not centralize, so they has higher length but little manufacturing firms. We use density of area and population to avoid this bias. Road density may not be used well at the same period, such as, new investment on road today, the local firm may not benefit today but may be tomorrow, so we use the lag stock of road to measure these effect. Moreover, less industrialize counties has less export, but may has better road density because it focus on the development the agricultural or service industry, such as tourism. In order to avoid this kind of sample selection bias, we control as set of variables *X'*, that is GDP per capita, population, area, government revenue, local labors' education (measured by average number of middle school students). Besides, that, the popularity of telephone will help enterprises reduce the cost of the information in the economic activities, so we take the local mobile phone users to represent it, and we also use urbanization rate as a proxy of industrialization rate. *t* is the year fixed effect, *u* represents the county fixed effect,  $\varepsilon$  is the random error.  $\beta$  represents the sensitive of the total export to the transportation infrastructure investment.

As for the endogeneity problem, a major concern with our estimating model is reverse causality problem. Such as, road investment may centralize at the higher export area, which a main channel to increase the economic growth. In order to resolve these possible endogeneity problems, we have adopted a variety of methods. First of all, the lag variable of traffic infrastructure can control the volume of causal relationship between transportation infrastructure and export. The strategy does not distinguish the target of road investment policy, this only test whether after road investment, local export will be promoted or not. Second, we use panel data fixed effects model to control the unobserved omitted variables bias. Third, we control the industrialization rate of county to measure the development of export sector.

The equation (1) test the hypothesis that the whether the road effect on export. Following this logic, we also provide the examination of hypothesis 2, which test its mechanism of road effect. As discussed in section 2, if we only consider the short term effect with the relative price has been changed, labor and capital may flow into the non-tradable sectors. Hence, we use the new registered firm numbers by sector as a proxy of private capital, and use employment share by sectors measure the labor movement, instead of export to re-regress the model (1). If the road investment has positive effect on the private capital and labor on service industry, or negative effect on manufacturing sector, then one potential effect channel has been proofed (more detail see in Section 5).

### 4. The Data

This paper uses data from multiple sources. First, all of fundamental economics, i.e., export, GDP per capita, employment share by sectors, population, area, education, urbanization rate, etc., are obtained from Sichuan Statistical Yearbooks of China from 2003-2013 published in 2004 to 2014. All of counties report their export data only began at 2003 after China become a WTO member. Second, New Registered Firm numbers by sectors are collected and calculated according main business merge with National Economical Industry Classification (GB/T4754-2011) by authors, where it comes from Administration of Industry and Commerce of Sichuan Province in China. This data is different from the other data set. It include all size, industrial, property of firms, such as large scale and small firms, manufacturing or service industry, state-owned, private, or foreign etc., which provide us an opportunity to capture almost all capital resource flow into which sectors after road investment. And we first calculate the firm numbers according industrial classification, and then aggregate into county-level according the registered address.

There are 138 counties local at Sichuan Province, and we exclude the district of city (37 districts distribute in 21 cities) because two main reasons: 1) district is difference from counties because they are centralized in the city, if we treat them as homogenous, the industrial cluster or agglomerate effect cannot be distinguished; 2) road length are reported exclude the street data, but include the village connection road. However, not all of counties report these variables we used every year, such as, the export and road data is omitted in Daocheng county in year 2008 and 2010. At the end, total sample size of fundamental economics are 1307 within 138 counties of 11 years, but imbalance.

Table 1 reports the summary statistics of all variables. On the average, each county exports 27,300 thousand dollars every year. There are 213 firms registered in each year, and 24 are manufacture firms, 138 are service firms. And 57.8

thousands labor work at industrial sector, but 82.3 thousands labor work at service sectors. Total road length of each county is 1,392 km, 48.6 km per square area, the average area of county is 2,780 square kilometers. And 806.7 km per thousand population, which each county has 529 thousand persons. And income of county is 13,807 yuan per capita, government revenue has 271.6 million yuan in average, 28.0 thousand kids educated at middle school level. And 158.8 thousand phones are used within a county. 18.3% live in the urban area.

Table 1. Summary Statistics

Variable	N	Mean	Std. Dev.	Min	Max
<u>Independent variables</u>					
Export ( thousand Dollars)	1307	27,300	141,702	0	2,918,100
Total new firm No.	1307	213	206	0	1,652
Manufacture firm No.	1307	24	34	0	365
Service firm No.	1307	138	154	0	1,406
employment of industrial ( thousand)	1307	57.80	56.01	0.10	372.10
employ of service ( thousand)	1307	82.25	69.65	0.80	344.00
<u>Dependent variables</u>					
Road (km)	1307	1392.09	1024.34	119.00	12034.00
Road/area (km/million sq km)	1307	48.61	61.91	3.49	538.46
Road/Population (km/thousand)	1307	806.64	789.16	31.59	17093.80
GDP per Capita ( <i>yuan</i> )	1307	13807.42	10250.44	2095.00	61965.00
Area (sq km)	1307	2780.66	2665.23	330.00	24944.00
Population ( thousand persons)	1307	529.04	402.53	24.00	1626.00
Revenue (million yuan)	1307	271.64	475.40	1.53	6459.70
Phone ((thousand)	1307	158.83	172.71	0.40	1200.00
Middle school students((thousand person)	1307	27.95	23.22	0.20	116.27
Urbanization rate (% , non-agricultural share)	1307	18.27	8.94	4.59	64.87

Notes: Fundamental economic information come from the Sichuan Statistic Yearbook published from 2004 to 2014. And New register firm data are from Administration of Industry and Commerce of Sichuan Province in China 2004-2013.

## 5. Results

### 5.1 Baseline Results

Table2 shows the road infrastructure investment on exports using Sichuan county-level data from 2003 to 2013 based on equation (1). Year and county fixed effects are included in the regressions, but not reported separately. The variable of interest is road length in column (1), road density of area in column (2) and road density of population in column (3). As mentioned in Section 3, road investment is the lag one period variable. On the one hand, the same period road investment may not be used efficient to transport goods, on the other hand, the future economic activities may not reverse effect on the history investment<sup>v</sup>. The coefficients for the interest are significantly negative at 1% level and robustness. Suggesting counties with better road investment experienced a much larger decline in export than other counties. The stock of road investment has reduced total export by 29% (or  $100(e^{-0.345}-1)$ ) if using 2003 as a base line. Compare this results with Figure 1 of panel B, we can find that growth of export are not contributed by the better road investment. However, this paper do not discuss the real reasons of export increasing.

The coefficient of other control variables make sense, higher income and higher urbanization rate counties export more, but the mobile phone decline the export. One reason maybe the local population use phone to detail with the private or local business, and use internet to do international business, but we cannot get this data. Other control variables effect are insignificant. All of estimation results show that our interest variable effect are robustness.

Table 2. The impact of road investment on export (county-level)

	(1)	(2)	(3)
	Log(export)	Log(export)	Log(export)
Lag(Road length)	-0.345** (0.140)		
Lag (Road per area)		-0.278** (0.141)	
Lag (Road per person)			-0.330** (0.140)
GDP per Capita	0.697** (0.305)	0.689** (0.306)	0.692** (0.305)
Education	-0.295 (0.238)	-0.268 (0.239)	-0.185 (0.204)
Phone	-0.280* (0.156)	-0.284* (0.156)	-0.257* (0.154)
Revenue	0.161 (0.164)	0.153 (0.164)	0.176 (0.163)
Area	-5.590 (3.471)		-5.136 (3.378)
Population	0.885 (1.009)	0.407 (0.985)	
Urbanization	0.786* (0.437)	0.748* (0.437)	0.841* (0.434)
Year dummy	YES	YES	YES
County dummy	YES	YES	YES
N	1307	1307	1307
Adj. R2	0.118	0.115	0.118

Note: All of the independent variables are in the logarithm form. The county cluster standard error are reported. "\*\*", "\*\*\*", "\*\*\*\*" represent the 1%,5% and 10% significant level respectively.

Moreover, there are also some omitted variables cannot be observed by many reasons will cause the above estimation is bias. We know that the county in Sichuan province has different type land, and suffer the big earthquake disaster at 2008. These two reasons may lead the Table 2 results are bias because of the heterogeneity problem. So we do a set of robustness check, first, we group the counties into two sub-sample, one if mountain area belong the fault line suffer the quake (disaster), the other are plain area without quake (non-disaster)<sup>vi</sup>, and re-regress the equation (1), results are not difference between two groups reported in Table3a which significant are similar with Table2 Besides, that we also exclude the year 2008 to control the quake effect, the results robustness, the road investment has significant negative effect on the local export reported in Appendix Table1.



Table 3a. Robustness check (sub-sample)

	Non-disaster counties	Non-paired disaster counties
Lag(Road length)	-0.615*** (0.102)	-0.262** (0.102)
GDP per Capita	1.378*** (0.469)	1.369*** (0.404)
Education	-0.357 (0.265)	-0.624** (0.251)
Phone	-0.349* (0.192)	-0.152 (0.173)
Revenue	-0.101 (0.192)	-0.170 (0.181)
Area	6.812 (5.687)	6.624* (3.716)
Population	3.508*** (1.107)	3.361*** (1.117)
Urbanization	1.815*** (0.592)	1.622*** (0.491)
Year dummy	YES	YES
County dummy	YES	YES
N	1307	1307
Adj. R2	0.659	0.701

Note: Column (1) except the disaster counties, and column (2) except the disaster counties with receive the pairwise aid counties (eg., definition from Bulte et al., 2013). Disaster are local at the mountain area, which also show that the results are robustness even though there is the land type heterogeneous bias. All of the independent variables are in the logarithm form. The county cluster standard error are reported. "\*", "\*\*", "\*\*\*" represent the 1%, 5% and 10% significant level perceptively.

As mentioned in above sections, we argue that the road investment has short term effect on the local export through different sectors, because relative price of non-tradable and tradable goods will rise in short term. So we also estimate road investment effect on the growth rate of export (defined as export in period t over period t-1) to capture the short term effect. And the results are reported in Table 3b, except the road density of area<sup>vii</sup>, the interest variable has significant negative effect on export consistence effect with Table 2. However, here we use the random effect instead of fixed effect, because the first order difference may not relate with the error, Hausman test proof this assumption (Prob>chi2 = 0.963 cannot reject the null hypothesis that error term is uncorrelated with dependent variables).

Table 3b. Robustness check (growth rate)

	(1)	(2)	(3)
	Change of export	Change of export	Change of export
Lag(Road length)	-0.410** (0.196)		
Lag (Road per area)		-0.268 (0.163)	
Lag (Road per person)			-0.391** (0.182)
GDP per Capita	0.328 (0.325)	0.221 (0.317)	0.302 (0.312)
Education	0.206 (0.250)	0.215 (0.251)	0.252 (0.191)
Phone	0.055 (0.208)	0.070 (0.208)	0.069 (0.202)
Revenue	0.055 (0.164)	0.066 (0.164)	0.066 (0.159)
Area	0.194 (0.151)		-0.213 (0.168)
Population	0.089 (0.315)	-0.328 (0.307)	
Urbanization	-0.430* (0.256)	-0.459* (0.256)	-0.449* (0.246)
Year dummy	YES	YES	YES
N	1307	1307	1307
Adj. R2	0.118	0.115	0.118

Note: Change of export defined as growth rate over last year, and is 1 if last year has no export. All of the independent variables are in the logarithm form. The county cluster standard error are reported. "\*, \*\*", "\*\*\*\*" represent the 1%, 5% and 10% significant level respectively. Here we use the random effect because the first order difference may not relate with the error term, Hausman test proof this assumption (Prob>chi2 = 0.963 cannot reject the null hypothesis that error term is uncorrelated with dependent variables).

### 5.2 The Transmission Channel

So what are the major transmission channels for the declining export in better road investment counties? Of course, there are many potential culprits. The simplest explanation would be that the underdevelopment industrialization counties with lower population density, but they may have longer road length. However, we have shown that given the urbanization rate and fixed the county effect, the road length per population or per area also restrict the export (see Table 2). Besides that, we also split counties into two groups, one is higher industrial development, defined as with urbanization rate higher than the median ratio over years, and less than that thresholds are defined as lower industrial development counties<sup>viii</sup>. Then re-regress Table 2 result within two sub-samples, results are reported in Table 3c, Panel A show the higher development of industrial sector, and Panel B is the lower development of industrial sector. However, these results are contrary to the above logic, these show that counties with better road investment may reduce the export even in a better development of industrial sectors instead of under-development areas. This suggests that the higher road density counties have less export than lower ones, especially in the higher urbanization areas.

Table 3c. Robustness check (sub-sample according urbanization)

	(1)	(2)	(3)
	Log( export)	Log(export)	Log(export)
<u>Panel A: urbanization rate (<math>\geq 15.3\%</math>)</u>			
Lag(Road length)	-0.467** (0.199)		
Lag (Road per area)		-0.420** (0.199)	
Lag (Road per person)			-0.449** (0.199)
Year dummy	YES	YES	YES
County dummy	YES	YES	YES
N	682	682	682
Adj. R2	0.068	0.063	0.057
<u>Panel B: Lower urbanization rate (<math>&lt; 15.3\%</math>)</u>			
Lag(Road length)	0.053 (0.198)		
Lag (Road per area)		0.077 (0.197)	
Lag (Road per person)			0.059 (0.199)
Year dummy	YES	YES	YES
County dummy	YES	YES	YES
N	625	625	625
Adj. R2	0.124	0.117	0.111

Note: Median urbanization rate over 11 years is 15.3%, lowest is 4.6%, and highest is 64.9%. Panel A restrict the sample within higher urbanization rate group ( $\geq 15.3\%$ ), and Panel B restrict the sample within lower urbanization rate group ( $< 15.3\%$ ). All of the independent variables are in the logarithm form same with Table2 do not report here. The county cluster standard error are reported. "\*", "\*\*", "\*\*\*" represent the 1%, 5% and 10% significant level respectively.

Hence, rising relative price as discussed in the previous sections is one potential transmission channel. We can probe the nature of the transmission mechanism a little further, using additional data. Thanks to the massive road investment inflow, there was first boom the non-tradable sectors, such as housing, retail, restaurant, transportation, hotel, etc., which stimulate the demand of non-skill labors and attract the capital investment on this sectors. Using data obtained in New Registered Firm data from Administration of Industry and Commerce of Sichuan Province in China from 2003 to 2013. Table 4 reports the road investment effect on the capital flow by two different sectors. Column (1) estimate the effect on the total new investment measured by total new register firm numbers, column (2) test the effect on capital flow into manufacturing sectors, and column (3) test the capital flow into service sectors. Besides that, we also do the robustness check using three measurements of road investment, road length in Panel A, road density of area in Panel B, and road density of population if Panel C. All of these results show that the road investment hinders the private capital investment flow to tradable sectors, but stimulate the investment on service sectors. These results are robustness within different periods, such as drop the quake year 2008 (see Appendix Table2). Then the non-tradable sectors demand of labor is increased, the price and wage are higher than average, so non-skill labor will move from the manufacturing firms to the service sectors<sup>ix</sup>. In short run, the manufacturing need reduce the producing line or rise wage, but the price is determined by the international market, it cannot shape quickly, so all of these firms have to reduce the production, export are restricted. However, we cannot provide the price change or wage gap evidence to further test this channels, because the local wage is the average wage only observed at the equilibrium in our data set. This is our big limitation need to investigate in the future.

Table 4. Road investment effect on the new register firm by sectors (Capital channel )

	(1)	(2)	(3)
	Log (Total new firms)	% of manu. firm	% of serv. firm
<u>Panel A: Road length</u>			
Lag(Road length)	0.075** (0.030)	-1.023* (0.571)	2.309* (1.275)
Control variables	YES	YES	YES
County fixed effect	YES	YES	YES
Year dummy	YES	YES	YES
N	1307	1307	1307
adj. R <sup>2</sup>	0.245	-0.005	0.032
<u>Panel B: robustness check</u>			
Lag(Road density of area )	0.066** (0.030)	-1.080* (0.571)	2.187* (1.275)
Control variables	YES	YES	YES
County fixed effect	YES	YES	YES
Year dummy	YES	YES	YES
N	1307	1307	1307
adj. R <sup>2</sup>	0.245	-0.007	0.030
<u>Panel C: robustness check</u>			
Lag(Road density of population )	0.075** (0.030)	-1.042* (0.571)	2.347* (1.278)
Control variables	YES	YES	YES
County fixed effect	YES	YES	YES
Year dummy	YES	YES	YES
N	1307	1307	1307
adj. R <sup>2</sup>	0.241	-0.006	0.025

Note: The control variables of Panel A, B and C are same as column (1), (2) and (3) of Table 2 respectively. The county cluster standard error are reported. "\*", "\*\*", "\*\*\*" represent the 1%, 5% and 10% significant level respectively.

Whether the employment by sectors are shaped by the road investment? We also take a future investigate, using the county-level employment by sectors data, re-regress the road effect on the share of employment in two sectors. Table 5 shows that better road density reduce the share of industrial employment significantly, but has little effect on the service sectors. But these results may not robustness because data limitation, which we only can observe the employment work at local area, and cannot capture effect on migration to other province.

Table 5. Road investment effect on the employment by sectors (Labor channel )

	(1)	(2)
	% of manu.	% of serv.
<u>Panel A: Road length</u>		
Lag(Road length)	-0.959*** (0.305)	-0.281 (0.368)
Control variables	YES	YES
County fixed effect	YES	YES
Year dummy	YES	YES
N	1307	1307
adj. R <sup>2</sup>	0.284	0.078
<u>Panel B: Robustness check</u>		
Lag(Road density of area )	-0.965*** (0.305)	-0.315 (0.368)
Control variables	YES	YES
County fixed effect	YES	YES
Year dummy	YES	YES
N	1307	1307
adj. R2	0.285	0.078
<u>Panel C: Robustness check</u>		
Lag(Road density of population )	-0.970*** (0.306)	-0.300 (0.371)
Control variables	YES	YES
County fixed effect	YES	YES
Year dummy	YES	YES
N	1307	1307
adj. R2	0.280	0.064

Note: The control variables of Panel A, B and C are same as column (1), (2) and (3) of Table 2 respectively. The county cluster standard error are reported. "\*", "\*\*", "\*\*\*" represent the 1%, 5% and 10% significant level respectively.

Because the data limitation, we cannot control the size of new register firms. And some argue that the size of manufacturing firm, or entry cost may higher than service, the new firm start-up is lower than service sector. Using number of new registered firms may have measurement error. So, we split the sample into manufacturing and service sectors and use panel data to estimate the road effect separately. It means when we control the sectors' owner characteristics and its trends, the results are robustness. Such as, in table 4 column (2), the result shows that the detrend growth rate of new private capital of manufacturing is restricted by road investment given the total new investment. And road increases the growth rate of investment on service sector. We do not compare the number of new registered firms by these two sectors directly.

## 6. Conclusion

The relation between road infrastructure investment cross-country in growth models have been unable to document robust evidence of positive effect. One prominent explanation for the absence of such effects is "Market Access" hypothesis, which argues that better road connected will reduce the transaction cost and benefit aggregate export. "Local road density" hypothesis argue that market access undermine the profitability of the different regions may has different effects. If only focus on the local area, the better road density promote the productive of manufacturing sectors by caused reduce the inventory cost. However, all of these studies ignore the different effect on service sector, which may reverse to impact on the tradable firms, and the relative price will be shaped in short term, labor and capital may flow between tradable and non-tradable sectors. If the non-tradable sectors are boomed first, then the labor and capital will flow into higher productivity sectors, hence restrict the relative lower sectors, such as manufacturing, and export are hinder.

In this paper we seek to contribute to the literature on the effectiveness of road investment by focusing on its different effect on sectors in a specific geographical area (Sichuan province, in China). Indeed, this is one of the first papers to

probe the consequences of road investment effect on between tradable and non-tradable sectors before the local wage converge to the equilibrium level. The recent development in Sichuan of China provides us with a good opportunity to gain a better understanding of the economic consequences of road investment. Hopefully the research findings will also be relevant for other less fortunate regions.

Our main question is whether the road infrastructure investment is a factor explaining export. To explore this issue, we employ a simple panel fixed effect models, and using a set of data to estimate it. All the methods unanimously support to hypothesis 1, the road has significantly negative effect on local export, i.e. higher road investment counties has less export in the short run. Specifically, we find that (i) road investment reduce the new firm entry growth rate of manufacturing sector; (ii) better road investment stimulate the more private capital flow into service sectors; (iii) employment of industrial has been restricted caused by road investment. Hence, the road investment tends to cause contraction of the manufacturing sector. More tentatively, we also document that (temporary) increases in the prices of non-tradable sectors are a potential transmission mechanism linking road to export decline. Of course it remains an urgent priority for future work to explore long-term effects also seems useful.

The purpose of this paper was not to evaluate the policy impact of road investment policy, and we do not tend to judge whether the county need to investment on road. This conclude implicit that policy maker need to consider both the short and long-term effects of the road investment. Our aim is much more modest, and is restricted to identifying whether road investment has negative effect on local export, if it consider the relative effect on the linked two sectors (Tradable and non-tradable). But caused by data limitation, we cannot provide the price change or wage gap by sectors evidence.

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<sup>i</sup> Rong and Gong (2013) argue that boom of China's housing sectors crowding out the manufacturing firm 's innovation investment.

<sup>ii</sup> See Yao (2009) and Fan et al. (2011) introduction about the Western of China's development, such as "Go Western Policy".

<sup>iii</sup> Banerjee et al. (2012), Donaldson and Hornbeck (2013) summarize the detail information of railroad effect on the export.

<sup>iv</sup> For example, see Meng (2005) introduce the migration patterns in China.

<sup>v</sup> We use lag from to avoid the reverse causality endogenous bias, which is not the best method to solve this. But our study just focus on test the stock of road investment effect on economics, we do not argue that whether a county need road investment or not.

<sup>vi</sup> The definition is consistence with Bulte et al. (2018).

<sup>vii</sup> Road density of area has little variation after the first order difference, so there has no results.

<sup>viii</sup> Median urbanization rate over 11 years is 15.3%, lowest is 4.6%, the higher is 64.9%.

<sup>ix</sup> The assumption is manufacturing firm are labor intensive in all counties.

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