



ISSN 1913-9004 (Print)
ISSN 1913-9012 (Online)

International Business Research

Vol. 12, No. 6, June 2019

Canadian Center of Science and Education®

INTERNATIONAL BUSINESS RESEARCH

An International Peer-reviewed and Open Access Journal for Business Research

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Seven Snags of Research Ethics on the Qualitative Research Voyage

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Received: October 9, 2018

Accepted: October 23, 2018

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p1

URL: <https://doi.org/10.5539/ibr.v12n6p1>

Abstract

Responsible researchers with ethically sound research skills are fundamental to success in an ever-changing business and social world. Embedding ethics into research by students seems to be intuitively easy given tight, standardized ethical guidelines and rigorous ethical approval process in the university. In reality, there are Masters and PhD research students who feel ill-prepared when they encounter ethical ambiguities and complexities in the field which are unique, beyond what they had foreseen at the outset of a qualitative inquiry or were prescribed, advised and forewarned by a research ethics committee (REC).

The aim of this conceptual paper is to discuss seven pitfalls of research ethics in a qualitative research voyage in order to educate and sensitize current and prospective research students. The seven pitfalls are: (1) complexity and ambiguity of informed consent; (2) embedding informed consent as a process rather than an event; (3) navigating the moral conundrum of unintentional disclosure; (4) dealing with deductive disclosure; (5) dialectic between participant's desire for recognition and greater confidentiality; (6) researcher role conflict and (7) difficulty of embedding researcher reflexivity. The paper concludes that only research students who are ethically literate and actively reflexive in the entire research process are more likely to know whenever they encounter ethical pitfalls, deal with them properly; and ultimately entrench relevant skills to conduct ethically sound research. Highlighted are implications for research educators to develop research competence of current and future researchers.

Keywords: research ethics, ethical dilemmas, research integrity, qualitative research, Masters and PhD research

1. Introduction

As novel and sustainable solutions are required to address problems in the world, any effort to develop responsible researchers is less successful if some Masters and PhD research students fail to master the twin imperatives of being able to conduct ethically sound research, but also ethically evaluate research done by others. Current and prospective research students are turning to the university to develop their praxis of research ethics, among other skills. A decade ago, Miller and Boulton (2007:2199) were overt that the "growing mismatch between increasingly standardized ethics procedures and the complex nature of qualitative social research" would be disabling to novice researchers. As if to prove that this assertion is valid, some students are facing difficulties in embedding ethics in their qualitative research.

The voyage of these students, as any experienced qualitative researcher is typified by many contextual, complex, and "ethically important moments" which are unpredictable, subtle and require timely decisions that have ethical ramifications (Guillemn and Gillam, 2004). To be laconic, there are ethical dilemmas or unforeseeable ambiguities in a qualitative research voyage, which are difficult to encapsulate in full on information sheets or signed consent forms administered at the outset of a research inquiry. Pollock (2012:1-6) is insightful that "formulaic procedural resolutions" are pre-determined, and therefore less responsive to emergent ethical issues (e.g. potential risk of unintentional disclosures). Instead, the practice of "micro-ethics" centred on the judgement and integrity of researchers is pronounced as well suited to entrench the ethical nature of qualitative research process rather than increasing regulation.

Kennedy (2006:143) concurs that "while the ethical guidelines for research seem clear at a glance, a closer look at the intimate nature of qualitative research" reveals that there are many ambiguities. Ellis (2007:22) who is an experienced post graduate research supervisor concur: "I haven't come close to addressing all ethical questions that arise in doing research...these questions swirl around me like sand storm in every research project I do or

supervise”. In short, ethics are an inextricable part of research, elusive, pervasive, but also complex to both students and research supervisors. It is therefore baffling to research supervisors and external examiners when postgraduate students are not able to explicitly and meaningfully report on ethical ambiguities in their qualitative research. This invokes a variety of questions: does the absence of ethical dilemmas in research reports imply that research students are simply under-reporting or oblivious of ethical pitfalls and challenges, hoping they do not matter; or failing to discuss how they dealt with genuine ethical challenges and pitfalls, if at all, they actually did? The lack of concrete answers to these critical questions fuel research educators to fathom potential reasons for poor praxis of research ethics by some Masters and PhD research students of qualitative research, its broader consequences, and possible corrective efforts. Outside the academy, organizational leaders are concerned with failure to develop research competences of employees. This has a negative impact on the mix of skills in the pipeline of leadership and management of research departments. Overall, it is worrisome to the research community as students become not just users of research, but sometimes researchers themselves expected to execute ethically sound research on various issues. Thus, there is an urgent and compelling need to fathom ethical pitfalls in research faced by students and disseminate this epistemic knowledge to all research students, research educators and any institution that educate and develop researchers.

In this vein, the purpose of this conceptual paper is to discuss seven ethical pitfalls and challenges on the qualitative research voyage, and alert current, prospective research students and novice researchers to possible ways of dealing or avoiding research pitfalls without compromising research ethics. The intention of describing the pitfall is by far not to attack those whose work exhibits them. As a point of departure, this paper discusses key paradigms of ethics as a foundation for understanding research ethics within the broad philosophy of ethics in general. Thereafter, the paper discusses specific pitfalls and challenges of research ethics, which are capable of scuppering any unwary Masters and PhD research student or novice researcher. Finally, the paper encapsulates key implications for embedding research ethics.

2. Paradigms of Ethics and Concept of Research Ethics

It is scholarly sound that any endeavour to understand the concept of research ethics is buttressed by extant schools of thought on ethics. Following a cursory review of literature on ethics, three instructive paradigms, namely consequentialism, deontology and virtue ethics are drawn from the work of Collins (2012:149-157), Crockett (2005) and (De Klerk, 2017) to enrich our understanding of ethics in general and research ethics in particular. The three paradigms of ethics are selected for discussion primarily because they espouse relevant philosophy, which inform ethical practice in research, and has been key in influencing the code of ethics used by researchers.

2.1 Consequentialism Paradigm

Profoundly, consequentialism requires us to judge our actions as right according to their consequences or achieving some good state of affairs (De Klerk, 2017:262; Schwandt, 2015:91). In this regard, consequentialism upholds the notion that ethics are exogenous to people or a person. Thus, the anticipated outcomes of action are central in judging action as right (Collins, 2012:149-151). In this way, consequentialism embraces “ends-based” theories of ethics that pronounces the importance of analysing the predicted outcome of action or decision to understand moral worth (Thorpe, 2014:261). For example, egoism theory focuses on outcomes in terms of self-interested desires and interest whilst simultaneously caring about the interest of others. Egoism theory is essentially about judging a decision and action as right if it conforms, furthers and not conflicts with one’s self-interest and well-being. Alternatively, social group relativism is a theory of ethics which judges action as right if it conforms to one’s social group’s norms. The association of oneself with ethical standards of a group and sharing of social group interests is useful in defining what is right. Collins (2012:149-151) also posit that cultural relativism is another ethical theory. In simple terms, this theory stress that action is right if it relates, and conforms to national culture and set of laws. Utilitarianism as advanced by Mill and Bentham is a more complex theory within the consequentialism paradigm. It upholds that what matters is the greatest good for the greatest number (Mondal, 2016). Criticisms of consequentialism include the lack of responsiveness to minority interests. Other critics highlight that the ethical primacy of “outcome” downplays the “means” of ethics (Thorpe, 2014:261). In consequentialism, questionable practices are acceptable as long as the consequences are not negative or hurt anyone substantively.

2.2 Deontological Paradigm

Deontological theories of ethics posit that action is right if it is something that everyone should do (Collins, 2012:149). This paradigm comprise “rule-based” theories of ethics which stresses that ethical judgments should be grounded in universal, external rules of what is right to do (De Klerk, 2017:262; Schwandt, 2015:91). The

analogous maxim of deontology is “do as you would be done by” (Crockett, 2005:193). The deontological paradigm inform researchers to ethically focus on “what *ought* I to do” and not “what do I *want* to do” (Thorpe, 2014:262). It is prudent to realize that the idea of rightness and wrongness being in the action (the means) distinguishes deontology from consequentialism, which focuses on consequences (ends) of action or decision. It is notable that consequentialism and deontology paradigms share the view that ethics are exogenous to the person or people. Scholars of ethics assert that these two paradigms have influenced the establishment of codes of ethics of research (Thorpe, 2014:262). The common criticism of the “ends-based” and rule-based paradigms of ethics is that they are not comprehensive and exhaustive enough to universally account and guide action in all research situations.

2.3 Virtue Ethics Paradigm

Virtue ethics paradigm cast a very different light from consequentialism and deontology. Notably, virtue ethics provides a lens which advocates that the internal, ingrained, subjective values and traits (e.g. honesty, fairness, respect to others, prudence etc.) within or inherent in an individual drive ethical decision-making (Collins, 2012:149; Thorpe, 2014:262). Arguably, virtues or excellence are manifested in practical judgments, and turned into habits which are used frequently and ultimately become part of one’s moral character. Virtue ethics relates to not only voluntary aspirations, but also living beyond the minimum requirement (Crockett, 2005:202). The challenge is that the plethora of virtues is very extensive. Guided by virtue ethics paradigm, researchers rely on their own internalized or inherent value system to determine the best course of action. Virtue ethicists contend that action is right if it strengthens or cultivates moral character (Collins, 2012:149). It is instructive to note that the analogous maxim is “it’s not whether you win or lose its how and why you play that matters” (Crockett, 2005:193). In this way, virtue ethics paradigm dismisses the logic of objective rules and exogenous perspectives of ethical universalism. This paper underscores that ethics is not about prescriptions, norms, and ideals external to society but rather part of the social, cultural, and political milieu. As such, qualitative researchers needs to be “guided by good ethical motives and practice”, and that each research encounter is unique (Miller and Boulton, 2007:2204). Research ethics is primarily about applying the fundamental theories of ethics to research process, with consideration of what is good for self as well as others (Coghlan and Brannick, 2001). Kennedy (2006:143) cautions research students that the rigorous approval process by REC simply creates “a structure, like the framing in a house. They do not provide the answers to every ethical dilemma that could emerge in the research process”. In other words, ethics review is “a short-hand reminder” to Masters and PhD research students of more complex and context-specific dilemmas of ethics that are yet to come up, and require their attention (Miller and Boulton, 2007:2199). So, what valuable advice need to be given to prospective Masters and PhD research students and any novice researchers to help them to be critical, comprehensive, and creative, but also ultimately entrench research ethics?

3. Ethical Pitfalls, Cautions and Potential Solutions

In what follows, the paper focuses on seven ethical pitfalls faced by some research students and their potential solutions. The researcher identified these ethical pitfalls from a review of literature selected because of being relevant to any of the four domains of research ethics, namely procedural, situational, relational, and exiting ethics as suggested by Tracy (2010). The domains proposed by Tracy (2010) were useful, as they seem to cover most aspects of research ethics. The pitfalls identified from literature reflect some of the recurrent, unique, critical, or complex issues, which may facilitate or jeopardise the practice of ethics in a qualitative research.

3.1 Complexity and Ambiguity of Informed Consent

Firstly, there is ethical complexity compounded by an ever-increasing scope and variety of interrelated material details that researchers need to provide participants if they are to make an “adequately”, informed and voluntary consent (Ellis, 2007). For example, a researcher needs to provide research participants with relevant details such as the purpose and scope of the study, details of his or her organisational affiliation, data collection techniques and procedures but also why it is interesting/important enough for the participant’s to participate in the study. Clarity on what is involved and sort of questions to be asked (e.g. any sensitive or embarrassing question) are pivotal. In addition, the researcher is also required to inform participants of any foreseeable risks, if any. Clarity on the selection of participants but also on the use of results of the study are key for consent to be informed. Furthermore, the variety of information to participants from the researcher includes method of anonymization of data, time given time to participants to consider their participation and also ask any questions (Sanjari, Bahramnezhad, Fomani, Shoghi & Cheraghi, 2014; Saunders, Kitzinger & Kitzinger, 2014; Schwandt, 2015).

With this spectrum in mind, the challenge is on how comprehensive a qualitative researcher should be in terms of information that is provided to embrace the diversity of salient content for informed consent to be ethical

(Schwandt, 2015:91-92). While a researcher cannot fully provide information of what they do not know will occur in future, it is equally impossible for participants to fully consent to what is not yet known, and presented to them.

Arguably, a set of three criterion is necessary to make informed consent valid (Miller and Boulton, 2007). Thus, valid, informed consent should be characterized by (1) provision of full and relevant information to inform decision to participate, (2) voluntary participation and (3) competence of participants to make such a decision. Ambiguity arises when consent that is granted is premised on provision of current information which happens to be incomplete; presupposed by insufficient understanding of the nature and purpose of a research, but also inadequate knowledge of how a particular qualitative research will proceed because of uncertainties. As long as neither the research student nor the participant is uncertain or not able to anticipate at the outset all the emergent aspects or how the qualitative study will unfold, one wonders if participants fully know what they are practically consenting to.

As qualitative research is tolerant to unanticipated changes, many codes of research ethics lack definitive or exhaustive guidance on the scope and variety of details to be given to research participants in order to get their informed consent (Martin & Marker, 2007). Ellis (2007:23) advises that the ethics radar of novice researchers needs to be aligned to the notion that “even when they do get consent from those in their study, they should be prepared for new complexities along the way”. This is a very powerful caution to any unwary research student and novice researcher.

3.2 Embedding Informed Consent as a Process Rather than an Event

Consent in qualitative research may take the form of “general consent at the beginning” of the study or as an on-going and relational concept (Ellis, 2007:23). Indeed, some research students depict informed consent as a discrete “one-off” act, which is harmonious with the static, audit and accountability model (Vanclay, Baines & Taylor, 2013). Arguably, the conception of consent as a “once for all event” trivialize the value of consent especially in a research process which is less predictable and emergent. The critical question is how Masters or PhD research students ensure that participants have also consented to issues that arose after signing the consent form at the beginning of a study. To put it simply, research students face the ethical challenge of how voluntary informed consent procedures are adequately nuanced and sensitive to ethically important situations which unfold in a qualitative inquiry at different times (Miller & Boulton, 2007:2206). As a potential solution, Masters and PhD research students need to be ethically literate and creative to view consent as “re-negotiation and decision-making which involves participants” as the research process unfolds (Ellis, 2007:23). Certain stages at which informed consent is organized and negotiated with gatekeepers and participants are decipherable in a research (Miller & Boulton, 2007). While students identify some of these, they rarely document clearly the process of invitation (e.g. phone, face-to-face, written communication), the response from the participants, the questions asked and answers given, the negotiation of dates and times of interviews, and so on to reflect the “process” of what really happened. In the parlance of Guillemin and Gillam (2004), this is not just about procedural ethics (formal approvals for a study to commence) but rather process ethics (ethics in the course of practice). This is consonant with informed consent as a process and portrayal of on-going interaction to make sure that informed consent is valid (Miller & Boulton, 2007). On-going interactions between a researcher and participant is vital to ensure informed consent is validated by continued participation of participants in a study (Reid, Brown, Smith, Cope & Jamieson, 2018:70-74)

Some external examiners observe that research students pursue a narrow view of informed consent mostly limited to a specific stage at the start of the research relationship (Miller & Boulton, 2007). As post-data collection consent is also necessary, research students at every level and novice researchers have the moral imperative to initially alert participants that confidentiality might be discussed before, during and even after data collection. In this regard, Kaiser (2009) proposes a standardized post-interview confidentiality and consent form signed by every participant at the end of data collection, primarily to extend conversation beyond the initial consent form. One of the demerits of post-data collection consent is when key participants re-consider that their data already collected and analysed should no longer be part of the study (Thorpe, 2014). This raises ethical dilemma in terms of options such as continuing the study without data that is withdrawn or discontinuing the study. In particular, Kaiser (2009:1637) cautions researchers of potential obstacles such as the “lack of standardized process for obtaining additional consent”. Without proper guidance, additional consent is unlikely to be obtained to ensure informed consent that is valid throughout the entire research process. It is advisable that research students go beyond the simplistic notion of an overly prescriptive informed consent at a particular stage that expire when data collection ends. The conception of informed consent as a process beyond data collection has a variety of implications. These may include cost of re-contacting participants but also perception of

unnecessary harassment or further intrusion. Research supervisors need to prepare research students to practice informed consent as a “process” which demands creativity. Informed consent is not a one off event scheduled before commencing the research voyage.

3.3 Navigating the Moral Conundrum of Unintentional Disclosure

Fundamental to the relationship between a researcher and participant in a research context is the promise of confidentiality, anonymity and trust (Robertson, 2014). Often, unintended disclosure occur where there is trust and rapport built by a research student with participants in pursuit of participant’s freedom of expression, anonymity, openness and truth. In such relationship, research participants face the potential risk of unintentional disclosure or revelation of details about their organization, others but also themselves (e.g. commercial secrets, people’s private information, evidence of illegal activities or potentially embarrassing details) which may create discomfort or reputational damage if known by others (e.g. public or authorities). To be succinct, this represents a dialectical opposition for a researcher between “expression and protection” (Ellis, 2007:21). The ethical pitfall is that some Masters and PhD research students are rarely explicit not only when they encounter such dialectical opposition, but also how they deal with it.

Unintentional disclosure with potential to damage an individual participant or participating organisation presents ethical dilemmas for a researcher at three levels. Firstly, there is the level of a participating organization; especially that access is often premised on assured confidentiality, anonymity, and absence of harm (e.g. confidentiality agreements with company). Unintentional disclosure with potentially damaging information creates problems not only when one is studying another organization but also his or her own organization, management or colleagues (Reid *et al.*, 2018:72-74). Secondly, unintentional disclosures also present ethical dilemmas at the individual participant level where signed informed consent, promise of anonymity and confidentiality plus rapport by the researcher gives participants a sense of protection such that they open up and speak freely with a researcher as a confidant (Ellis, 2007:23). Thirdly, the researcher faces the dilemma of whether to express unintentional disclosures as reality or protect an organisation and research participants. For example, a research student may face a variety of potential risks (e.g. witch-hunting and sour work relations with colleagues as participants) if damaging, unintentional disclosures about colleagues are reported as findings of a research even if they are anonymized.

This moral conundrum invokes the question of whether Masters and PhD research students simply use unintentional disclosure just like any data revealed to them voluntarily by participants or not. Another interesting question is whether these research students pursue expression or protection in reporting potentially damaging unintentional disclosures in a study. At the backdrop of all this is an ethical obligation of research students towards research participants such that some of them report the use of member check to seek consent on what aspects of unintentional disclosures may be used or not without compromising the findings. However, member check or respondent validation is often used by research students as an epistemological tool to ensure research quality (e.g. used to solicit feedback on researcher’s findings, unearth nature of disagreement and their reasons such as error of interpretation, fear of financial or reputational damage if findings are publicized) and seek further clarity (Schwandt, 2015:195-196). While member check is also a potentially strong ethical tool to uphold the truth, some Masters and PhD research students are not clear on how they use it to deal with instances when a participating organization disagree with all or some findings not because they are not true, but other reasons. Research educators need to train students on how member check is also an ethical act to uphold nothing but the reality or truth in the face of irreconcilable disagreements between a researcher and participants or a participating organization. It is vital that the way Masters and PhD research students deal with unintentional disclosure should enhance rather than compromise accurate portrayal of reality.

In extreme circumstances where unintentional disclosure reveal evidence of illegal activity, novice researchers are advised that they have an obligation to breach participant confidentiality and anonymity. This has connotations of betrayal of participants by a researcher who initially made assurances of full and not partial confidentiality (Pollock, 2012:2-5). On the other hand, it would also be unethical not to disclose illegality. In instances of moral conundrum, a researcher has to rely on his philosophical understanding of ethics to make best judgement possible, informed by knowledge of a particular context and debates relating to each case (Pollock, 2012).

3.4 Disguise or Destroy: Dealing with Deductive Disclosure

Deductive disclosure is also another ethical challenge that research students grapple with on their research voyage. This occurs when traits (e.g. age, gender, number of years of experience etc.) of individuals or groups are identifiable in a research by self or others even if real names are not used (Ellis, 2007; Saunders *et al.*, 2014).

Christians (2007) highlighted that watertight confidentiality has proved to be impossible in some instances while the reader sometimes recognize pseudonym and disguised locations.

In this regard, anonymity works as far as local people have no objection and cannot be bothered by what is written or there is little scrutiny from outsiders (Walford, 2005:86). Inevitably, some scholars deride that anonymity is more of a strategy to gain access as “pseudonyms act to protect people and organization when there is little to protect them from” (Walford, 2005:88).

Anonymity in practice cannot be totally “blanket” (e.g. use of pseudonyms or replacing identifiers to disguise every identifying detail) (Schwandt, 2015; Walford, 2005). As there are multiple clues to a person’s identity (e.g. process of elimination may be used to identify others etc.), it is always not easy for a researcher to predict which data will lead to identification and require anonymization. While greater level of anonymization seems desirable to avoid deductive disclosure, it also poses the risk of making data less useful because of de-contextualization and “decoupling of events from history and geographically specific location (Nespor, 2000:549). Some research students encounter the ethical ambiguity of how much disguising of details in data actually enhances confidentiality or destroys the meaning of data. In this regard, Masters and PhD research students and novice researchers need to be mindful that anonymity is essentially a “balancing act of compromising some integrity of data to make the most of anonymity and at other times risk anonymity to enhance integrity of data” (Saunders *et al.*, 2014:12). This epitomizes the ethical conflict between conveying rich, accurate, and contextualized details of reality on one hand, and de-contextualization to avoid deductive disclosure on the other. Kaiser (2009:1635) lament that literature and some codes of ethics do not offer specific and practical guidance to novice researchers on how to deal with this ethical tension. This matter deserves urgent attention of research educators if they are to develop students with capacity to conduct ethically sound research.

3.5 Dialectic Between Participant’s Desire for Recognition and Greater Confidentiality

The researcher-centred approach to select aspects of a person’s story to modify in order to make the research participant unrecognizable to others when the report is published has ethical challenges (Wiles Crow, Heath & Charles, 2008:422). Disguising of research participant’s voice and identifying details to comply with confidentiality is sound; but it may also conflict with participant’s desire for greater recognition in their story especially when it is a positive one (Wiles *et al.*, 2008:422). Concisely, there are dialectical opposites of “participant’s desire or right for greater recognition” on one hand, and “anonymity by default” on the other (Wiles *et al.*, 2008:422). How this is dealt with is critical. More importantly, any research student need to be ethically sensitivity to ensure that his or her role in “disguising” data does not impede participant’s desire for recognition.

Renegotiation of participants’ desire for anonymity or full recognition needs to be open throughout the research voyage, even if there is anonymity agreed at the start of the study (Parry & Mauthner, 2004). This echoes the value of informed consent as an ongoing process of negotiation of the terms of agreement as the study progresses to ensure that the participant’s greater desire for recognition is not compromised. This means re-contacting participants and getting additional or re-envisioned, informed consent based on details and a wider range of confidentiality options e.g. recognition of participants (Kaiser, 2009:1637). In the foreground of considering full recognition of participants, it is imperative that the researcher clearly advises the participant of how their full recognition as research participants relates to the ethical obligation of a researcher to avoid or minimize harm to participants because of participation in a study.

3.6 Researcher Role Conflict

A research student may have a variety of formal and informal roles in a research context, which may have impact on a variety of issues on research ethics (Reid *et al.*, 2018:69-75). For example, some MBA research students may specifically introduce themselves as researchers of their own organizations. In such relationship, participant may see the research students in two ways, as a manager and a researcher. Commonly, participants have problems to detach the manager from the research students. Thus, a hierarchical relationship prevails which predates the research and is durable beyond the research period (Sultana, 2007).

These multiple identities, power, and relational dynamics in a study affect the freedom of participants to be more open in the interviews (e.g. sensitive on what to divulge or censure). The researcher may see the need for intervention or provision of managerial advice when work-related problems are raised during interviews with a junior employee (Reid *et al.*, 2018:69-74). Except in action research where there are specific participatory guidelines to avoid this, the paradox is that every intervention reinforces the power dynamics, role of manager, rather than that of a researcher (Reid *et al.*, 2018:71-74). Alternatively, there is a risk that every failure to intervene may potentially decrease the participant’s perception of the manager as a responsible and powerful

advocate on their behalf. This posits an ethical conundrum to some research students in terms of how to deal with role conflict in a research. The ethical pitfall is manifested when a research student fail to report and reflect on when any of his or her role in a research context affected the qualitative research voyage (Strauss & Corbin, 1990:186-188).

Furthermore, some research students have friends in their respective organizations who may sometimes be part of research participants (Taylor, 2011:3-12). In this regard, a less hierarchical and multi-faceted relationship prevails. The role of a researcher who is also a friend may shape the researcher's work, degree of bias, and his or her positioning in the field (Ellis, 2007:4). For example, the researcher may face the difficulty of distinguishing data gathered in conversations with the same person as a friend from what is collected in a designated research-participant context (Ellis, 2007). Furthermore, research participants who are friends of a research student may have expectations of a "friendly", "insider", and more sympathetic researcher (e.g., who has contextual knowledge that pre-dates the research) (Taylor, 2011:3-12). Profoundly, "the problem is not about being friends with participants, but rather acting as a friend and not yet living to the obligation of friendship" (Ellis,2007:13). While sociology, anthropology, and medicine have grappled with the ethical quandary of insider friendships and intimacy between participant and researcher, there is little discussion and guidelines on how to deal with these expectations particularly within management research to inform research students and novice researchers. If the researcher is an insider, it is very possible that the narrative of the student as a researcher and the researched may be entwined (Taylor, 2011:9). This raises ethical pressure or potential for bias, misrepresentation and misinterpretation by a researcher to portray not only the self but also his or her own organization in favourable light (Sanjari *et al.*, 2014). As some Masters and PhD research students also conduct research in contexts other than their workplaces, they also assume other roles such a (a) stranger, (b) visitor, and (c) initiator (Sanjari *et al.*,2014; Reid *et al.*, 2018). Overall, the role that a research student adopt in a research context intersect with research relationships and consequently affect the research process in ways that need clarity in the dissertation. As a potential way of addressing researcher role conflict, research students need to engage in a process of self-regulation and active reflection regarding each of the roles that they may have in a research context and explicitly report on how these affected them and others in the research process (Strauss & Corbin, 1990:186-188).

3.7 Difficulty of Embedding Researcher Reflexivity

Phelan and Kinsella (2013:88) are explicit that "discussing reflexivity in relation to ethics and research is easy... enacting reflexivity in our everyday research practice is far more challenging". Sultana (2007:376) asserts that reflexivity in research is about active "reflection on self, process, and representation, and critically examining power relations and politics in the research process, researcher accountability in data collection and interpretation". On the other hand, reflection is different as it means 'thinking about', and sometimes connotes introspection of an isolated mind in an attempt to address researcher prejudice (Finlay, 2002). While reflection is less interactive, reflexivity at the other end is a more active, intersubjective process, which has learning aspects. This paper upholds the view of reflexivity suggested by Robson (2002: 22). Thus, reflexivity is...an awareness of the ways in which the researcher as an individual with a particular social identity and background has an impact on the research process. It is also noteworthy that reflexivity is characterized as a "methodical process of on-going questioning of the doing of research and also learning about self as a researcher, research participants, others, and the research context which illuminates meanings about personal, theoretical, ethical, and epistemological aspects of the research process" (Kanyangale & Pearse ,2012). According to Tracy(2010:837-851), ethics is not only about procedural ethics, but also situational ethics(which require reflexivity to deal with unanticipated ethical questions due to the specific nature of the research context), ethical relationships (e.g. managing multiple identities of the researcher and dynamic researcher-participant relationships) and ethical ethics of anonymity and confidentiality in disseminating findings.

In research reports, it is advisable that Masters and PhD research students are explicitly reflexive on their own values, professional background, positionality, or subjectivity (Reid *et al.*, 2018). In many instances, there is limited evidence in research reports of some research students that adequately reflect on (1) what they have learnt about themselves as individuals and professionals, (2) what they have learnt about the content, (3) but also what they have learnt about the research process itself (Robson, 2002). In short, there is lack of evidence manifesting sensitivity to the ways in which the researcher (e.g. role of his or her prior assumptions, biases) and the research process have shaped the collected data (Ellis, 2007; Sultana, 2007). It is important that researcher plainly indicate their prior assumptions at the outset of any research report to enhance credibility (Strauss & Corbin, 1990:186-188).

In general, the recognition that literature lacks prescription on specific types of ethical responses to research

situations that emerge in the complex and social context of qualitative research compounds the struggle to embed reflexivity in research (Phelan & Kinsella, 2013:88). Subsequently, Masters and PhD research students are cautioned to reflect-in-action and also reflect-on-action as ethical guidelines fail to offer any explicit guide on how to be reflexive in order to embed situational ethics (Guillemin & Gillam, 2004; Kanyangale & Pearse, 2012). The prescriptive, analytical, and regulatory procedures of ethics cannot help a researcher to anticipate and reinforce exhaustively researcher reflexivity (Guillemin & Gillam, 2004; Tracy, 2010). As such, researchers need to combine ideals of research ethics with reflexivity (Reid *et al.*, 2018). This is a valuable contribution to the scholarship of how research students endeavour to practice ethics that permeates research, and ultimately demystify the difficulty of ethical research practice by students. After all this, one may ask: what are the implications of these ethical pitfalls and challenges on the development of research skills by research educators?

4. Implications for Research Praxis and Education

There are three notable research implications for research educators, Masters and PhD research students, and novice researchers. Firstly, the paper has highlighted that effort to embed ethics in research by students should go beyond rigorous procedures and regulation, exemplified by the gate-keeping exercise by REC. Theories on ethics and researcher reflexivity are vital. Thorpe (2014:262) agrees that “rigid adherence to any ethical code, whether deontological or consequentialist, would seriously restrict the scope for action” when an ethically important moment arises in a research process. In this respect, it is prudent that research educators re-visit the content that is taught in the module of research methods to research students to include paradigms of ethics in general (e.g. consequentialism, deontology, and virtue ethics). This is vital to ensure deep understanding of philosophical thinking behind research ethics in a qualitative research so that any Masters and PhD research student and novice researcher can meaningfully practice ethics in any unforeseen, complex, and social aspects of qualitative research process. Without robust philosophy on research ethics, two issues are evident. First, the technicalities of doing research ethics or getting ethical clearance approval will remain inadequate to prepare Masters and PhD research students to deal with novel aspects of research ethics. Second, these research students may have problems to notice when they have actually fallen into ethical pitfalls during a research process, and subsequently how to deal with them. Passive learning, but also inadequate experiential learning evident in traditional teaching methods such as lecturing are not very helpful for post-graduate research students to acquire practical skills to deal with some of the ethical pitfalls when encountered in a qualitative study. While the cognitive understanding of the philosophy of ethics and research ethics by students through classroom interactions between research teacher and student is pivotal, there is also need for carefully designed variety of interactive, hands-on and active learning experiences in which students engage with real research participants as part of research methodology as a practice. There is need for students to develop in all the four domains of ethics as highlighted by Tracy (2010), namely, procedural ethics, process ethics, situational ethics, and ethical relationships in research.

Secondly, it is imperative for researchers to undertake empirical studies of student’s challenges in embedding research ethics in qualitative research. These studies may privilege the viewpoint of new graduates or those who examine the research outputs of postgraduate students to offer potential solutions to ethical pitfalls.

Lastly, the praxis of research ethics in a qualitative research needs an interplay of the trinity involving: (1) robust ethical review and regulatory process by REC, (2) researcher’s firm grasp of theories of ethics and research ethics, and (3) ethical researcher reflexivity. An over- emphasis on one aspects of this trinity at the expense of the others may jeopardise overall research ethics. As this trinity is proposed as core to the praxis of research ethics, there is need for research educators and practitioners to delve into how the interplay of theory, REC review and approval of research ethics applications, and researcher reflexivity comes together to make research ethics a reality in a study. Research educators have absolutely no option but centralize better understanding of the philosophy or theories on ethics as a primary foundation if more Masters and PhD research students are to demonstrate mastery in the praxis of research ethics in qualitative research.

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Impact of the U.S. “Indo-Pacific Strategy” and “Pivot to Asia” and China’s “Belt and Road Initiative” on Sino-US Political and Economic Relations

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Received: April 9, 2019

Accepted: April 30, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p11

URL: <https://doi.org/10.5539/ibr.v12n6p11>

Abstract

In response to China's rapid rise and its claim of broadening its "core interests", the U.S. launched the "Indo-Pacific Strategy" and "Pivot to Asia". Meanwhile, in order to avoid conflicts with the U.S. caused by advancing eastwards, China continues its steps of expanding westwards by proposing the cross-border and inter-continental "Belt and Road Initiative". To carry on this initiative smoothly and maintain economic stability and development, China has also proposed the new model of major power relations. This paper aims to explore the development and influence of political and economic relations between the two countries by analyzing the policies pursued by the U.S. and China.

Keywords: Indo-Pacific Strategy, Pivot to Asia, Belt and Road Initiative, The New Model of Major Power Relations

1. Introduction

The success of China's reform and opening-up has contributed to China's substantial economic growth and its overall national strength, and thus the rapid rise of China in the Asia-Pacific region has threatened the U.S. that starts to feel insecure. In response to this change, the U.S. government has proposed the "Indo-Pacific Strategy" and "Pivot to Asia" (Wang and Wu, 2016). Meanwhile, in order to avoid direct conflicts with the U.S., China continues its steps of expanding westwards by proposing the "Belt and Road Initiative" and the new model of major power relations, in the hope of coexisting and flourishing with the U.S. through its "peaceful rise". However, how the U.S. perceives and reacts is of great importance to the formation of the new model of major power relations and the smooth development of the "Belt and Road Initiative". This study discusses the major policies respectively pursued by China and the U.S. and analyzes their impact on the Sino-US political and economic relations.

2. Literature Review

Yang (2005) pointed out that the Theory of China Threat (Sheng, 1999; Broomfield, 2003) attributes the zero-sum game between China and Japan to their historical conflicts. In response to the peaceful rise of China, the U.S. should strengthen its alliance with Japan to curb the rise of China and retain the ability of the U.S. to maintain the balance of power in the Asia-Pacific region. The U.S. recently has proposed the concept of "Indo Pacific" that redefines the U.S. strategic outlook on Asia. That is, the U.S. intends to collaborate with Japan, India and Australia to safeguard the open trade model in the Indo-Pacific region. The continuation of "Pivot to Asia", the "Indo-Pacific Strategy" emphasizes the commercial interests of fair trade under the "America First" policy. As a result, ASEAN countries are required to reduce their trade surplus with the U.S. and pile up their investment and procurement in the U.S. Therefore, the "Indo-Pacific Strategy" is deemed as a countermeasure to China's "Belt and Road Initiative". Since 2010, government officials of the U.S., Japan, India and Australia have repeatedly referred to the concept of "Indo-Pacific", which is coined by Japan as the "integration of two oceans". The concept of "Indo-Pacific" has gradually been closely combined with the word "strategy", thereby resulting in the term of "Indo-Pacific Strategy" (Chen and Wei, 2015; Wang and Wu, 2016).

China's policy towards the U.S. has invariably been influenced by the U.S. policy toward China, and the Chinese response consequently is passive. Considering the dual objectives of national development and security, China still has to coexist with the U.S. pragmatically (Ge, 2001). Shao (2007) considered China's current westward development is more feasible, especially given that Central Asia is such an important hinterland as to catalyze the "Belt and Road Initiative". Most of the Central Asian countries are developing ones in desperate need of development where the U.S. exerts weak influence. Given the abundance of resources and energy in this area, Central Asia is the best target for China to resort to diplomatic means for its rising influence in neighboring countries. Bmariansi (2013) indicated that the Central Asian countries along the Silk Road Economic Belt of the Belt and Road Initiative, especially those with abundant hydrocarbon reserves and mineral deposits, have already become major destinations of the Chinese investment. The geographical proximity of these countries to China and their reliable land energy supply contribute to easing China's dependence on oil that is transported on maritime route. China also aims to stabilize Central Asia by promoting its economic development, including the stability of Xinjiang (China) that shares a long border with the Central Asian region that used to be reigned by the Soviet Union. Meanwhile, the "new model of major power relations" proposed for the first time by Xi Jinping in his visit to the U.S. in 2012 clarified the direction of the sustainable development of Sino-US relations. Hu Jintao, ex Chinese President, formally proposed in 2012 the concept of a new model of major power relation between China and the U.S. In November 2012, the report of the 18th National Congress of the Communist Party of China (CPC) clearly pointed out that China would improve and develop its diplomatic relations with other countries and broaden the fields of cooperation to address differences and promote a new model of major power relations featuring long stability and sound development. Since then the "new model of major power relations" has been important to China's diplomatic strategy (Wang, 2016).

3. Research and Analysis

3.1 *China's Rise (Theory of China Threat) and the U.S. Response ("Indo-Pacific Strategy" and "Pivot to Asia")*

The "reform and opening-up" initiated by the end of the 1970s prompted the rapid growth of the Chinese economy. In 2010, China's GDP surpassed Japan by USD 6 trillion becoming the second largest economy in the world, with significant growth of its overall national strength. In 1992, US Admiral Derwelt Lassen first proposed the "Theory of China Threat", which has rapidly emerged in the international community (Chu and Chang, 2010). The current "Theory of China Threat" has emerged since the end of the Cold War when the threat to the U.S. imposed by the Soviet Union, its major rival, vanished and China rises to become the major "potential rival" (Kwo et al., 2006). Despite the remarkable rivalry between China and the U.S. in international politics, the huge distance between two countries on both ends of Pacific almost eliminates the possible border disputes or military conflicts, especially when China is striving for economic boom and does not hope to see economic stagnation or slowdown. Given that social stability is crucial to a country's development, China naturally wants a stable environment to develop its economy (Men, 2016). In 1989, a political unrest broke out in China, resulting in the US-led sanctions on China since June. In response to such sanction, China has developed a foreign strategy of "peaceful rise" (Kwo et al., 2006; Zhao and Wang, 2014). In recent years, the influence of the U.S. on Asia has gradually weakened. The return of Hong Kong and Macao to China has boosted the national confidence of the Chinese people, while strengthening the recognition of the "Theory of China Threat" by more countries. At the same time, the U.S. has also realized the necessity of "pivot to Asia".

Xi Jinping delivered a speech in Kazakhstan in 2013 when he proposed building the "Silk Road Economic Belt" jointly. In the same year, Xi Jinping in Indonesia further proposed building the "21st Century Maritime Silk Road". The "Belt and Road Initiative" marks China's counterattack to the U.S. "Pivot to Asia" and has been proactively launched. On May 14, 2017, the "Belt and Road Forum for International Cooperation" was held in Beijing attended by 1,500 major political figures from more than 130 countries, including 29 foreign heads of state. During the forum Xi Jinping announced that China would add an investment of RMB 100 billion in the Silk Road Fund founded in December 2014 with USD 40 billion, making the fund close to RMB 400 billion (Tsao, 2018). According to Tsao (2018), there are three explanations for the Belt and Road Initiative in American academic circles: (1) The Belt and Road Initiative is China's response to the U.S. strategy of "Asia-Pacific rebalancing", aiming to shatter the "siege" imposed by the U.S. and contain the rise of India; (2) The economic significance of the "Belt and Road Initiative" is stressed. China has long intended to reduce the economic imbalance between the inland and coastal regions, seek an escape route for the large-scale overcapacity of the manufacturing industry, and consolidate its position as the global center of supply and manufacturing; (3) The Belt and Road Initiative is considered the natural development of China's desire to

replace the U.S. as the global hegemony. The U.S. academia's response to the Belt and Road Initiative can be roughly divided into two categories. One is the scholars who hold the traditional thinking of containing China's development and emphasize the consolidation of alliance to stop China from challenging the U.S.; the other is scholars who are relatively optimistic and advocate that the U.S. should join the "Belt and Road Initiative" on the premise of adhering to its own standard, thereby preventing China's impact and challenges on the international system.

This study holds that China intends to challenge the political hegemony of the U.S., expand cross-continental economic cooperation and development, and break through the multi-tier military siege imposed by the U.S. Proceeding from the data of the U.S. Brookings Institution and scholars of the Council on Foreign Relations, Sung (2017) believed that American scholars conceive the Belt and Road Initiative from three main aspects: intention, influence and prospect. (1) Intention: The conception on the intention of the Belt and Road Initiative by the U.S. Brookings Institution and the Council on Foreign Relations demonstrates three main tendencies: economic intention, intention of economic and strategic consideration, and strategic intention; (2) Influence: The Belt and Road Initiative can promote regional economic integration, threaten the dominance of the U.S. in the world, especially in Asia, challenge the geopolitical landscape, and impact the long-term US-led international financial system; (3) Prospect: Regional security, investment risks, and alleged doubts of some neighboring countries. Extending from the west shore of Atlantic Ocean to the east shore of Pacific Ocean, the U.S. boasts such a perfect geographical position that it can interact with Asian countries to its west and with European countries to its east. By contrast, China on the west shore of Pacific Ocean is blocked by the island chain formed by the U.S. and its allies to the east. However, countries to the west of China are relatively friendly from the third world. China's development of the western regions has lasted for a long time, but it is confined with its territory. The "Belt and Road Initiative" extends China's development of the western territory westwards to Central Asia, Europe and Africa. Against this backdrop the U.S. feels the threat to its status as the global hegemony and will naturally react. However, its location in the Americas deprives the U.S. of geopolitical advantages and makes the situation beyond its reach. Nevertheless, the Asian allies of the U.S. around China have become the best base for the U.S. to march forward. In the Cold War, the U.S. allied with countries of the free world to block the communist camp represented by China and the Soviet Union. In the 1990s, the collapse of the Soviet Union and the liberation of Eastern Europe marked the end of the Cold War, but the subsequent rise of China turns the target of blockade to China. The U.S. even extended the blockade from East Asia and Southeast Asia to India in South Asia. The designation of the "Indo-Pacific Strategy" mentioned by Chen and Wei (2015) in literature review can be regarded as an action of the U.S. to expand its "blockade" policy. This action can also be attributed to be one of the good reasons for China's "Belt and Road Initiative".

Yang (2012) pointed out that the U.S. policy toward India has been changed and featured "attraction" since the 21st century, the real purpose of which is to stabilize India so that India supports the U.S. anti-terrorism war on terrorism morally and India and Pakistan coexist peacefully without exerting a negative impact on the anti-terrorism war waged by the U.S. and Pakistan. Hillary Diane Rodham Clinton, ex-Secretary of State, made it clear at the ASEAN Regional Forum in 2009 that the U.S. would strengthen its relations with Southeast Asian countries, re-assume and reinforce its responsibilities and leadership in the Asia-Pacific region, as a political announcement for the return of the U.S. to the Asia-Pacific region. Hsia (2015) agreed that the "Indo-Pacific Strategy" launched by the Obama Administration since 2010 aims to: (1) expand the strategy of "Asia-Pacific rebalancing" to the Indian Ocean region to link the Pacific Ocean with the Indian Ocean; (2) to expand the U.S. "axis" Asia-Pacific security system to the Indian Ocean region to create a crescent-shaped huge network of alliances and partners; (3) to contain the rise of China and India within the framework of the US-led international mechanism and rules by implementing a two-pronged policy of cooperation and restriction. According to the 2015 National Security Strategy of the U.S. of America, the strategy of "Asia-Pacific rebalancing" pursued by the U.S. coincided strategically with India's "eastwards" strategy, indicating that the U.S. attempted to take advantage of India for its strategy of "Asia-Pacific rebalancing". From the strategies of "Pivot to Asia" and "Asia-Pacific rebalancing" to the "Indo-Pacific Strategy", the U.S. effort to contain China has been intensified constantly. According to Tsao (2018), the U.S. responds to "Belt and Road Initiative" with the traditional "siege". In addition, Sung's (2017) argument shows that the U.S. is alert and hostile to the regardless of intention, impact or prospect. This east-to-west development route diverts into two ways: one reaches Europe through Central Asia, and the other is a maritime route reaching Eastern Africa through Southeast Asia, with relay stations on each route. The relay stations along the route of the "Belt and Road Initiative" influence each other, and such influence also exerts an impact on the "Belt and Road Initiative".

3.2 Five Central Asian Countries of the "Belt and Road Initiative"

According to Li (2014), recent years have seen the attempt of a couple of major powers to work with Central Asian countries to build a Silk Road economy dominated by major powers. For example, in 2011, the U.S. proposed to bypass China and Russia to establish a "New Silk Road Plan" extending from the Greater Middle East and Greater Central Asia via Afghanistan to Pakistan to India. Aiming at integrating the two geographical sections of Central Asia and South Asia, this plan intended to grab the national interests in Asia following the withdrawal of international army from Afghanistan in 2014. Since the day when the five Central Asian countries gained independence, Japan has put forward the "Silk Road Diplomacy" and subsequently the "Silk Road Energy Plan".

Since 2004, Japan has adjusted and speeded up the planning on this issue for multiple times, proposing the "Silk Road Central Asia Strategy" of "Central Asia + Japan" that aimed at gaining a share in the energy competition and cooperating with the U.S. to contain the influence of Russia and China in Central Asia. Russian President Vladimir Putin proposed the "Steel-based Silk Road Plan" during his visit to South Korea in 2013, with railway transportation as the basis of large-scale Eurasian trade. All these are signs of the fact that many powers are targeting on Central Asia, but among these Silk Road initiatives China's "Belt and Road Initiative" has been the only one put into practice. In addition, the importance of Central Asia to the "Belt and Road Initiative" can be seen from the studies of the following scholars. Chang and Yuan (2016) pointed out that under the guidance of the concept of cooperative security, China's geopolitical strategy in Central Asia mainly includes: the security strategy of cooperating with Central Asian countries in combating "three forces" (terrorism, separatism and extremism) to safeguard border stability; the geopolitical strategy of maintaining a balanced political landscape of great powers in this region; and the energy strategy of ensuring the stability of Central Asian countries for their sustainable supply of oil and gas. Among these strategies, the consideration of border security and geopolitical balance proceeds from the geopolitical strategic positions of China and Central Asia, while the energy strategy is intimately related to the resource endowment of Central Asia and China's energy demand. Hu et al. (2014) proposed that the "Silk Road Economic Belt" with its east starting point in China will extend westwards to have three sections of different functions: (1) the Central Asian Economic Zone (population of 65 million); (2) the Pan-Central Asian Economic Zone (population of 1.96 billion); (3) the Eurasian Economic Zone (population of 2.74 billion including that of Pan-Central Asia). Tsai (2013) argued that China's growing influence on Central Asia also allows it to further reflect on its real interests in this region; specifically, such interests can be viewed from four perspectives: national security, geopolitics, energy strategy and economic interests.

According to Tang (2000), the development of the Northwest of China will be extremely slow if it relies solely on the gradual westward movement of economic forces in the coastal areas, and the gap between the Northwest of China and the coastal areas will be further widened, which is not conducive to the political and social stability of the Northwest. The economic integration of Central Asia and its vast market will be another power house for the economic development of the Northwest of China, contributing to the political and social stability of this region. Sung (2015) mentioned that the "Silk Road Economic Belt" complements with the "Western Development Strategy" and the synergy contributes to the economic development and social stability of China's border areas, and also facilitates the implementation of the foreign strategy of benefiting and securing neighbors. Apart from the tremendous economic significance, the initiative has brought about social progress and cultural exchanges among neighboring countries through economic development, playing an important role in ensuring regional security. Sung believes that the strategies of "Pivot to Asia" and "Asia-Pacific rebalancing" implemented by the U.S. in recent years have largely compressed the strategic space of China and changed the surrounding areas of China tremendously. As many new problems and situations emerge, China has been forced to upgrade its "Western Development Strategy". Qi (2015) suggested that the diplomatic influence of the "Belt and Road Initiative" on areas involved is as follows: (1) injecting new vitality into neighboring diplomacy conceptually and practically; (2) effectively integrating the dual neighboring diplomatic ideas of "advancing westwards positively" and "making maritime breakthrough"; (3) coordinating China's border development with the neighboring diplomacy. During the Soviet Union period, the Beijing government's direct interaction with Central Asian countries was scarce as the official channel for interaction was virtually under the full control of the Central Soviet Union government. After the disintegration of the Soviet Union, Beijing quickly established relations with newly independent countries, but the initial focus of China was mainly on demarcation and security support for the policy implementation in Xinjiang. China began to pay attention to the economic opportunities in the region in the mid-1990s. Since the 2000s, China has been an enthusiastic participant in the major infrastructure projects linking Xinjiang with Central Asia, such as road and pipeline construction. After

the 911 incident in 2001, however, Central Asian countries supported the "anti-terrorism war" waged by the U.S. In return, the U.S. has provided a considerable package of economic projects or trade opportunities for this region. Since the beginning of the 21st century, the Shanghai Cooperation Organization has remained an important forum on issues of trade and security, but the competition between Russia and China, two major member states of the organization, has curtailed its impact. As time goes by, the situation becomes clearer: China's constantly growing economic advantage translates into significant and sometimes even decisive political influence. Chang (2009) argued that the abundant resources and energy of Central Asian countries, such as Kazakhstan, Uzbekistan, and Turkmenistan, are in sharp contrast to China's relatively severe energy situation. China needs to import enough oil and gas to meet the sustainable economic development in the future, while the economic development of Central Asian countries requires the export of a large amount of oil and gas, which serve as the basis for the complementary energy cooperation between China and its neighboring countries in Central Asia. In summary of what these scholars argued, Tsai's (2013) argument combines that of Chang and Yuan's (2016) and Hu et al. (2014), both of whom believed that Central Asia has a great positive effect on China's political and economic development. Tang (2000) focused on the development of the Central Asian market. Sung (2015) and Qi (2015) suggested that the "Belt and Road Initiative" will be conducive to China's neighboring diplomacy and strategic development. Chang (2009) indicated that China's economic growth will inevitably lead to rising oil demand, which is crucial to the Chinese economy that is underpinned by a colossal amount of energy. Compared with the U.S., China owns the following advantages in Central Asia countries: (1) Opportune timing - The anti-terrorism effort of the U.S. at home deprives it of the attention to Central Asia; China's successful "reform and opening-up" and the consequent rapid economic growth require the transfer of excessive productivity to overseas areas; (2) Geographical convenience - China limits with Central Asia and the China Railway Express that travels across Kazakhstan will tighten the economic and commercial exchanges between the two regions, while Central Asia is beyond the reach of the U.S.; (3) Good historical relations - the U.S. and Central Asia rarely communicate and only maintain relations, while the Shanghai Cooperation Organization (SCO) provides a platform for the proper communication of China and five Central Asian countries.

The literature review indicates that the five central Asian countries that both the U.S. and China are competing for show preference to China, which boasts fast economic growth, close geographical location and good relations. Moreover, the fast-growing Chinese economy needs the energy supply of the five Central Asian countries, while the five demand for the direct investment of China, creating a win-win landscape. Nevertheless, despite the inferior timing, geographical location and bilateral relations, the U.S. still will ally with countries in the region to contain China, as it always does. Yang (2012) pointed out that since the 21st century, the U.S. has promoted the strategic layout of South and Central Asia through the following means: (1) launching a "color revolution" in Central Asia to bring the pro-American government to power; (2) controlling the core areas of South and Central Asia through wars in Iraq and Afghanistan; (3) actively attracting India and Pakistan to serve for its strategy in Central and South Asia. Therefore, China, despite its multiple advantages, still needs to be on guard against the U.S. allies in Asia that attempt to contain China. China had been blocked by the U.S. on the western shore of Pacific since the Cold War. Although the relationship between the two sides has greatly improved since the late 1970s when two countries established diplomatic relations, the U.S., out of the global strategic consideration, still adheres to the island chain strategy implemented in the Cold War to block China on the east coast of Asia. In response, China bypasses the maritime route and turns to land route moving westwards. This is why the Belt and Road Initiative has its starting "point" in the west and extends as a "line" towards Central Asia and then to the European Continent where an area comes into being. Since there is no port on the entire route from the west of China westwards to Central Asia and the European coastal areas, inland exports must rely on trains with large cargo loads. Thanks to the prevalent flat terrain in Central Asia and the existing railways that link it with Europe, land transportation marks the primary choice for the region. According to Mo et al. (2015), China has opened the China Railway Express that travel across three major corridors: the western corridor extends beyond China from the central and western regions via Alashankou (or Holgos), the central corridor extends beyond China from North China via Erenhot, and the eastern corridor (including the northeast) extends beyond China through the southeastern coastal areas via Manzhouli (Suifen River). By the end of 2014, there had been 21 routes of China Railway Express in operation, including 13 in normal operation and 8 in trial operation that cover 13 cities and 5 border ports in China. From its first opening in 2011 to the end of June 2016, the "China Railway Express" had travelled for totally 1,881 times, starting from 16 Chinese cities and arriving at 12 foreign cities. The 39 routes in operation have generated import and export of USD 17 billion in total.

Although Chou (2018) pointed out that there are four major obstacles to the "China Railway Express": (1)

dependence on government subsidies; (2) high operating costs; (3) low operating efficiency; (4) insufficient understanding and trust of countries along the route on the "China Railway Express". According to Lu et al. (2018), although the cost of maritime transport is far lower than that of rail transport, the time cost of the former is higher. It takes roughly 30 to 45 days from a Chinese coastal port to a European one, while it takes only 15 days for the China Railway Express to arrive in the destination. In addition, on the basis of quantitative analysis along with geopolitical and geoeconomic theories, Eurasia is partitioned comprehensively. The results show that: (1) In terms of transportation cost, maritime transportation holds an obvious upper hand, but the respective advantages of maritime and land transport vary from one region to another; (2) Taking time cost into account, the competition pattern of maritime and land transport basically shows a balance of 1:1; (3) Against the backdrop of the "Belt and Road Initiative", the integration of the Central European and Russian regions (a combination of inland and land-sea composite areas) is the hub for the integration of the Eurasian Continent. Given that all regions involved in the initiative are land-sea composite areas, this conclusion is expected to provide a scientific basis for China's in-depth cooperation with the European Union in the Belt and Road Initiative. As a result, China can claim that the "Belt and Road Initiative" is no longer a slogan but a fact in progress. Chou (2018) pointed out that the fourth obstacle to the "Belt and Road Initiative" is the insufficient understanding and trust of countries along the route on the "China Railway Express". Most Central Asian countries are developing countries with abundant resources and energy that are in urgent need of construction, a sign of their underdeveloped trade and logistics that leads to their poor understanding on the "China Railway Express". The logistics of five landlocked Central Asian countries relies on land transportation, and the transportation cost of railway is relatively low for export. Given that the five Central Asian countries are along route of the "Belt and Road Initiative", the "China Railway Express" can give full play to the role of these five in smooth flow of goods. As Yang (2012) stated, although the U.S. remains active in Central Asia, the five countries of this region are expected to opt for the economic "Belt and Road Initiative" rather than the political "Pivot to Asia".

3.3 Ten ASEAN Countries along the "Road"

Compared with the five Central Asian countries along the "belt", China and the ten ASEAN countries along the "road" have more frequent economic exchange and trade, so the "road" is expected to be implemented more smoothly than the "belt". However, the political factors differ the reality from the expectation. According to Womack (2017), Southeast Asian countries founded the Association of Southeast Asian Nations (ASEAN) in 1967 when China vigorously supported the revolutionary organizations in Myanmar, Thailand and Cambodia as well as the northern Vietnam in opposition to the U.S. agent in Southeast Asia. The invasion of Vietnam into Cambodia in 1979 created a common enemy for China and ASEAN. As a result, China reduced its support for revolutionary organizations in Southeast Asia and allied with ASEAN and the U.S. against Vietnam. At the same time, China's "reform and opening-up" policy began to develop common economic interests between China and its neighbors. Since trade started almost out of nothing, it took China a long time to become a major economic partner of Southeast Asian countries, but China's rapid development and its cooperative attitude raised close attention in the region. ASEAN Regional Forum (ARF) was founded in 1994; ASEAN began its "10+3" meeting with China, Korea and Japan in 1997. China shares borders with most of the ten ASEAN countries. The economic exchange and trade between the two sides should be frequent and their business activities can also complement each other, but as is mentioned above, the economic relations between the two sides were virtually a vacuum and on the verge of tension before the "reform and opening up". After the reform and opening-up, the easing political stalemate and the consolidation of trade and economic exchange have relieved the tension between the two sides, especially considering the important role of this region in the "Belt and Road Initiative". Sun (2015) suggested that the China-ASEAN cooperation should be the cornerstone of the "New Maritime Silk Road". Firstly, China should endeavor to build the "China-ASEAN Community of Shared Future" to stabilize the "diplomatic courtyard" of China. The "New Maritime Silk Road" relies on the member states of ASEAN and China and ASEAN are expected to sustain the global economic growth. Secondly, this initiative helps deepen China's geoeconomic interests. The integration of China and ASEAN can radiate into South Asia, Middle East and East Africa, and reproduce the glory of the traditional Chinese-led Maritime Silk Road. Thirdly, it should resonate with the "Silk Road Economic Belt" across Eurasia, and strengthen China's geopolitical interests. Finally, the initiative should diversify the cultural and personnel exchanges between China and foreign countries.

Although the relationship between China and ASEAN countries has gradually improved and trade has been intensified after the "reform and opening up" and the end of the Cold War, the U.S. still holds a strong political and economic grip on the region. Today, amid the collision between the "Pivot to Asia" and the "Belt and Road

Initiative", the political and economic influence exerted by China and that of the U.S. on ten ASEAN countries can be compared as follows: (1) Opportune timing – The withdrawal of the U.S. from the Trans-Pacific Partnership (TPP) has largely weakened the U.S. influence on the countries of the region, while China's successful "reform and opening-up" has boosted the rapid economic growth rapidly, and the bilateral economic exchange and trade are expected to expand. Added with the great promotion of the "Belt and Road Initiative" by China, this marks an opportune timing for both sides seeking mutual economic benefits; (2) Geographical convenience: The U.S. is far away from the ten ASEAN countries while China is close to them, granting China geographical convenience; (3) Good relations: Despite the huge distance between the U.S. and Southeast Asia, most of the ten ASEAN countries belong to the US-led democratic camp. Since World War II the U.S. has maintained long-term relations with ASEAN countries, some of which are allies of the U.S., and other non-allied countries of the organization are not hostile to the U.S.; the exchange between China and ASEAN countries are long and frequent, added with the advantage of overseas Chinese people. China has signed the Regional Comprehensive Economic Partnership (RCEP) with the ten ASEAN countries along the "road"; the China-ASEAN Free Trade Area (CAFTA) or ASEAN 10+1 composed of China and ten ASEAN countries has been fully launched since January 1, 2010.

Although China boasts the above advantages, Lin (2016) suggested that China's aggressive territorial claims in the South China Sea in 1992 triggered regional tensions and became one of the hot spots of conflict in the Asia-Pacific region. In the same year, China approved of the Act of Territorial Sea and Contiguous Zone on the Nansha and Xisha Islands, and ASEAN immediately issued the ASEAN Declaration on the South China Sea. ASEAN took the initiative to found the ASEAN Regional Forum (ARF), a countermeasure of ASEAN against China's sovereign claim over the South China Sea. This is the sign of the preoccupation of Southeast Asian countries on a rising China, but as Ku (2018) pointed out, the China-ASEAN economic relation is constrained by the current international climate of great change, great development and great adjustment: (1) The economic globalization, political multipolarization and constant IT development create pluralistic competition and cooperation, gaming and win-win relationship; (2) The 2008 financial crisis curbed the global economic growth by the Western developed countries, while the countries of emerging market represented by China "rise in group" and become an increasingly important force in global economy. (3) As globalization enters a new stage, "anti-globalization movements", extreme conservatism inside countries and trade protectionism sprawl all over the world, imposing challenges on the reform of international governance system. This study holds that the three changes of the international climate mentioned by Ku (2018) emphasize that the current world features: (1) cooperation in replace of competition; (2) emerging markets over advanced markets; (3) formation of anti-globalization. As the world is facing such a huge transformation, Southeast Asian countries that should act in line with the U.S. political stance still prioritize their economic needs over political ones. Therefore, the Belt and Road Initiative that boosts the economic benefits of all countries is bound to put the ten ASEAN countries in the predicament of leaning to China or the U.S., or whether economy outweighs politics. As long as China reduces political factors and focuses on economic incentives, the ten politically pro-American ASEAN countries at least will not reject the "Belt and Road Initiative", enabling the Initiative to be implemented smoothly and create a win-win scenario.

3.4 "Belt and Road Initiative" and "New Model of Major Power Relations"

Despite the obviously active countermeasures of the U.S., China continues to promote the "Belt and Road Initiative" in a low profile because China is keenly aware of the impact of international relations on its economic development. According to Wang (2009), China's 60-year relations with major powers can be divided into the following stages. The first stage was the alliance in the early 1950s when China allied with major powers such as the Soviet Union. The second stage featured the confrontation and competition marked by China's open "exposure, condemnation and criticism against the Soviet Union" in 1965, resulting in the open confrontation of both countries. The third stage featured the informal alliance. After the bloody conflict between China and the Soviet Union in 1969, China deemed the Soviet Union as the greatest threat and formed an "anti-Soviet" alliance with the U.S. The fourth stage was characterized by the non-aligned independence. At this stage, China continued to develop friendly relations with the third world without allying with any major power or small countries around it. China was the leader of itself. The fifth stage featured the multiple portfolio of partnership and China's integration into the international system. Since 1994, China has established various forms of partnership with many major powers. After breaking the shackles of the West-led sanctions in the international community, China began to introspect and construct its own international status, identity and image, shifting to the concept of "being a responsible major power". The sixth stage marks China's proactive action to build harmonious and cooperative relations among major powers. China has begun to rise to the

occasion where the world, especially other major powers, requires that it take on more international responsibilities.

Wang (2016) pointed out that after Xi Jinping came to power, there have been two approaches for the new concept of security. One is to inherit the approach for the new concept of security taken by Jiang Zemin and Hu Jintao, and the other is to adhere to the "overall concept of national security concept" proposed in the First National Security Conference from April 15 to 28, 2014. Wang (2016) noticed the shift of China's international strategy in practice as follows: from war and revolution to peace and development; Change from the low-profile domestic economy to the proactive foreign strategic activities aiming to making a difference; from self-centered to bilateral and multilateral development; from alliance to non-alignment and to partnership; from traditional concept of national security to the new concept of security and then to the expansion of overall concept of security; from ideology to national interests; from self-reliance to proactive integration to the international system; from national and regional perspectives to the height of global development. China's strategic development has evolved as mentioned by Wang (2009) and Wang (2016) because the failure of "Great Leap Forward" and "Three-Line Construction" since the founding of the People's Republic of China made China realize that the relations with the U.S. and the Soviet Union, along with the policy itself, held the key to success. This prompted Chinese leaders to understand that the international political environment greatly influenced the domestic economic development. The key to the success of the subsequent "reform and opening up" is not only the reform of the socialist economy and the implementation of the free market economy, but also the improvement of the international political environment such as the establishment of Sino-US diplomatic relations. The "new model of major power relations" aims to create a sound international political environment for the smooth implementation of the "Belt and Road Initiative", which is mainly out of economic consideration, but the rise of China has become major concern of the U.S., resulting in the "Pivot to Asia" strategy. This initiative has made the U.S. feel that its global hegemony is challenged so severely that it works with its Asian allies to block China at the cost of resorting to the Cold War mentality. To avoid direct conflict with the U.S., Xi Jinping proposed "building a new model of Sino-US major power relations" in his visit the U.S. in February 2012, which drew great attention in the globe. This model might be what Xi conceived for the development of Sino-US relations when he came to power. On March 11, 2013, Thomas Donilon, then assistant of the U.S. national security affairs, mentioned "building a new model of Sino-US major power relations" in his speech of explaining the U.S. policy toward Asia-Pacific region to the Asian Association. Wang (2016) put forward three negative effects of the U.S. strategy of "Asia-Pacific rebalancing": (1) undermining the strategic mutual trust between China and the U.S.; (2) the U.S. negative response to the Chinese initiative of "new model of Sino-US major power relations" initiative; (3) deteriorating the security environment of the Asia-Pacific region: China is not only deeply concerned about the U.S. diplomatic and military strategies, but also involved with increasing conflicts with other countries in the South China. Hu (2018) also pointed out that in addition to overcoming the pressure from the U.S., China's building a new model of major power relations still needs the support of a majority of countries in the region to tackle the challenges of other external factors. However, the U.S. effort to contain China's rise remains the decisive factor for China's successful new model of major power relations with the U.S.

In order to fully develop the economy, China has repeatedly adopted the strategy of non-confrontation and non-conflict in a low profile, from Deng Xiaoping's "keeping a low profile" to the "new model of major power relations", demonstrating China's sincere hope for "peaceful development" with being involved in conflicts with the U.S. The "new model of major power relations" can be regarded as China's attempt to prevent the "Sino-US confrontation" from escalating. In particular, after the "Belt and Road Initiative" was launched, China hopes that its policy will not be hindered by the constraints of the U.S. However, the "Belt and Road Initiative" shows that China's ambition is not confined to Asia, but as far as to Europe, Asia and Africa, which preoccupied the U.S. The upgrading of the strategy of "rebalancing" to the "Indo-Pacific Strategy" is a clear sign of the broader and stronger constraints by the U.S. on the "Belt and Road Initiative". In addition, the "new model of Sino-US major power relations" will also be decisive to the success of the "Belt and Road Initiative".

4. Results and Discussion

Since the 21st century, the growing "rise of China" has enhanced the determination of the U.S. to strengthen its influence on Asia through the "Pivot to Asia", which has been materialized by strengthening the political relations with its Asian allies to contain China and adopting the subsequent "Indo-Pacific Strategy". In contrast, the "Belt and Road Initiative" proposed by China, despite the existence of political intention, is a concept of international cooperation mainly out of economic consideration. From the economic and geographical perspectives, the western region is undoubtedly the end point of China's regional construction and development.

However, from the perspective of "Belt and Road Initiative", the remote western region on the border of China is in the center of East, West, Central and South Asia. Therefore, the western region of China that used to be considered the end point of investment and development will be the starting point of the "Belt and Road Initiative". China intends to extend its political and economic territory through the "Belt and Road Initiative" that goes across three continents, Europe, Asia and Africa. It can promote domestic and foreign investment economically and strengthen its relations with the third world countries politically. Logistically it can make use of the Eurasian railways on land and maritime routes through India and Southeast Asia to Europe. However, the success of the China Railway Express has been confined to the space between Asia and Europe, the success of "point" and "line" that is far from the success of "area". The five Central Asian countries can be regarded as the preliminary success of "area" on the belt and the operation of RCEP as the success of "area" on the road. The belt extends westwards from the west inland of China and Central Asia is an important relay station to Europe, while Southeast Asia is part of the "21st Century Maritime Silk Road" on the "Belt and Road Initiative" heading to Europe. Therefore, the support of ten ASEAN countries can be set as a target in the short run. With the "Belt and Road Initiative" initiative, the five Central Asian countries on the "belt" can exert a huge impact on China's economic development due to their energy endowment, and are expected to play their roles in the future market. The ten ASEAN countries on the "road" can be expected to expand their existing market scale. Wang (2018) pointed out that "Belt and Road Initiative" strategy provides strategic guidance for Chinese enterprises to develop the African markets, although some economic risk, social risk, policy risk, and investment risk in Africa, there also is advantage of a national strategy to support the opportunities and resources endowment. In order to further response to the "The Belt and Road" strategy, based on the systematic assessment of the African market risk, enterprises in China actively implement the "going out" strategy of developing African market, from the perspectives of enhancement of risk prevention and control, promotion of cross cultural management ability, Joint foreign investment among enterprises looking for suitable partners, prudent exploration of risks and so on. China has advantages over the U.S. in the opportune timing, geographical convenience and good relations of both the "belt" and the "road", but the attitude of countries involved towards the Initiative and the U.S. influence on these countries remain as a major obstacle to the smooth implementation of the "Belt and Road Initiative".

The above-mentioned attitude of major powers gears towards the "Belt and Road Initiative" decisive for its smooth development. Although the U.S. is on the other end of Pacific Ocean, its attitude exerts the hugest influence on the "Belt and Road Initiative". After the setbacks of "Great Leap Forward" and "Three-Line Construction" and the success of "Reform and Opening-up", China has come to be keenly aware of the key role played by the good international relations, especially the Sino-US relations, in its economic stability and development. Therefore, even if the U.S. persists in working with its Asian allies to curb the "Belt and Road Initiative" at the cost of repeating the Cold War, China's constant emphasis on "peaceful rise" and the "new model of Sino-US major power relations" demonstrates its effort to create the best environment for dispelling the hostility between the two countries and maintaining the sustainable development of China's economy. As discussed in the analysis, it is the U.S. that plays a decisive role in how to avoid the negative impacts of "Indo-Pacific Strategy", "Pivot to Asia" and "Belt and Road Initiative" and seek positive benefits from these strategies.

Acknowledgement

This research is supported by the National Chin-Yi University of Technology, Taiwan, R.O.C. (under Project: NCUT 19-R-MB-025)

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Budget Policies During and After the Oil Crisis of 2014: Comparative Analysis of Saudi Arabia, UAE, and Kuwait

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Received: April 10, 2019

Accepted: May 5, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p23

URL: <https://doi.org/10.5539/ibr.v12n6p23>

Abstract

This paper explored how some Gulf Cooperation Council (GCC) countries employed budget policies to manage their budget deficits in the fiscal years between 2014 and 2018. Empirically, this study attempted to summarize and critically analyze several approaches of economic strategies that countries utilized such as sovereign wealth fund, revenue-increasing policies, and expenditure-reducing policies in response to budget deficits during and after the oil crisis of 2014. Secondary data were gathered from the ministry of finance reports as well as various official documents covering three different GCC countries, which are Saudi Arabia, UAE and Kuwait. The findings of this study showed distinct patterns in a three-country approach to manage their budget deficits. Saudi Arabia and UAE implemented a comparatively more balanced approach between increasing revenues and reducing expenditure. On the other hand, Kuwait focused on reducing their budget expenditures and adopted policies that promoted across the board cuts and is relatively relying more on oil revenues to balance the budget.

Keywords: public policy, public budget, budget policy, budget deficit, budget-balancing policy

1. Introduction

This study explored how three different country-members of the Gulf Cooperation Council (GCC), which are Saudi Arabia, United Arab Emirates (UAE), and Kuwait, responded to their budget deficits during and after the oil crisis of 2014. In particular, the study contributed to the literature by conducting a comparison of the various budget-balancing strategies that these countries have utilized to address their budget challenges. A budget deficit is generally defined as “the fiscal condition in which state government revenues are short in providing for the cost of its promised services” (Shi, 2016, p 27). Contrary to previous economic recessions, the current oil crisis impacted countries’ budget revenues to a greater extent. Beginning from Fiscal Year (FY) 2014 and through FY 2015 and FY 2016, the economic conditions in almost all GCC countries became significantly difficult (Altman & Haass, 2010; Bouri, 2015; El-Katiri, 2016; Sultan & Haque, 2018).

This study helped in understanding the influence of public policy on the budget. In 2014, public budget for the three GCC countries shrunk to historical standards. These countries were obligated to find alternative revenue resources to make up for the lost in budget. There were three main budget-balancing strategies that these countries considered to close the gap in the budget, which are withdrawing from the sovereign wealth fund, implementing revenue-increasing policies, and/or adopting expenditure-reducing policies (Shi, 2016; Presley & Westaway, 2017; Sultan & Haque, 2018). However, the question remains whether there are different patterns in budget-balancing strategies between countries; and how the different policies could have influenced the budget (Alkhateeb, Sultan, & Mahmood, 2017; Fattouh, Poudineh, & Sen, 2015).

The secondary data collected from the ministries of finance reports showed that the three GCC countries have utilized different types of budget-balancing strategies to manage their budget shortfall (IMF, 2019; Presley & Westaway, 2017). For GCC governments, budget deficits were more likely to be significantly reduced when a balanced approach is considered. However, the use of expenditure-reducing policies such as across the budget cuts or employee benefits cuts were less likely to improve the budget (Maghyereh, Awartani, & Tziogkidis, 2017; Haque & Khan, 2019).

2. Literature Review

When a budget shortfall occurs, broad arrays of strategies and policies are considered to fight budget deficits

(Ndjokou, 2013). An examination of these strategies within the context of the oil crisis of 2014 provides pivotal information for the reader and the literature. There are three main types of budget-balancing strategies that the literature offers, which are the utilization of sovereign wealth fund, revenue-increasing strategies and expenditure-reducing strategies (Truman, 2009; Shi, 2016; Maghyereh, Awartani, & Tziogkidis, 2017; Alkhateeb, Sultan, & Mahmood, 2017; Sultan & Haque, 2018). Below, a discussion of each category is provided.

First, the sovereign wealth fund is a country's savings or financial reserves, often named "budget stabilization fund" or "rainy days fund." In times of strong economy, countries put budget-surplus in a fund for use in times of unanticipated budget shortfalls (Shi, 2016). The fund is also known to be a low-risk investment that governments consider in order to continue providing civil and other services to their citizens without having to increase tax that might exacerbate an economic downturn (Shi, 2016; Truman, 2009). However, the mere existence of sovereign wealth fund does not guarantee the avoidance of hardship during severe budget shortfall. In fact, during the 2014 economic recessions almost all GCC countries implemented other strategies to balance their public budget (Maghyereh, Awartani, & Tziogkidis, 2017; Sultan & Haque, 2018).

Second, revenue-increasing strategies aim to grow the economy by implementing policies that enhance budget revenues without severely affecting public spending or creating market hostility (Ndjokou, 2013; Garcia & Hénin, 1999). Implementing revenue-increasing strategies during economic recessions can be extremely challenging. In economic recessions, government revenues decrease significantly and markets become particularly sensitive to government policies that aim to close the gap in the budget, especially if these revenue-increasing policies come in the form of rising major tax sources such as the value added tax (VAT) or implementing new taxes and fees (Ivanova, Romanova, Kostoglodova, & Romanov, 2017; Maghyereh, Awartani, & Sweidan, 2017).

Third, expenditure-reducing strategies are commonly known as a mid-year budget cuts that governments employ during economic recessions in order to avoid severe budget deficits (Shi, 2016; Garcia & Hénin, 1999). In fact, governments are forced to utilize such strategies in order to cope with the heavy pressures from severe declines in revenue collections and increasing expenditure demands (Raudla, Douglas, Savi, & Randma-Liiv, 2017). Forms of expenditure-reducing strategies include employee benefits cut, subsidies cut, and across the board budget cuts (Shi, 2016; Alkhateeb, Sultan, & Mahmood, 2017).

3. Methods

This is a comparative study that utilizes secondary data in order to analyze the budget balancing strategies implemented by three GCC countries. Comparative analysis is a method that researchers use in order to explain a subject matter that cannot be studied without comparing on the bases of logical reasoning (Ragin, 1987). The data are adopted from the financial reports produced by the ministries of finance in the three GCC countries, which are: Saudi Arabia, UAE, and Kuwait from 2014-2018 to analyze the budget balancing strategies that these countries adopted to cope with the oil crisis of 2014. Some of these reports were unpublished; however, they are supplemented to the author via office visits.

4. Results

Results showed that the oil crisis of 2014 had significantly increased budget deficits for all three GCC countries indicating the huge reliance on oil revenues as the single major source for budget revenue. Table 1 showed how Saudi Arabia was able to significantly reduce their annual budget deficit to about 4% to GDP. However, Kuwait experienced relatively high budget deficit during the FY 2016 and FY 2017 in which oil prices were at their lowest rates. On the other hand, the UAE maintained their budget deficit within similar ranges during the intense period of the oil crisis (FY 2016 and FY 2017).

Table 1. The Dollar Amount and Percentage of Budget Deficits for Saudi Arabia, UAE and Kuwait for Fiscal Years 2014-2018

Country	FY 2014*		FY 2015*		FY 2016*		FY 2017*		FY 2018**	
	\$	%	\$	%	\$	%	\$	%	\$	%
Saudi Arabia	-103	16	-83	13	-63	9	-36	5	-35	4
UAE	-62	15	-66	18	-72	20	-75	20	-80	18
Kuwait	-24	14	-19	16	-32	29	-26	21	-20	13

Source: The World Bank*, MOF of Saudi Arabia, UAE, and Kuwait**

Note: Dollars in Billions of US Dollars. % Of budget deficits is measured by the total amount of budget deficits as a percentage of general fund expenditure.

GCC countries rely heavily on oil production for their budget revenues. Table 2 showed how oil crisis of 2014

had drastically decrease GDP for Saudi Arabia, UAE, and Kuwait for the FY 2015 and FY 2016. However, the UAE was relatively more able to significantly increase their budget revenues and overcome their budget shortfall. On the other hand, in FY 2018, Saudi Arabia was only 1% short from exceeding their GDP in FY 2014. As for Kuwait, the GDP shrunk significantly and is 12% away from meeting their GDP in FY 2014. One of the main reasons for such results is that UAE and Saudi Arabia has implemented more revenue expansion strategies such as value added tax (VAT) and new fees and taxes, whereas Kuwait focused more on budget cuts and relied comparatively more on oil production for budget revenues.

Table 2. The GDP (\$) and Annual Growth (%) for Saudi Arabia, UAE and Kuwait for Fiscal Years 2014-2018

Country	FY 2014*		FY 2015*		FY 2016*		FY 2017*		FY 2018	
	\$	%	\$	%	\$	%	\$	%	\$	%
Saudi Arabia	756	3.7	654	4.1	644	1.7	686	-0.9	745	2.3
UAE	403	4.4	358	5.1	357	3	383	.8	432	2
Kuwait	162	0.5	114	0.6	110	3.5	120	-2.9	144	1.7

Source: The World Bank*, MOF of Saudi Arabia, UAE, and Kuwait**

In table 3, the inflation rates between the three GCC countries are compared. Inflation, often expressed as a percentage, indicates the purchasing power of a nation's currency (Haque & Khan, 2019; Fattouh, Poudineh, & Sen, 2015). In 2016, Saudi Arabia implemented an employee benefits cuts in order reduce budget expenditure. However, this action may have contributed to the deflation that the country experienced as public purchasing power decreased. The UAE maintained relatively a normal range of inflation rates. However, Kuwait experienced a lower inflation rate in 2018, which could indicate that budget cuts might have slightly affected public purchasing power.

Table 3. The Inflation Rate (%) for Saudi Arabia, UAE and Kuwait for Fiscal Years 2014-2018

Country	FY 2014*	FY 2015*	FY 2016*	FY 2017*	FY 2018**
	%	%	%	%	%
Saudi Arabia	2.2	1.2	2.1	-0.8	2.6
UAE	2.3	4.1	1.6	2.0	3.5
Kuwait	2.9	3.3	3.2	2.2	0.8

Source: The World Bank*, MOF of Saudi Arabia, UAE, and Kuwait**

Table 4 showed the budget balancing strategies that GCC countries adopted during and after the oil crisis of 2014. Distinctions in using budget balancing tools are clear among the three countries, which contributed to their variation in budget outcomes during and after the crisis. In particular, countries that implemented revenue-increasing policies were more likely to successfully close the gap in the budget. For example, Saudi Arabia and UAE introduced the VAT in January 2018. According to reports from Saudi Ministry of Finance, the new taxes introduced in 2018 had generated annual revenue of more than 26.6 billion dollars (Saudi Ministry of Finance, 2019). Also, the UAE was able to receive 6.7 billion dollars in revenues (UAE Ministry of Finance, 2019). On the other hand, Kuwait did not introduce VAT to date (Kuwait Ministry of Finance, 2019).

Table 4. Various Budget Balancing Strategies Adopted by Countries

Year	VAT			New Fees and Taxes			Oil Subsidy Cuts			Budget Cuts			Sovereign Wealth Fund			Employee benefit cuts		
	SA	UAE	KW	SA	UAE	KW	SA	UAE	KW	SA	UAE	KW	SA	UAE	KW	SA	UAE	KW
2014								X										
2015								X		X	X	X	X	X	X			
2016				X	X			X		X	X	X	X	X	X	X		
2017				X	X		X	X			X	X						
2018	X	X		X	X	X	X	X					X					

5. Discussions

This study was designed to compare the budget-balancing strategies that three GCC countries had utilized during and after the oil crisis of 2014. Using comparative analysis enabled the study to examine the policies implemented by each country and assess the impact on the economy. In this section, a discussion of each country's budget-balancing strategies and the policies implemented are provided.

Among these three countries, UAE was more successful than Saudi Arabia and Kuwait in closing the gap in the budget. The review of UAE's budget-balancing strategies during and after the economic recession of 2014

suggests that the country applied a balanced-approach that placed equal importance into revenue-increasing measures and expenditure cutting strategies in order to cope with the most severe budget shortfalls in FY 2015 and FY 2016. In the following fiscal years, UAE focused more on revenue generating policies to improve revenue collections and cover budget deficits. Using such strategies, the UAE was able to keep its revenue growth stable over time and significantly increase its budget in FY 2018 (Fouejieu, Rodriguez, & Shahid, 2018; Garcia & Hénin, 1999; UAE Ministry of Finance, 2019).

Saudi Arabia reduced most of its budget shortfalls that it encountered in 2014. An examination of Saudi Arabia budget-balancing strategies indicates that withdrawing from sovereign wealth funds or introducing expenditure-reducing policies, such as employee benefits cuts were most frequently adopted as the oil crisis lingered (Sultan & Haque, 2018). However, these strategies did not improve the economy. In fact, they might have contributed to the deflation that the Saudi Arabian economy experienced in FY 2017. Nevertheless, Saudi Arabia's utilization of revenue-increasing policies such as the introduction of VAT was one of the most successful budget-balancing tools that was implemented (Garcia & Hénin, 1999; Saudi Ministry of Finance, 2019). The country's economy had generated double the projected revenues for the FY 2018.

Kuwait mostly applied cuts across the budget to reduce public spending, and relied heavily on oil revenues cover budget shortfalls. Kuwait implemented few strategies that are related to revenue enhancement. Unlike UAE and Saudi Arabia, Kuwait did not introduce VAT nor decrease subsidies for gas and oil. Kuwait would continue to face the most fiscal problems in balancing revenues with expenditures once oil prices drops. Also, unlike UAE and Saudi Arabia, Kuwait is 12% short of their 2014 budget revenue (Alkhateeb et al., 2017; El-Katiri, 2016; Fattouh et al., 2015; Kuwait Ministry of Finance, 2019).

6. Conclusion

In this study, an investigation was conducted to assess the impact of budget shortfalls in three GCC countries with a specific focus on their economic tools selections of budget-balancing strategies in response to the oil crisis in 2014. Based on previous literature and study of the three countries, this paper categorized budget balancing strategies into several types utilizing secondary data from MoFs and IMF reports (Belmont, 2016; IMF, 2017). For example, the mere existence of sovereign wealth fund did not guarantee the avoidance of hardship during severe budget shortfall (Garcia & Hénin, 1999; Maghyereh, Awartani, & Tziogkidis, 2017). In fact, all three countries had to consider other strategies to cope with the oil crisis of 2014. However, the implementation of revenue-increasing and expenditure-reducing policies varies across countries.

This study underpinned the fact that policies implemented by governments have a huge impact on the economy (Alkhateeb, Sultan, Mahmood, 2017). Selecting the right budget-balancing strategy can help the country close the gap in the budget and promote economic growth (Shi, 2016; Garcia & Hénin, 1999). Relying heavily on oil production for revenue is not sustainable. GCC countries ought to continue assessing the impact of each policy implemented as social, economic, and political conditions might shift (Maghyereh, Awartani, & Sweidan, 2017).

The evaluation of budget-balancing strategies for these countries showed that there were distinct patterns in use of strategies. Findings of this study indicated that countries which implemented strategies with different focuses such as either revenue increasing or expenditure reducing would produce different outcomes and economic growth (Sultan & Haque, 2018). This conclusion is consistent with previous literature regarding budget-balancing strategies (Shi, 2016; Belmont, 2016; Sultan & Haque, 2018). Future research could broaden the investigation scope to include other GCC countries and utilize different social and economic growth indicators to assess the impact of policy on budget.

7. Limitations

This study is limited to three GCC countries (Saudi Arabia, UAE, and Kuwait) because data was only accessible in these countries during the time the investigation. Also, the analysis is constrained by the timeframe and data resource available from 2014 to 2018.

Acknowledgement

The author wish to acknowledge the support of King Saud University, which funded this study via grants.

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The Use of Information Systems (GIS) to Monitor the Quality of Life of Older People in Greece

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Received: January 8, 2019

Accepted: April 26, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p29

URL: <https://doi.org/10.5539/ibr.v12n6p29>

Abstract

The aim of the study is to present the usefulness of Geographic Information Systems (GIS) to explore the socio-economic indicators that affect the health level of the elderly. The study uses a specially designed questionnaire to capture data on socio-economic indicators of the elderly in Greece. The results of the survey are plotted in the corresponding geographical locations on the maps, using GIS in a way that provides the person concerned a full picture of the geographical distribution of socio-economic indicators that affect the health level of the elderly. The study finds that there is an obvious proportional relationship between Sense of Quality of Life with healthier characteristics, a less proportional relationship with financial characteristics and even a less proportional relationship with the age and the education level of the respondents. The study has implications for health sector professionals and policy makers in Greece.

Keywords: GIS, socioeconomic factors, elderly people, quality of life, e-health

1. Introduction

The public health sector is a complex and controversial area. In recent years, the work of healthcare professionals has become increasingly effective due to the use of Information and Communication Technology services. There are many problems and challenges in relation to the public health sector. Recently, the use of Geographic Information Systems (GIS) and the spatial representation of various health issues help health professionals to provide better public health services and make better decisions (Fradelos et al., 2014).

GIS are increasingly recognized as an important instrument for the management of health data, for mapping of health indicators, for distribution of disease impacts and analysis and for finding the location of health facilities and services (Garner et al., 1993). Researchers today use modern GIS systems and other mapping applications to address various health problems. Forecasting as well as simulation models rely on these systems (Taylor et al., 2013).

On the other hand, the interest in developing and using life quality assessment tools is wide nowadays. In the 1970s, the first questionnaires on health-related quality of life aimed at measuring the health outcomes in a multidimensional way, including physical, mental and social health measurements. In medical literature, since 1970, it has been observed that a steadily growing number of researchers include the concept of quality of life in relation to the health of the individuals. Today, most studies on clinical intervention results include some form of measurement of health-related quality of life (Yfantopoulos, 2007).

Classical indicators can capture the impact and duration of illnesses in society, but they do not attribute the real impact that patients have on their illnesses and complications because they are based on health-care unit data. Classical indicators cannot be used to assess the patient's visual angle, nor can they provide useful data for assessing the social effects of a disease or its treatment.

The purpose of the current study is to investigate the socio-economic indicators that affect the health level of the elderly by using a specially designed questionnaire. The quantitative data method has been selected for the survey, which allows the systematic collection of objective numerical data and then its performance in numerical

form for purposes of statistical analysis. More specifically, a specially designed questionnaire was used in print and in electronic form. The objectives of this study are: i) To record the current profile of the elderly in the country's Open Centres of Elderly Care, as it is in the period of the economic crisis. ii) To explore the perception of the elderly about the impact of the economic crisis on their health and lifestyle. (iii) To assess the factors that affect the quality of life of elderly. (iv) To investigate the degree of correlation between socio-economic indicators and the quality of life of older involved in that research. v) To explore the differentiation of the degree of correlation between socio-economic indicators and the quality of life of the elderly.

Given the usefulness of GIS and their application in the areas of physical health, mental health, health services and general health management, the results of the survey were mapped as graphs in the respective geographic locations on the maps, providing the person concerned with a full picture of the geographical distribution of economic and social characteristics and, above all, the health status of the elderly by region. Thus, the public institutions and health service providers concerned are given the opportunity to take prompt decisions on their actions.

In order to obtain valid and scientific results, a representative sample of the studied population was collected, i.e. 897 questionnaires, so that the results and conclusions drawn from them and related to the particular population could be generalized. Methods of Descriptive Statistics (calculation of frequencies and frequency distributions, central trend indicators, dispersion) were applied in order to present the study data and to draw conclusions about the population under investigation.

For the present study the quantitative approach is followed by the large population. The quantitative approach allows research to be conducted on a large part of the target population and "allows the researcher to learn what is happening but does not give interpretation to understand the experience". It also follows the principle of generalizing a conclusion from the specimen under study in a minor proportion of the population (Cohen & Manion, 1994).

The following Section 2 describes the applications of Geographic Information Systems in Health and the correlations between the different socio-economic factors and the quality of health. Section 3 presents the methodology followed for its implementation, and the final Section presents the conclusions of the study.

2. Literature Review

2.1 Applications of Geographical Information Systems in Health

The use of GIS systems is widely applied to public health and many studies are based on them. Public Health Informatics (PHI) is an emerging specialty, which focuses on the application of information technology and technology to the practice of Public Health and Research (Hanchette, 2003). As part of this effort, a GIS or, more generally, a Spatial Decision Support System (SDSS) offers improved geographic imaging techniques, resulting in faster and better decision making in the field of Public Health (Yasnoff & Miller, 2003).

GIS techniques are used to show the lack of correlation between causes and effects or between different outcomes. GIS can contribute to Public Health in many ways because they can provide information on many issues and support the decision-making process properly. They can provide information on the distribution of health services. Thus, any disparities that are increasing continuously could be abolished. Also, policy-makers can be helped and made the right decisions. Health professionals can easily identify the difficulties and inequalities in accessibility to health services and thus be able to cope with the current situation (Foley, 2002). For example, eliminating inequalities in health is one of the two primary goals of the Healthy People 2010 program currently in the US. The use of GIS can play an important role in this effort by helping Public Health professionals to identify the areas of weakness and inequality and helping them ideally to identify and develop solutions to address these deficiencies. GIS can also help researchers integrate dissimilar data from a wide range of sources, and can still be used to impose quality control measures on these data.

The use of GIS has increased exponentially to solve various public health issues. These systems are critical to assessing and addressing relevant health problems in different areas of the earth (Foley, 2002).

A GIS can play an important role in the surveillance, management and analysis of diseases. It appears to be an important tool for the analysis and presentation of epidemiological data. Public health services, diseases, as well as any health information can be mapped and associated with various information such as environmental data, health and social data.

This creates a means of monitoring and managing disease and health programs. It is necessary to understand, monitor and emphasize the reasons that may be related to the development of a disease. Some of these factors could be the environment, behaviour and the socio-economic level of a region. If the "source" of the disease is recognizable and its development and transmission is known, health managers will be able to cope effectively

with pandemics (Najafabadi, 2009; Ezatti et al., 2005). A GIS system is a tool with great potential that could contribute to assessing environmental risks and human exposure to them.

The design of home care is one of the most active applications of GIS. A GIS can help to organize all the routes that a healthcare professional should follow, taking into account many parameters. On the other hand, private health services could organize an extension plan to promote their services. They can even make forecasts for some services that are in great demand in specific areas. In general, the fields of application of GIS could be applied to strategic planning, research and evaluation, emergency preparedness and the availability and location of health care services (Smith et al., 2007). GIS provide enormous convenience for healthcare providers in organizing and managing health services. Therefore, the organization and coordination of the various services is easier and more efficient. The healthcare provider can quickly and efficiently direct the patient to appropriate health care services (Najafabadi, 2009). GIS are able to provide the exact location of special medical devices. It is important that an insurance organization be able to know the closest location for access to a CT scan when requested by the insured person (Smith et al., 2007).

2.2 Socio-economic Factors

There are many bibliographical references demonstrating the strong positive correlation between socio-economic status (SES) and health for many populations in many social sectors (Adler & Ostrove, 1999; Feinstein 1993; Von dem Knesebeck et al., 2006; Kitagawa & Hauser 1973; Marmot, et al., 1997). Moreover, there is ample literature on the causal mechanisms of linking socio-economic dimensions and health. For example, education is considered to promote good health not only through the creation of financial resources (income and employment) but also through the provision of socio-psychological resources, i.e. healthy behaviours (Ross & Wu, 1995; Mirowsky & Ross, 1999), anxiety ability (Lantz et al., 2005; Lin & Ensel, 1989), self-control (Mirowsky & Ross, 1998; Taylor & Seeman, 1999) to better manage disease and disease (Goldman & Smith, 2002).

Income has been shown to promote health by influencing diet, quality of housing, exposure to environmental hazards, stress, and access to adequate health care (Cohen et al., 2003, Hayward et al., 1988; et al., 1994; House, 2002; Lantz et al., 2005). Individuals or families with low income are particularly vulnerable because they may not be able to have good physical and mental health (Andrulis 1998), restriction of access to healthy foods (Darmon et al., 2002; Caraher et al., 1998), resulting in toxic environments (Evans & Katrowitz, 2002) and unhealthy housing conditions associated with a high risk of illness (Rosenbaum, 2008). Further research has shown that income is more closely linked to the evolution (rather than onset) of the disease than the level of education (Herd et al., 2007; Zimmer & House, 2003), suggesting that the financial resources promote health in part by increasing the person's ability to pay for medical care and to transfer it to appropriate health care units.

Many studies highlight the causal mechanisms by which the socio-economic situation affects people's health. According to Figure 1, the causal relationships between health and socio-economic status, in socio-political-economic conditions, to the extent that they facilitate or interfere with the mechanisms through which a person's socio-economic condition affects health (Link & Phelan, 1995). Link and Phelan (1995) argue that social factors greatly affect health and hence the emergence of diseases with various mechanisms.

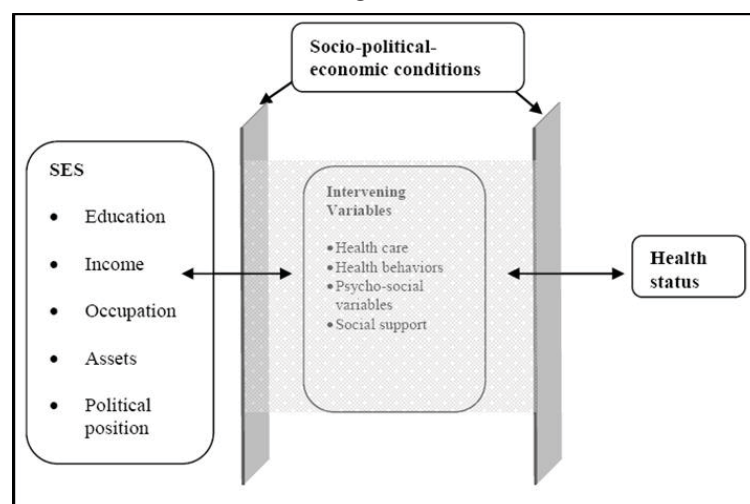


Figure 1. Socio-economic Factors and Health

Source: Link & Phelan, 1995

2.3 Socio-Economic Indicators in Health of the Elderly

The relationship between socio-economic status and health is an adequately documented epidemiological study. Studies carried out in the United States (Antonovsky, 1967; Kitagawa & Hauser, 1973; Palmore, 1982; Haan et al., 1987; Kaplan et al., 1987; Feldman et al. et al., 1990; Menchik, 1993;) confirm that socio-economically disadvantaged individuals have higher mortality than those with higher education, increased income, or good working conditions.

Research in the field of social epidemiology and health sociology has repeatedly shown that people belonging to low socio-economic groups face health problems and live less in relation to people in high socio-economic groups (Machenbach et al., 1997). Within the context of these differences, Huisman et al. (2004) conducted an investigation into people aged 65 and over to investigate the relationship between their socio-economic situation and mortality. The survey was based on data from mortality registers of population data from 11 countries and regions in Europe. The indicators of the socio-economic situation studied were the educational level and the permanent residence. The results of the survey showed that absolute and relative socio-economic inequalities in mortality remain at older ages between men and women, and socio-economic disparities in mortality were higher among the elderly and middle-aged people in some populations, although the relative age-based inequality showed differences in population by gender. Also, the correlation between the socio-economic situation and mortality in the 90+ age group was evident. According to the results of the survey, it is evident that the absolute socio-economic inequalities in mortality increase with age, while the relative socio-economic inequalities in mortality decrease with respect to age. Overall, socio-economic inequalities relative to housing were lower than those of education in the two largest age groups. The authors conclude that such inequalities are a major public health problem in Europe.

The issue of socio-economic inequalities in the field of morbidity and mortality has attracted a large number of researchers, but comparatively few have been centred on the elderly. The study by Huisman et al. (2004) makes a significant contribution to the bibliography on inequalities and mortality, and stresses the importance of examining elderly people in public health policy and actions. This is an issue of increasing importance given the aging of the population in developed countries and the increase in life expectancy and the poor health of people dying over 60 years of age.

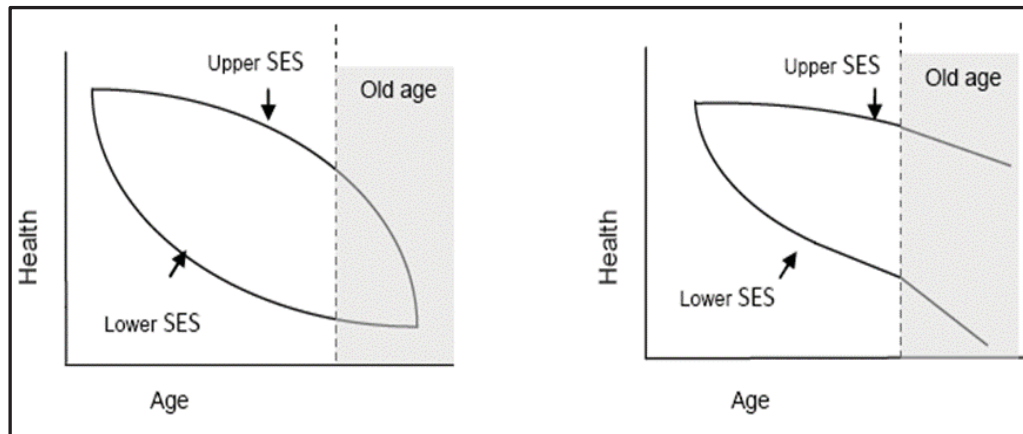
The aim of the Grundy & Holt study (2001) was to identify the most commonly used indicators of socio-economic status (social class, educational level, income, household financial resources, poverty indicators, housing and car ownership). A home interview was conducted at 3,543 participants aged 55-69 in 1988/9 and 2243 were interviewed again in 1994. All indicators were significantly correlated with differences in the elderly's self-reporting of health. The best pair of variables, according to the criteria used, was the educational level or the social class combined with an indicator of poverty.

According to numerous studies, differences in health from the socio-economic situation are smaller for young adults and increase with increasing age (House et al., 1990; 1994, Beckett, 2000). The main explanation for the existence of health inequalities for the elderly is the lowering of the levels of health at a later stage of their life which may be due to psychological factors contributing to poor health (House et al., 1994) such as: (1) lack of social relationships and social support; (2) changes in the elderly's psychological mood such as reduced sense of sovereignty, optimism, sense of control and self-esteem, or increased levels of anger and hostility, and (3) chronic and acute anxiety in life, including the anxiety of marginalization, taxonomy and other phenomena related to the social distribution of power and resources (Lantz et al., 1998).

Another explanation of health inequalities is also due to the natural deterioration of the organism by increasing age (Hayflick, 1998), which plays a key role in identifying the elderly (House et al., 2005; Mirowsky & Ross 2008). This explanation gives the hypothesis of convergence (Graph 1) that aging of the population serves to reduce health inequalities. A series of studies question the above hypothesis, showing that health inequalities based on the socio-economic situation continue to widen among the elderly, thus giving the case of divergence (Graph 1).

Education is related to the growing disparity in the health status of the elderly (Dupre, 2008; Mirowsky & Ross, 2008; Willson et al., 2007; Mirowsky & Ross, 2005).

Long-term economic distress seems to have cumulative effects on the health of older people (McDonough & Berglund, 2003; Benzeval & Judge, 2001; Lynch et al., 1997).



Graph 1. a) Health-age-convergence case and socio-economic situation (left-hand graph, b) Health-age and socio-economic deviation right-hand graph)

Source: Lowry & Xie (2009)

3. Research Methodology

The aim of the survey is to investigate the socio-economic indicators that affect the health level of the elderly. The main objectives of the survey are to record the current elderly profile, explore the perception of the elderly about the impact of the economic crisis on their health status and lifestyle, assess the factors that shape the quality of life of the elderly, the degree of correlation of the socio-economic indicators with the quality of life of the elderly in research and the investigation of the differentiation of the degree of correlation of the socio-economic indicators with the quality of life of the elderly.

Given the usefulness of GIS and their application in the fields of physical health, mental health, health services and general health management, the results of the survey are plotted in the corresponding geographical locations on the maps, providing the person concerned with a complete picture of the geographical distribution of the socio-economic indicators that affect the level of health of the elderly per region. Thus, the public authorities and health service providers are given direct opportunity to take decisions on what they need to do.

For the collection of data, two different approaches, quantitative and qualitative, are presented in the literature. In the quantitative approach, researchers choose to collect primary data, usually from large samples, which then are analyzed properly. Instead, in qualitative research approaches, the logic followed is different, as researchers choose to collect large data from a small sample in order to investigate in depth attitudes and perceptions (Kyriazopoulos & Samanta, 2010).

For the present study the quantitative approach is followed due to the large population. The quantitative approach allows research to be conducted on a large part of the target population and "allows the researcher to learn" what's going on "but does not give interpretation to understand the experience." It also follows the principle of generalizing a conclusion from the specimen under study in a large proportion of the population (Cohen & Manion, 1994).

Corresponding surveys have taken place both at European and international level. At European level, a longitudinal survey on health, aging and retirement (SHARE, 2005, Survey on Health, Aging and Retirement in Europe), the first results of which were published in 2005 (Börsch-Supan & Jurges, 2005). In the survey, initially 11 countries from Scandinavia to the Mediterranean participated, the countries that eventually participated reached 16 (with Israel, Czech Republic, Poland, Ireland, Slovenia). The collection of data is continuously enriched with new data, which are compared with earlier data, thus yielding updated and improved conclusions each time (Börsch-Supan et al., 2008).

In fact, SHARE's development follows faithful studies of the American Health and Retirement Study (HRS) and the English-Longitudinal Study of Aging (ELSA). In addition, many studies on aging have been conducted based on US Health and Retirement Survey (HRS), covering more Asian countries, Russia and African countries (Kapteyn, 2008).

According to Carone and Costello (2006), the importance of such studies lies in the fact that they can make a significant contribution to addressing uncertainty in the demographic and budgetary projections as well as the complex challenges of health care and long-term care policy pensions. Finally, these studies are a valuable tool

for facilitating difficult political debates on issues related to the quality of life and health of the population and how it is affected by socio-economic factors.

The research tool chosen to carry out this research, was applied to a small sample of elderly people. This small sample collects the characteristics of the final sample of the research, that is, the final set of people to which it is addressed. This pilot survey aims to highlight problems that may arise during the research process. The necessary corrections were made to the questions according to the participants' comments, in order to achieve the following: i) to ensure the reliability and validity of research, ii) to clarify the questions, iii) to estimate the required time to answer the questions, iv) to examine the reaction of the respondents, v) to ensure the completeness of the research tool, vi) to test the usability of the questionnaire, vii) to add more questions if necessary.

For the collection of valid and scientific results, a representative sample of the studied population was collected (Belleli & Papazoglou, 2004). In order to collect the data and to answer the research questions, questionnaires were distributed to the elderly of different Centers for the Protection of the Elderly (KAPI) in Greece. A total of 897 questionnaires were completed so that the results and conclusions drawn from them and related to this population could be generalized.

The final questionnaire consists of 5 sections and 27 questions.

1. The first section, consisting of 6 questions, relates to the demographic characteristics of the study population (gender, age, marital status).
2. The second section, consisting of 12 questions, refers to the characteristics of the stay of the elderly (area of residence today, area of residence in the past, place of residence, living situation and total number of family members living in the same house).
3. The third section, consisting of 6 questions, relates to the socio-economic characteristics of the elderly (educational level, occupation, main source of income, existence of economic self-sufficiency, annual income).
4. The fourth section, consisting of 8 questions, concerns the medical history of the elderly (health problems, physical energy, health and home restriction, health and activity, smoking, alcohol, diet, sleep, feeling of fatigue after awakening).
5. The fifth section, which consists of 9 questions, is about how the elderly themselves perceive their quality of life. In particular, it refers to the overall quality of life of the elderly, whether they enjoy their lives, whether they are happy most of the time, whether their current economic crisis affects them negatively, whether the pain affects their well-being negatively, and whether health restrict them to the home).

Methods of Descriptive Statistics (calculation of percentages and frequency distributions, central trend indicators, dispersion) were applied in order to present the study data and draw conclusions for the population under investigation.

Parametric methods of analysis were used too. In particular, chi-square test and statistical test T-test were used in order to investigate statistically significant correlations. The credibility of the survey is documented by: i) the use of the Cronbach Alpha Trust Factor (0.85), ii) the use of Likert type questions, iii) the use of a pilot survey, iv) the use of clear instructions to answer the questionnaire. Also, the validity of the survey is documented by: i) the use of closed type questions with all possible answers, ii) the anonymity of the survey.

4. Results

In order to investigate the association of Life Quality Impacts with certain Demographic Characteristics, Social Characteristics, Economic Characteristics and Health Characteristics, the dependent dummy variable was created called Life Quality Sense, consisting of the Medium Term of Variables Life Quality, Life Enjoyment, and Happiness, mentioned above. The dummy variable was associated with the following independent variables and groups of variables: The first correlation is made with Age variable as Demographic Attribute. The second correlation is made with the Educational Level variable as a Social Attribute. The third correlation is made with the group consisting of the independent variables Economic Autonomy and Annual Income as Economic Characteristics. The fourth correlation is made with the group consisting of the independent variables Physical Energy and Health Sense as Health Characteristics. The results of the linear regression are presented in Table 1, which shows the correlations that have emerged.

From the results, the Life Quality Sense (LQS - values 1 to 5), which was created as a dummy variable from the average of the group of variables Life Quality, Life and Happiness, is related to Age (integer values 1 to 3), as a Demographic Characteristic variable, as follows:

$$\text{LQS} = 0,191 (\text{Age}) + 2,165$$

It also appears that LQS (values 1 to 5) is related to the Educational Level (integer values 1 to 9), as a variable of the Social Characteristics, with the following relationship:

$$\text{LQS} = 0,193 (\text{Educational Level}) + 1,796$$

Table 1. Association of Life Quality Sense Elements with Demographic, Social, Financial and Health Characteristics through Linear Regression

Group of Dependent Variables	Dependent Dummy Variable	Question number	Independent Variables	Linear Regression Coefficient	Linear Regression Constant
Life Quality	The Sense of Quality of Life LQS	Demographic Characteristics		A	B
Life Enjoyment		2	Age	0,191 (p=0,000)	2,165 (p=0,000)
Happiness					
Life Quality	The Sense of Quality of Life LQS	Social Characteristics		A	B
Life Enjoyment		9	Educational Level	0,103 (p=0,000)	1,796 (p=0,000)
Happiness					
Life Quality	The Sense of Quality of Life LQS	Financial (Economic) Characteristics		A	B
Life Enjoyment		12	Economic Autonomy	0,264 (p=0,000)	1,663 (p=0,000)
Happiness				13	
Life Quality	The Sense of Quality of Life LQS	Health Characteristics		A	B
Life Enjoyment		21	Physical Energy	0,387 (p=0,000)	1,047 (p=0,000)
Happiness				15	

It also appears that LQS (1 to 5 values) is related to Economic Autonomy (1 to 2 Accuracy) and Annual Income (integer values 1 to 5) as variables of Financial Characteristics, with the following relationship:

$$\text{LQS} = 0,264 (\text{Economic Autonomy}) + 0,176 (\text{Annual Income}) + 1,663$$

Finally, it appears that LQS (values 1 to 5) are related to Physical Energy (1 to 5) and Health Sense (1 to 5) as Health Characteristics variables with the following relationship:

$$\text{LQS} = 0,387 (\text{Physical Energy}) + 0,186 (\text{Health Sensitivity}) + 1,047$$

Of the above, it is obviously more pronounced the proportional relationship of Life Quality Satisfaction with the Health Characteristics of Respondents, the less pronounced or proportional relationship of Life Quality Sense with the Economic Characteristics of Respondents and even less pronounced or proportional relationship of Life Quality Sense with Age and the Educational Level, as Demographic and Social Characteristics of Respondents respectively.

These results are in line with the previously mentioned studies for the cumulative effects of long-term economic distress seems on the health of older people (McDonough & Berglund, 2003; Benzeval & Judge, 2001; Lynch et al., 1997) as well as the relation of education to the growing disparity in the health status of the elderly (Dupre, 2008; Mirowsky & Ross, 2008; Willson et al., 2007; Mirowsky & Ross, 2005).

The depiction of the economic and social characteristics as well as the state of health of the elderly among the

different Centers for Open Elderly Protection of Greece is achieved through the use of the ArcMap software, in which all the table data is imported.

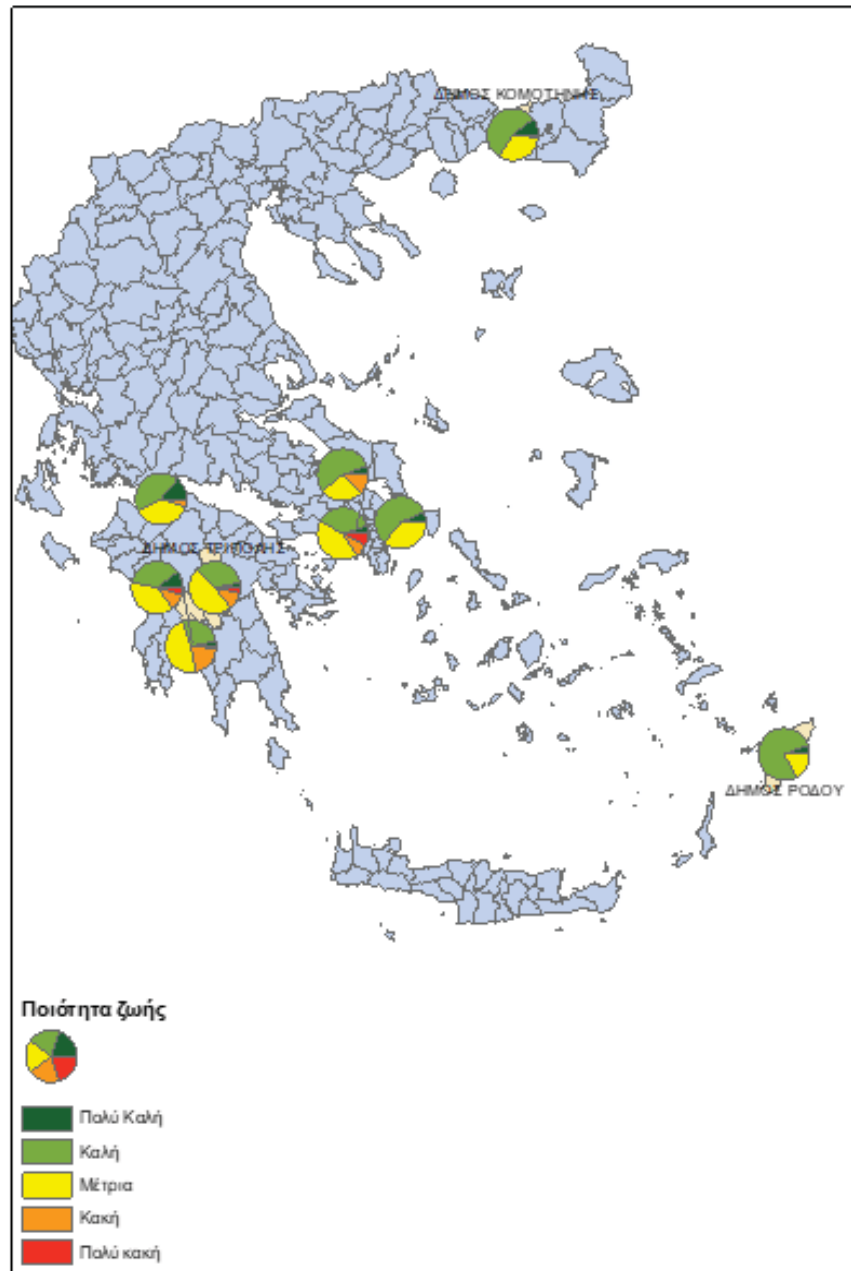


Chart 1. The use of GIS. Authors' survey

The figures are plotted in the corresponding geographical locations on the maps, giving the person concerned a full picture of the geographical distribution of economic and social characteristics and, in particular, of the health status of the elderly by region (see Chart 1). Thus, the public institutions and health service providers concerned are given the opportunity to take prompt decisions on their actions.

5. Conclusions

The aim of the survey was to investigate the socio-economic indicators that affect the health level of the elderly. The main objectives of the survey were to record the current elderly profile, explore the perception of the elderly about the impact of the economic crisis on their health status and lifestyle, assess the factors that shape the quality of life of the elderly, the degree of correlation of the socio-economic indicators with the quality of life of the elderly in research and the investigation of the differentiation of the degree of correlation of the

socio-economic indicators with the quality of life of the elderly.

From the previous presentation of results it is clear that there is an obvious proportional relation of the Sense of Quality of Life with the Health Characteristics of the respondents, a less pronounced proportional relationship of the Sense of Quality of Life with the Financial (Economic) Characteristics of the respondents and even less pronounced proportional relationship of the Sense of Quality of Life with Age and the Educational Level, as Demographic and Social Characteristics of respondents respectively.

Given the usefulness of GIS and their application in the fields of physical health, mental health, health services and general health management, the results of the survey were plotted in the corresponding geographical locations on the maps, providing the person concerned with a complete picture of the geographical distribution of the socio-economic indicators that affect the level of health of the elderly per region.

The limitations of research were more bureaucratic, related to the issue of each license. Another limitation was the difficulty of completing the online questionnaire as it is addressed to elderly people who are less familiar with new technologies and computers. A third problem was the relative difficulty of understanding some of the questionnaire questions from some elderly people, mainly because of their age. Also, the credibility of the survey depends on the sincerity of respondents.

Given the usefulness of such health surveys, presented graphically in charts, it is proposed to enable public officers to have direct access to these data for finding immediate solutions for each region of the state, whenever needed. It is also useful to expand these types of surveys in other countries, notably the European Union, with a view to the wider collection and evaluation of data and the comparative presentation of data and surveys in the Member States of the Union. Moreover it is useful to expand such surveys to various other ages and social groups, such as adolescents, young people, migrant groups, minorities, disabled etc.

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The Importance of Sustainability in the Fashion Sector: ADIDAS Case Study

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Received: March 5, 2018

Accepted: April 17, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p41

URL: <https://doi.org/10.5539/ibr.v12n6p41>

Abstract

In a society such as the present, characterized by an extremely consumerist lifestyle, the issue of social, economic and environmental sustainability must be taken into account and must become a conditioning element of day-to-day life choices by every business. To be a sustainable business means not only respecting the environment, but also respecting the health of workers and consumers, saving raw materials and economic resources, respecting human rights, rationalizing creative and productive processes, reducing waste, creating new and more transparent ties with communities. This implies a responsible behavior, with the aim to create value for all stakeholders. This is also affecting the fashion industry, where the problem of scarcity of resources and raw materials often leads to new entrepreneurial choices, which based on three important issues: saving, recycling, re-use. This study, using case study, examines the impact of sustainability policies implemented by some company operating in the fashion industry. Starting from these premises, the work intends to describe and analyze the application of the concept of sustainability in the field of fashion industry, focusing in particular on the Adidas case.

Keywords: sustainability, fashion sectors, case study

1. Introduction

Today, many companies, regardless of their sector, pay particular attention to the issue of corporate sustainability. The cause of this is to be found in the growing concern of companies and businesses over the excessive exploitation of natural resources and the consequent depletion of these resources. According to the Sustainability Revolution (Edwards, 2005), the survival and future development of both macro-systems (the planet earth, nations, etc.) and micro-systems (business and social organizations) presupposes the balance between three aspects Fundamental: environmental impacts, social implications and the achievement of adequate economic results (conservation and wealth creation). "Sustainability refers to the long-term maintenance of systems according to environmental, economic and social considerations" (Crane and Matten, 2007). The good sustainability practices adopted by companies and their adequate diffusion towards stakeholders can in the medium term become a source of competitive advantage and, therefore, contribute to the creation of value. The ability that businesses have to attract the best resources to ensure continuity and development, together with the attention of social stakeholders to which they must act while meeting their expectations, although these often appear to be irreconcilable between them, allows to build and/or strengthen mutual trust relations. Corporate Sustainability represents the condition for the survival and development of the enterprise system. However, it presupposes Corporate Social Responsibility as Corporate Sustainability and Corporate Social Responsibility are two concepts that are often confused and / or sometimes overlapping. Companies can adopt different strategies and tools to integrate good CSR practices with corporate sustainability. Such instruments are the formerly mentioned TBL tool (Daizy et al. 2013), the ten CSR principles by United Nations Global Compact (EC 2011), the guideline of the ISO-standard ISO 26000 for social responsibility (ISO 2014a) and Sustainability Reporting Framework by Global Reporting Initiative (GRI 2014a). In 2011, the European Commission updated its version on the definition of CSR. The reason behind the change was that initially, the definition was too broad in its meaning but the goal was also to be more in line with, and underline the core topics of, ISO 26000 (ISO 2012).

Corporate social responsibility must be pursued through responsible behavior that companies must adopt in

terms of value creation not only for the shareholders but for all the stakeholders that come into contact with the company. The interest in this issue has led companies to set aside only the classic economic purpose, profit, to orient themselves towards the adoption of the “triple bottom line”, or to a contemplative perspective (Elkington, 1997). Social nature (ensuring fairness and equal opportunities), environmental objectives (ensuring an ecological balance), economic goals (the ability to generate wealth). Through Corporate Social Responsibility, the company can balance the three sustainability objectives mentioned above (Wempe and Kaptein, 2002, Willard, 2005) and in this perspective, Corporate Social Responsibility can be seen as the basis for founding Corporate Sustainability. The growing importance attached to the theme of sustainability has led many companies to make tremendous efforts to implement sustainable practices related to the product / service offered (Yip et al., 2011). Companies are aware that doing so will not only help the environment and society, but can create a benefit for their reputation by positively contributing to the health of their brands. The theme of sustainability is becoming more and more relevant also in the field of fashion, where, by its very nature, the obsolescence of the product is further enhanced than the physical one, accelerating consumption dynamics and, therefore, use of natural resources. The basic idea is that of a fashion that creates value without destroying, generating and regenerating products respecting the environment. Starting from these premises, the paper intends to analyze how attention to sustainability in the fashion industry is a necessary condition for ensuring the company's competitive success and how social responsibility is intended to become an integral part of corporate value proposition as well as an additional element of Differentiation from many emerging countries.

The present work, after a brief introduction to CSR linkage and corporate value creation, clarifies the concepts of CSR and sustainability through an adequate review of the most significant national and international literature on the subject. Subsequently, it proposes an analysis of a case study, describing the methodology used to select the sample examined and analyzing the main conclusions drawn by delineating some limitations that the study presents suggesting possible future research lines.

2. Fashion and Corporate Social Responsibility

Corporate social responsibility (CSR) becomes a source of competitive advantage when companies adopt a socially responsible behavior towards all stakeholders, even those that at first sight may seem not directly involved in the economic activities of the company. Companies must simultaneously commit to four types of responsibilities: economic, legal, ethical and philanthropic. The company that adopts socially responsible conduct, monitoring and meeting the economic, legal, ethical, environmental and social expectations of all stakeholders, achieves a competitive advantage by maximizing long-term profits (Kaptein and Wempe, 2002;). The aim of the venture is not to maximize profits and simply to comply with national and/or international regulations (Mc Williams and Siegel, 2001), but before undertaking every strategic decision must analyze the impact of its actions on all stakeholders, trying to balance their interests with their own and trying to provide an adequate remuneration for the contributions received.

The power is supposedly in the hands of the client, who has the final decision of whether to support sustainable business or not. Before going further into evaluating the customer perspective, it is necessary to distinguish the difference in terminology of the customer and the consumer. The customer is defined as the actor who purchases the product while the consumer is the person who uses the product. Thus, the customer can be, but does not have to be, the same as the consumer depending if it is the same person buying the product and using it or not. Client and customer are used as synonyms in this paper.

From a business-management point of view, the first studies on CSR came from the United States in the 1920s (Gay, 1927; Donham, 1929). These authors constantly referred to the responsibility of business men. Nonetheless, a univocal and universally accepted definition of CSR has not yet been constructed (Carroll, 1999; Thomas and Nowak, 2006) and only in recent years have a precise role and a specific evaluation been given to ‘socially responsible’ businesses (Garriga and Melé, 2004). CSR becomes a communication tool in order to reduce information asymmetry between companies and stakeholders (Schadewitz and Niskala, 2010). This social accountability must be carried out in conjunction with and complementary to the compulsory instruments (financial statements), in a unitary and systemic manner (Griffin and Mahon, 1997), while using its own instruments for performance measurement and external communication (Bendell, 2005). CSR can have both financial and strategic advantages for firms. By engaging in social activities and reporting on CSR, firms develop the trust and goodwill of stakeholders, which can provide them with competitive advantages (Aguilera et al. 2007; Money and Schepers 2007; Gill 2008; Kolk and Pinkse 2010). Research suggests that CSR reporting promotes firms’ image and enhances their reputation, (Gray et al. 1995b; Vanhamme et al., 2012) as relationships with stakeholders are based on a positive exchange of benefits. Socially responsible firms tend to experience greater brand loyalty, customer satisfaction and employee commitment. CSR engagement also reduces the risk

that firm performance is negatively affected by labour disputes, product safety scandals and consumer fraud (Waddock and Graves, 1997). Investors increasingly consider firms' social behaviour in their investment decisions (Simpson and Kohers, 2002; Aguilera et al. 2007;) Investors, therefore, increasingly require boards and managers to engage in CSR and report on this engagement (Scholtens, 2008; Kolk and Pinkse, 2010). Is a reciprocal expectation that firms 'balance the multiplicity of stakeholder interests' and 'are responsible to society as a whole'?

Moreover, CSR is clearly more important if we consider that companies using this type of approach might obtain better economic and financial results (Aupperle et al., 1985; McGuire et al., 1988; Waddock and Graves, 1997; Orlitzky et al., 2003).

More and more "intelligent" consumption forms are used, to consumers more aware of environmental and social risks, more aware of resource efficiency and willing to pay a higher price than competition from socially responsible businesses. This tendency is even more felt within the fashion industry, especially among young people, where social responsibility orientation is accompanied by attention to environmental sustainability and becomes an increasingly important element of doing business.

Joergens (Joergens, 2006) points out that manufacturing companies must pay particular attention to sustainable fashion aimed at young customers, as it will be the latter who will become the next generation particularly interested in ethical and solidarity-based purchases. Ethical forms of purchase are products selected on the basis of their characteristics of recyclability and respect for the external environment. (Shen et al. 2013). However, with the perspective of young consumers regarding ethical and sustainable fashion, Joy et al. (2012) found that young consumers do not associate sustainability with fashion today, even though they are open to environmental issues.

Social responsibility in the fashion sector is broader in the sense that the company must take on the expectations of the current and potential stakeholders, and must constantly monitor the environmental impact of their production throughout the production chain, Operating in order to reduce the consumption of natural resources, emissions of polluting substances into the atmosphere and waste water and the waste of processing residues. Although it can not be considered as one of the most critical areas of the environment, production in the fashion industry involves the adoption of socially responsible behavior in its business strategies, not only for ethical reasons or social recognition, but with the awareness that this It also translates into a profitable economic return or better competitive advantage. The interest of fashion companies in adopting socially responsible behavior introduces us into a new concept of eco-sustainable fashion, which is characterized primarily by the care and attention of the choice of raw materials to be used in the fashion chain. Companies, in fact, tend to prefer more and more natural and biological fibers, or from renewable resources or even from recycled materials; Secondly, many fashion companies are using vintage second-hand products and are implementing upcycling processes (converting waste materials into new, better quality materials with low environmental impact). Not to be neglected is the respect of workers' rights, as well as the importance of safety and health of workplaces and respect for human rights. Fashion-makers have perceived this and are implementing socially responsible behavior that goes beyond the basic practices of reducing emissions of polluting substances to safeguard health, well-being and workers' rights.

3. The Sustainability in the Fashion Sector: A Literature Review

To pursue sustainability practices, companies must be able to combine the three main dimensions of business development: the economic dimension, the social dimension and the environmental dimension. Sustained in corporate strategy, sustainability implies responsible behavior as a value creation for all stakeholders and not just for shareholders. The studies on sustainability and sustainable development have a double purpose: to limit the misuse of the term and seek effective sustainability indicators. In this new vision sustainability is not considered a cost, but a competitive advantage.

Most sustainability scholars agree that companies pursue sustainable development if they achieve their goals by eliminating and / or reducing the negative impacts of their activity on the environment and, if at the same time, meeting their needs of current stakeholders without compromising those of future stakeholders. The company pursuing Sustainable Behavior needs to incorporate CSR's economic, legal, ethical and philanthropic principles in its vision and strategy and business practices. These principles enable the three dimensions (People, Profit and Planet) of Corporate Sustainability to be funded, as these are naturally related to the various CSR-related responsibilities.

We talk about sustainable development when it creates situations of substantial balance between the three spheres social, economic and environmental, or if you prefer, whether it is valid the so-called rule of the balance

of the three "E": ecology, equity, economy. A sustainable enterprise is therefore a reality organized with the aim of operating in a long-term perspective through the joint consideration of the economic, social and environmental dimension of its processes and performance (Goyal et al. 2013). The pursuit of objectives consistent with the concept of sustainable development and / or the implementation of a management model based on dialogue and the establishment of stable relations with its stakeholders Assures a firm life and creates value. The definitions of sustainability in the field of fashion industry refer to different concepts that are sometimes used with the same meaning, such as green, ethics, ecosystem, etc . This creates a lot of confusion (Shen et al., 2013). When we talk about sustainable fashion, we mean a fashion that incorporates fair trade solidarity, which respects proper working conditions without exploiting labor, which does not harm the environment and / or workers, which privileges the use of biodegradable substances, organic cotton (Joergens 2006), which uses recycled fabrics (Shen et al., 2013; Fletcher 2008). Sustainability in the fashion industry touches on different areas: from production to worker safety, to product quality and safety, to marketing, resource management Human resources, financial aspects. In *Cannibals with Forks* Elkington is describing sustainable development as the three bottom lines: environmental, economic and social (Elkington, 1997).

The three bottom lines are dependent on one another where society depends on the economy, which in turn depends on the global ecosystem, i.e. the environment. Over time, it has witnessed a true conceptual leap or a fundamental change in which the basic principles of economic behavior have been revised in the light of the new social dimensions. Switching to ecological and ethical production characterized by low resource consumption, reduced pollution, recycling of materials, working conditions and fairer pay, traceability, transparency and all other challenges that fall within the definition of sustainability is not a simple thing requires an entrepreneurial culture As well as many investments in this regard. Various fashion brands have long been implementing strategies to promote the use of materials and production processes in the respect of the environment and workers' rights, aspects considered nowadays as a source of value creation and competitive factor not to be underestimated. The ability to provide safety and well-being to your employees in work environments is essential to boost the efficiency of production processes and to support the new challenges of the fashion industry. In this area where quality prevails over quantity, the centrality of the product and its craftsmanship are of particular importance. There has been a real need for the consumer to contribute to respect for the environment in almost every sphere of everyday life. We are facing a consumer much more attentive than the past, an evolving consumer who enjoys a high value for money, more guarantees in the intrinsic product quality and traceability of the supply chain. The quantity of the product prefers the quality, the good product and well done adds a dimension between social and pleasure represented by the ability of the product to make it feel good, tied to the knowledge that a certain product has a special attention to the social made of linkage with the territory and fairness of relations with all stakeholders. European customers 50% state that they are willing to pay more for a sustainable product, but the actual market share does not even reach 1%. This inconsistency is known as the attitude-behaviour gap (Shen et al. 2013).

The perspective of the product life cycle involves the whole supply chain since it is appreciated that environmental impacts in a product's life can take place in all parts of the supply chain, and when evaluating the product life stages regarding sales and profits it includes the total supply chain as well. The recycling loop emphasises the desirable process of recycling in terms of sustainability at the end stage of the product life cycle. One can evaluate a product's life cycle in two ways depending on the purpose of the investigation. With the tool of Life-Cycle Assessment, the environmental impacts a product has through its life cycle can be investigated (Gmelin & Seuring 2014) and with Kotler's Product Life Cycle the management can evaluate how a product is profitable through its different life stages (Kotler & Armstrong 2009). Reusing is referred to as "the second life" where the product usually has the same function as before (Ligthart & Ansems 2012).

The desire to live more sustainable has involved the fashion and fashion industry a lot, prompting many companies to rethink chain relationships, moving from opportunistic relationships to strategic partnerships. In such a context, the fashion industry, as has been the case in other manufacturing and service sectors, has rethought its competitive strategies and the underlying idea is a fashion that creates value without destroying, generating and regenerating products in Respect for the planet. In this context, fashion companies have started investing in sustainable development policies. This has increased attention to corporate social responsibility practices and the challenge has become to understand at what level an enterprise Is ethically and socially responsible, and how does it consider compliance with these issues as an inevitable condition for maintaining its economic performance. The concepts of fashion and sustainability have come closer and closer. The diversity among definitions of sustainability is also evident related to the fashion industry, making it complex to understand the criteria and the scope of sustainability in this industry. There are several concepts that are used for

the same meaning, such as green, ethical and sustainable fashion, which creates confusion (Shen et al. 2013). When talking about sustainable fashion means refer to productions made with natural fibers using biological and biodegradable cotton, designed for a prolonged use in time and especially working in healthy place, which cause a low or no environmental impact and what makes use of eco-labelled or recycled materials. This definition will cover both the environmental and the social dimensions of sustainability, which makes the fashion sustainability definition more comprehensible and consistent (Shen et al. 2013).

Shen conducts a case study on a renowned fast-fashion brand, H&M (Stockholm, Sweden), which has developed a sustainable fashion supply chain with the use of eco-materials and by following many sustainability guidelines. Based on the publicly available secondary data, the author reveals that H&M's operations decisions may be associated with human well-being in different countries. To be specific, he finds that the sourcing team in H&M tends to select suppliers in low-human-well-being countries and the supply chain team in H&M may set a higher inventory level in the countries with higher human well-being.

4. Fashion and Good Practices of Sustainability

Fashion has a strong communicative and symbolic power and represents an element that identifies and influences individuals. Two are the main reasons driving fashion companies to adopt sound RSI practices and business sustainability: Firstly, because instances that come from the environment require behavior in that sense, secondarily because a healthy business under all circumstances raises an increase in terms of profitability and value creation. Fashion companies to communicate sustainability projects and respecting the appropriate quality standards of their productions have started on an annual basis to prepare dedicated sustainability reports and impact on the company's performance. A clear and transparent communication that enables current and potential stakeholders to understand the dynamics and strategies implemented to be sustainable to generate competitive advantages. In order to be sustainable it is necessary to involve all stakeholders, both primary and secondary. In addition, it must be clear what the objectives to be achieved are to be achieved, such as: energy and water saving, less waste of materials, reduced costs of non-sustainability, greater attention to local communities' needs, supply chain control Level and in every respect, close relationships with local communities based on transparency and mutual respect, constant attention to quality and compatibility of raw materials, security of their employees and their interest (Vigeo). Attention to sustainability in the fashion industry also concerns environmentalists, who constantly invite fashion makers to adopt non-polluting production policies, starting from tissues. It is good to remember some facts: cotton grows in about 80 countries (it is estimated that it occupies 33 million hectares of cultivable land) and provides about 32% of the volume of textile fibers used in the world; Has a heavy environmental impact due to water (73% of the fields is irrigated) and the chemicals used, it is enough to think that 6.2% of fertilizers and 14% of the pesticides sold in the world are destined for cotton. And then there are social problems and working conditions in the fields that often involve children. Cotton employs 250 million peasants, most of whom are in developing countries. Over the years, important initiatives have been developed to improve the fiber sustainability characteristics, as recalled by the report: Organic cotton born in the 80's (Fairtrade (2004)- Particular attention to sustainability in the fashion industry comes from young designers who attach great importance to the choice of raw materials and eco-friendly materials, from traceable crops and environmental impact (for vegetable fibers) and that respect the Animal welfare (for animal fibers, for hides and fine materials), safeguard and protect biodiversity, avoiding the use of endangered species, preferring materials processed with natural substances or treatments that reduce consumption Of water and using alternatives to the use of hazardous chemicals.

5. Case Study: Adidas Group and Its Efforts in Sustainability

Within the "Best Global Green Brands" ranking, formulated by Interbrand, Adidas, Nike, Zara and H&M are among the top 50 "green" brands for their strong commitment to environmental and sustainability policies and practices. Waste management, the development of innovative and environmentally friendly materials, involving employees in this process. H&M is certainly one of Zara's major leaders in the affirmation of "fast-moving" clothing products from the longest life cycle. This is a highly appreciated fashion for its innovative charge and affordable but certainly more environmentally and socially criticized for the low "transparency" of the long supply chains; Responsible for low production costs. The criticisms that have gradually saged on this business model have pushed H&M to try to make their business more sustainable and acceptable. The latest Sustainability Report will set a measure of this commitment. The most significant issue is the publication of the supplier list, so that the supply chain is opened to environmental organizations checks and evaluations of confirmations of the commitments made regarding the materials used in the chemicals used, working conditions and to the protection of workers. Whoever works in the company knows how well the supply chain is considered to be a primary asset of the company. The availability of suppliers to open up to transparency was not free for H&M and required

incentive and training programs. Suppliers included in the list cover 95% of production volumes and are located in both Europe and Asia. H&M's Annual Report also presents other significant initiatives such as the one that allows its customers to deliver in their shops the disqualified items of any brand and under any condition in return for a discount voucher with the aim of "closing the circle" Of the materials used; Which would overcome all criticisms of the "consumerist" business model.

In the report we also find information that H&M is the world's largest certified organic cotton buyer who, together with recycled cotton, covers 11% of its needs. H & M is part of the Better Cotton Initiative. Lastly, in 2012, the distribution multinational has launched a water conservation initiative with WWF in collaboration with employee training programs, suppliers and customers.

This research focused on a single case study, AIDAS, in order to highlight its commitment from a sustainability point of view.

2000 for the first time, the Adidas Group was selected to join the Dow Jones Sustainability Indices (DJSI), since 2001 published a Sustainability Report on an annual basis; it is the only company in the sporting goods industry which does it. Adidas is a company that, since 1989, is committed to sustainability, recognizing the importance of it. The company has always been concerned about the surrounding environment. In order to carry out the search, the company website has been analyzed in detail, where there is a history of the company's sustainable engagement history since 1989. It is enough to think that it has prohibited the use of chlorofluorocarbons for all products and many Harmful chemicals have not been used to manufacture their products, because they are aware of their unfavorable environmental impact. Successive years have created the fundamentals for supply chain management.

In 1998 the Adidas Group developed its initial supplier code of conduct, called Workplace Standards. The Standards are based on international human rights and labour rights conventions. They are contractual obligations under the manufacturing agreements the Adidas Group signs with all its suppliers.

- The “Social & Environmental Affairs” team was established to ensure suppliers’ compliance with the company’s Workplace Standards.
- In 1998, we also adopted a comprehensive and detailed Restricted Substances Policy for product materials, prohibiting the use of chemicals considered as harmful or toxic. This was the first policy in the industry that clearly indicated test and pre-treatment methods for restricted substances. Some of the initiatives that were thus generated were the phase-out of PVC materials from its main product categories, the first company in its industry to do so, as well as the introduction of new technologies to significantly reduce volatile organic compounds (VOCs) in footwear manufacturing by using innovative bonding technologies and water-based cement systems – both happening in the year 2000.
- Its factory in Germany was the first in the industry to receive EMAS environmental management system certification. This represents an important step in the efforts to reduce the environmental footprint of its facilities.
- 1999 marked the beginning of its formal Stakeholder Engagement approach, as the Adidas Group joined the Fair Labor Association (FLA) as a founding member. Since its inception, the FLA has focused on creating long-lasting solutions for sustainable supply chains. It is through the FLA that our supplier factories started being audited by external parties. Later, in 2005, the FLA accredited the Adidas Group’s monitoring programme for the first time.

In 2000 for the first time, the Adidas Group was selected to join the Dow Jones Sustainability Indices (DJSI), which was positively welcomed by investors who integrate sustainability considerations into their portfolios. To date, the Adidas Group has since been listed in the DJSI every year. It was in a spirit of transparency and responsiveness towards its stakeholders that the company in 2001 published its first Sustainability Report. Still today, the Adidas Group is the only company in the sporting goods industry which publishes a Sustainability Report on an annual basis.

2002 represents a big year for the environment, as the company launched its Environmental, Health & Safety Guidelines, as well as the Guide to Best Environmental Practice. These are comprehensive and detailed standards for suppliers on handling, storage and disposal of chemicals, waste water treatment and effluents. The guidelines were published and several brands in the apparel and sportswear industry have asked for permission to use our guidelines when dealing with their own suppliers.

In 2004 was born the Better Cotton Initiative (BCI), which addresses the negative social and environmental impacts of mainstream cotton farming, such as excessive pesticide and water use. Better Cotton is grown in a way

that reduces the amount of chemicals used. Virtualisation became a strategic initiative for the company, which allows a reduction of the quantity of physical samples required to design and sell new products. With virtualisation, resources and money are saved by reducing material waste, transportation and distribution costs.

In 2006 the company became a member of the Fair Factories Clearinghouse, an industry-leading compliance data-sharing platform, which Reebok had co-founded, as well as the Leather Working Group, key to the establishment of an audit protocol for all our leather suppliers.

2007 represents the year of transparency, as the Adidas Group voluntarily disclosed its global supplier factory list. Few years later they became the Official Sponsor, Licensee and Outfitter of the 2010 FIFA World Cup South Africa, they were the first and only FIFA sponsor to do so. Since then, we have disclosed the list of factories manufacturing 2014 FIFA World Cup Brazil products, as well as the list for the London 2012 Olympic Games. Here as well, we were the first Olympic partner to disclose its supply chain for the Olympic Games.

In 2008 the company started dedicated environmental audits at its supplier sites – based on a rigorous environmental audit protocol that includes chemicals management (risk management, handling, use and storage of chemicals).

In 2010, among agreements and collaborations with international labour organization, the company launched its Environmental Strategy, which demonstrated the company's ongoing commitment to embedding environmental sustainability in all products, processes and services to significantly improve The Adidas Group's environmental footprint.

The collection for the London 2012 Olympic Games was the most sustainable Adidas collection ever produced. At the same time was launched a new technology which eliminates the need for water in the dyeing process, therefore also reducing the use of chemicals.

In the same year, Adidas hit the market introducing a new way of making products with no textile waste.

The year after, Adidas launch products made with environmentally preferred materials, with a low waste, innovating its way to create its products.

Other important thing is that the company is listed for the 14th consecutive time in the Dow Jones Sustainability Indexes and named leader in the "Textiles, Apparel & Luxury Goods Industry" for the tenth time.

Since 2014 the company is ranks among the top 10 companies in the Global 100 Most Sustainable Corporations in the World, the most extensive data-driven corporate sustainability assessment in existence. To be more precise, the company ranks 8th. The company presented its "4 P" sustainability strategy, rooted in its values – performance, passion, integrity and diversity and built on the achievements and learnings from previous years, while taking into account the societal landscape and future global trends.

Furthermore, the Group commits to being 99% PFC free by no later than December 31, 2017.

In 2015 Adidas Group is ranked among the top three of most sustainable companies worldwide. It is recognized as best European company and as leader in its industry in the Global 100 Index by Corporate Knights. It signed a partnership with Parley for the Oceans, an environmental organization and collaboration network that raises awareness for the beauty and fragility of the oceans and implements comprehensive strategies to end their destruction. As founding member, Adidas supports Parley for the Oceans in its efforts in communication and education, research and development, direct action and eco innovation.

First footwear made with Ocean Plastic: In June, in the unique surroundings of the United Nations Headquarters Adidas showcases an innovative footwear concept born from its collaboration with Parley for the Oceans.

Fighting climate change, the company joins the UN Climate Neutral Now initiative to promote a wider understanding of the need and the opportunities for society to become climate neutral as well as to showcase that many organizations are already taking concrete action in this direction.

Some months after Adidas presents 'Sport Infinity', a research project led by Adidas and funded by the European Commission, bringing together a variety of industry and academic experts, with the aim of developing a material that can be endlessly recycled using a waste-free, adhesive-free process.

In 2015 Adidas Group is listed fifth among the 'Global 100 Most Sustainable Corporations in the World' and is recognised as the leader in its industry. It is the third consecutive year that the Group is included in the Top 10 of the Global 100 Index

Starting from the company's core belief that sport can have the power to change lives, the strategy "Sport needs a space" translates the Group's sustainable efforts into tangible goals and measurable objectives until 2020. Its

strategy is built on the achievements and learnings from previous years, taking into account changes in the societal landscape, global trends and goes hand in hand with our overall business strategy. Its approach to sustainability reflects the feedback captured from stakeholders and sets clear targets to achieve.

There are many sustainability issues a multinational company might face. To identify the most relevant issues, Adidas looks at its business through different lenses. The following aspects guide the company in determining topics and issues of concern in its programmes and reporting:

- **Peer-based and industry-wide norms:** sustainability issues or standards that are developed by other companies or are addressed industry-wide and are used as benchmarks for its performance.
- **Stakeholder concerns and societal trends:** issues that are of high importance to its stakeholders including communities, non-governmental organisations (NGOs) and the general public, or reflect societal and consumer trends. Adidas regularly consults stakeholders on various topics to better understand their views, concerns and expectations.
- **Opportunity for innovation:** areas where the company can explore innovative solutions that benefit the environment, customers and other stakeholders to demonstrate sector leadership and create competitive advantage.

In order to be ensure that its Sustainability Strategy and programmes address the topics that are most material or salient to the business as well as the challenges ahead, the materiality assessment has been regularly updated based on our ongoing stakeholder engagement, driven by the Social & Environmental Affairs department (SEA) - in close coordination with other corporate functions - with around 70 staff members in 14 countries. Due to their international background and local connectedness, they are well placed not only to know relevant stakeholders in key sourcing countries, but also to connect with them at a local, national and international level.

Stakeholder input is collected and centrally evaluated by SEA's senior management team to ensure that input from different groups is considered in a balanced way. Once significant changes to the previous year are identified, relevant topics are further followed up on, and classified according to their overall importance and relevance to our company. Based on this classification, key topics are integrated in the strategy and programmes and regularly report on the website and in annual publications.

The company recognises its responsibility to be accountable to all of its stakeholders, which involves regular and open reporting of our social and environmental performance.

Some stakeholders, in particular socially responsible investment (SRI) analysts, wish to see the annual reporting fully benchmarked against the reporting standards of the Global Reporting Initiative (GRI). In previous years they have relied on complete sustainability reports and some references in the annual financial report to meet the GRI requirements. Since 2012, information in the annual financial and sustainability report contributes to meeting these requirements. This allows the company to keep its sustainability report succinct and focused on performance and progress while qualitative information is reported on the corporate website.

This sustainability website section is where we provide information about the Adidas Group's sustainability goals, strategy, programmes and performance. The sustainability section:

- Focuses on what is most material for the company and for stakeholders;
- Supplies facts and figures about the key pillars of its programme: protecting workers in the supply chain, developing employees, contributing to local communities, and driving environmental progress;
- Discloses information about how the company put sustainability strategy into practice through guidelines, operating procedures and corporate policies;
- Provides news about developments or changes in our programmes;
- Publishes statements in different places that respond to stakeholder requests that have become of public interest;
- Archives data from previous years that allows readers to track our sustainability record and history;
- Includes links to other sections of our corporate website and to external websites where additional information can be found.

Sustainability report

The annual sustainability report focuses on the progress of the company in meeting its key targets for the year. The report also looks forward and presents the targets for the year ahead.

VERIFICATION: the company recognises that some stakeholders want companies to ensure the content and data disclosed in their sustainability reports is independently verified. While they try to continuously improve the reporting systems for supplier monitoring data, they states that much of this data, in particular data on labour conditions, is not always verifiable in a standardised way. For this reason Adidas reporting does contain information that is subject to an annual review by the Fair Labor Association. They also refer to data verified when supplier factories or own facilities were certified to ISO, EMAS and OSHAS standards.

COVERAGE: The sustainability reporting covers all brands of the Adidas Group. It also refers at length to the activities of suppliers - both those with whom the Adidas Group has a direct contractual relationship (direct supply chain) and those whose contracts are with individual business units, agents or licensees (indirect supply chain)

PERFORMANCE DATA: Reliable performance data is important. It allows to review the progress and plan next steps. By publishing that data the company invites its stakeholders to form their own view about company performance.

Global Reporting Initiative

Adidas recognizes that the GRI Guidelines are the international benchmark for sustainability reporting. Therefore, they use the GRI to inform the sustainability reporting and, in accordance with the G4 Core Guideline version, the company presents a content index highlighting where they have covered the GRI indicators in the reporting.

Green company reports

To carefully track the progress of its environmental initiatives and their impacts against targets, Adidas established a detailed environmental data recording and reporting system, which currently includes 48 sites and covers around 80% of the Adidas Group internal environmental footprint. Every year It publishes a special Green Company Performance Analysis that shows its achievements.

Being a sustainable business, Adidas is striking the balance between shareholder expectations and the needs and concerns of its employees, the workers in the supply chain and the environment. They believes that acting as a responsible business will contribute to lasting economic success. Adidas is continuously working towards becoming a more sustainable company, never stop learning and improving sustainability efforts.

6. Conclusion

The results of the paper show that ADIDAS, an important international brand, is among the top 50 “green” brand for their strong commitment to environmental and sustainability policies and practices. The development of innovative and environmentally friendly materials, the involvement of employees in this process, represent some of the sustainability efforts of ADIDAS and other fashion companies in the last years.

Summarizing, the research represents an important step in the sustainability items as focus attention on the importance of such variables which often condition and influence company’s performance so it may be used from manager to implement firm performance. Further step of the research should be represented by the extension of fashion companies.

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The Discussion on Input – Output Framework Extended for Analyzing on Relationship between Demographic and Economic

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Received: April 23, 2019

Accepted: May 8, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p52

URL: <https://doi.org/10.5539/ibr.v12n6p52>

Abstract

So far, many studies on economic structure have been proposed, Studies on the relationship between demographics and communication economics basically consider changes in age structure, leading to changes in saving and investment capacity. In Miyazawa's demographic-economic model, the focus has been on quantifying the relationship of final consumer groups and corresponding income groups. This study tries to establish the relationship between age and output and income. This study tries an attempt to extended Miyazawa's model which gross capital formation at columns and operating surplus at rows. That means the input – output system was not only extended aging group at consumption of employees at rows and final household consumption at columns, but also add to gross capital formation at columns and total income of producers (operating surplus and exogenous income) at rows. In this system, it is allowed to consider changing population structure which not only affects economy through saving or investment but also the structure of final consumption by age also spreads to output and income. So, in this research is not only this related inter-sartorial at first-time distribution for considering but also the impact of demographic to economic activities and re-distribution income follow by type of aging group.

Keywords: consumption, demographic, economic, gross capital formation, input, output, value added

1. Introduction

The attempt to find an interaction between population and economy seems to be the goal of economic researchers; typical classical economists interested in the demographic-economic relationship are TR Malthus (1766 -1834)¹, Adam Smith (1723 - 1790) and David Ricardo (1772 - 1823). However, their theory is rarely expressed in the form of mathematical expressions.

Coale& Edgar M. Hoover (1958) argued that structural change of the number leads to changes in the structure of the economy through savings and investment, from changes in population structure can leading to economic growth and it is considered a demographic gift. David Bloom and Jeffrey Williamson (1997), Ahlburg, Dennis A (1987) and Barro, Robert J. (1997) found the impact between economic growth and Population Growth in development countries.

Since, Leontief's Input-Output System (IOS) came out into (1936, 1941), it has been further developed and expanded in many ways by various researchers. Moreover, including originally inter-regional input-output table by Isard (1951), multi-regional input-output model (MRIO) by Chenery (1954) and Moses (1955) and Miller, Blair (1985); Social accounting system by Stone (1961) Pyatt and Rose (1977). Demographic – economic model was parallel developed with social accounting matrix by Miyazawa (1976) and Madden and Batey (1983), Demographic – economic model has been developed by Miyazawa for analyzing the structure of income distribution by endogenous consumption expenditures in the standard of Leontief system. It means the Leontief

¹Malthus was an English reverend (1766-1843), who in his book “An Essay on the Principles of Population” wrote an argument against his contemporary Mr. Godwin, who believed in unlimited population growth. *Malthusian population theory* warned of the possibility, that while the population grew geometrically, food resources grew only in arithmetical proportion, thus creating the conditions for a shortage in the long term that would require an adjustment in the birth rate.

system was extended by a group of consumption expenditures in column and corresponding group of row income. In 2019, Nhung N.H, Thai N.Q, Trinh. B, Phong N.V (2019) applied this model for analyzing on rural and urban in Vietnam economic structure.

There are some research on economic structure based on input – output analysis such as Hussain AliBekhet (2009) also used input – output approach in order to decompose of Malaysian production structure and calculating output, income, employment multipliers in Malaysian Economy, this author also used input – output system for ranking Sectors Changes of the Malaysian economy (2010), B.Trinh, B.Quoc (2017) applied input – output system in order to research on industrial Structure, GDP Growth and sustainability of Vietnam, Bui Trinh, Kiyoshi Kobayashi, T. D. Vu, P. L.Hoa & Nguyen Viet Phong (2012) also used input – output model for forecasting Economic Structure for Vietnam Toward Sustainable Economic Growth in 2020

This study tries an attempt to extended Miyazawa’s model which investment at columns and operating surplus at rows. That means the input – output system was not only extended by type of aging groups at consumption of employees at rows and final household consumption at columns, but also gross capital formation at columns and total income of producers (operating surplus and exogenous income) at rows. In this system, it is allowed to consider changing population structure which not only affects economy through saving or investment but also the structure of final consumption by age also spreads to output and income. So, in this research is not only this related inter-sartorial at first-time distribution for considering but also the impact of demographic to economic activities and re-distribution income follow by type of age group.

Study was using input - output tables in 2012, 2016 and merging the data sources of input-output system, population census and household expenditure surveys for finding the change on impact of demographic to economy

2. Methodology

This research uses type I and type II of Leontief system.

Type I of input-output analysis is based on standard equation of Leontief system:

$$X = (I - A^d)^{-1} \cdot Y^d \tag{1}$$

In this type, We get power of dispersion and sensitivity of dispersion for output and income matrix that is included impacts by factors of final demand. In this case, X is matrix of output that induced by factors of final demand, I is unit matrix, A^d is domestic direct input coefficient, Y^d is matrix of domestic final demand that defined as:

$$Y^d = Y^d(C_1, C_2, C_3, I, G, E) \tag{2}$$

C₁, C₂, C₃ are final consumption present before working ages, in the working ages, past the working ages corresponding, I is vector of gross capital formation, G is vector of Government consumption expenditure, E is vector of export. In order to estimate value added induced by a unit of final demand the equation (1) can rewritten as below:

In order to estimate value added induced by a unit of final demand the equation (1) can rewritten as below:

$$V = v \cdot X = v \cdot (I - A^d)^{-1} \cdot Y^d \tag{3}$$

Where: V is matrix of value added with rows presents type of income and columns are sectors; v is matrix value added coefficient, with: v_{ij} = V_{ij}/X_j

And:

$$X \div Y^d \text{ present impacts of factors of final demand to output}$$

$$V \div Y^d \text{ presents impacts of factors of final demand to value added}$$

Here: ÷ shows scalar division

The equation (2) shows induced impacts of each factor of final demand to components of value added, for example, it can measure how much final consumption of type of ages induce to components of value added. This shows that the structure of age does not only affect the economy from changes in savings / investment but also depends on the final consumption factor of each type of age spreading to the production and income.

Type II is an expansion Leontief system and Miyazawa model. The study considers the following systems:

$$A \cdot X + c_1 \cdot T_1 + c_2 \cdot T_2 + \dots + c_n \cdot T_n + k \cdot T_c + E = X \tag{4}$$

$$v_i \cdot X + V'_i + V''_i + V'''_i + V''''_i = T_i \tag{5}$$

$$v_c \cdot X + V'c = Tc \tag{6}$$

Where: $v_i \cdot X = V_i$; $v_c \cdot X = V_c$; $i = (1, n)$ is number of type aging groups

V_i and V_c are production income of labor and capital corresponding, X is an vector of output;

And:

A is matrix of direct input coefficients;

V'_i ($i = 1, n$) is exogenous income of aging group i that receipted by other aging groups

V''_i ($i = 1, n$) is exogenous income of aging group i that receipted by transferring of Government institutional

V'''_i ($i = 1, n$) is exogenous income of aging group i that receipted by production sector

V''''_i ($i = 1, n$) is exogenous income of aging group i that receipted by transferring from abroad.

T_i is total income of aging group i , T_c is total income on capital, it includes share of capital ($v_c \cdot X$) and capital transfer ($V'c$),

c_i, c_n are coefficients vectors of final household consumption of household by aging group i^{th} , household consumption of product i ($C_i(i)$) defined as below:

$$c_i(i) = C_i(i) / T_i(i) \tag{7}$$

k is a vector coefficient of gross capital formation (K), that element k_i was defined:

$$k_i(i) = K_i / T_c(i) \tag{8}$$

T_c is total income on capital (including operating surplus and capital transfer income),

Put:

$$B = \begin{pmatrix} A & c_i & k \\ v_i \\ v_c \end{pmatrix} \tag{9}$$

The equation system (1), (2), (3),(4),(5) and (6) can be rewritten in a matrix form like standard Leontief equation with endogenous and exogenous variables of incomes and expenditures and we have:

$$\begin{pmatrix} X \\ T_i \\ T_c \end{pmatrix} = (I - B)^{-1} \cdot \begin{pmatrix} E \\ \theta \\ V'_c \end{pmatrix} \tag{10}$$

Where I is an unit matrix, $\theta = V'_i + V''_i + V'''_i + V''''_i$

And Put: $L = (I - B)^{-1}$

$$L = (I - B)^{-1} = \begin{pmatrix} L^A & L^{C_i} & L^k \\ L^{V_i} & H \\ L^{V_c} \end{pmatrix} \tag{11}$$

L is computed based on Sonis and Hewings work (1993) where:

L^A is called enlarged Leontief inverse matrix. It includes multiplier effects $(I - A)^{-1}$ and induced feedback effects by L^{Ci} , and L^k . To be explicit, we have:

$$L^A = (I - A - c_i.T_i - k.T_c) \quad (12)$$

L^{Vi} , and L^k are income multipliers that spillover effects caused by final consumption and gross capital formation, we have:

$$M(L^{Vi}, L^k) = M(V_i, V_c)L^A \quad (13)$$

Applying Miyazawa explained matrix, we have:

$$M(L^{Ci}, L^k) = (I - A)^{-1}.M(c_i, k).H = L^A.M(c_i, k) \quad (14)$$

With: $M(c_i, k)$ is sub-matrix of extended matrix B and $M(L^{c1}, L^{c2}, L^{c3}, L^k)$ is sub-matrix of matrix L. The number of row of this matrix is equal to the number of sectoral of the input-output table, and its number of column is the additional numbers of row as of Leontief extended matrix.

H is an enlarged matrix of Miyazawa interrelation income multipliers. This means exogenous income induced impact on redistribution of income. It causes spillover effects to production through household consumption by age, since we have:

$$H = I + M(V_{ii}, V_c).L^A.M(c_i, k) \quad (15)$$

It implies that final expenditure stimulates income outside of production

So, Formula (10) can be rewritten:

$$L = \begin{bmatrix} L^A & L^A.M(c_i, k) \\ M(V_i, V_c).L^A & I + M(V_i, V_c).L^A.M(c_i, k) \end{bmatrix} \quad (16)$$

3. Conclusion

With the above arguments, it is hoped to find new conclusions: With the same input conditions, it is hoped that the output of this extension model can obtain "non-linear" results, depending on belonging to "integrated" relations. This research question is being applied to Vietnam's economy data and new search results will be presented in a subsequent article.

We hope that in the future, it will present some findings based on the proposed model with data based on the use of input tables - outputs for 2012, 2016 and consolidation of system data sources. input, census and household expenditure survey in Vietnam. Hopefully there will be "non-linear" results, which are not linear and relations have been "integrated".

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The Role of Knowledge Management on Competitive Advantage in Jordan Manufacturing Companies from Employees Perspectives

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Received: April 8, 2019

Accepted: May 5, 2019

Online Published: May 16, 2019

doi:10.5539/ibr.v12n6p58

URL: <https://doi.org/10.5539/ibr.v12n6p58>

Abstract

The study aimed to investigate the role of knowledge management on competitive advantage in Jordan manufacturing companies from employee's perspective. The research used the descriptive analytical methodology. In addition a self administrated questionnaire was developed according to research hypothesis and objectives for the purpose of achieve the study objectives. The research sample consisted of. 255 subjects. The self administrated questionnaires were distributed over 0 research sample, 240 questionnaire were collected, therefore the research sample is 240.. All gathered data were checked and coded then analyzed by using the social Packaging statistical System (SPSS). The study concluded that there is a relationship between knowledge management and competitive advantage in Jordanian industrial companies from the point of view of administrative employee perspectives. In addition the data also concluded that here is a relationship between knowledge generation and competitive advantage. Also there is a relationship between knowledge storage and competitive advantage and there is a relationship between knowledge sharing and competitive advantage in Jordanian industrial companies. The study revealed hat there is a relationship between knowledge application and competitive advantage.... The study recommended that Jordan manufacturing companies have to encourage knowledge management use and to notify their employees with the motives behind such use for obtaining their support.

Keywords: knowledge management, competitive advantage, industrial companies

1. Introduction

Modern technological changes imposed on organizations regardless of their activities many challenges that had to be faced with modern management methods to enable organization to maintain its survival and increase its ability to achieve its objectives efficiently and effectively. Knowledge management and its programs were the methods proposed by specialists and management scientists to meet these challenges. In order to meet these challenges and improve performance, the application of knowledge management is one of the ways in which organizations can resort to it. This is done through the re-educating and re-training of the labor force in knowledge management, building the knowledge base of the organizations, as well as through the organizations' tendency to collect and disseminate knowledge at all levels of management and develop their quest to invest in acquiring new knowledge and employing the knowledge that it possesses Enabling efficiency and efficiency to the stage of excellence by promoting the so-called best practice.

Problem Statement

As a result of the role played by knowledge management in most business organizations, knowledge management has become a source of competitive advantage. This means shifting attention from tangible to intangible assets, of which knowledge is the most important. It is worth mentioning that the industrial companies are the most needed to apply knowledge management. Industrial companies are able to control the useful knowledge and able to implement are the most who can gain the competitive advantage. Therefore the study problem is an attempt to investigate the impact of knowledge management on competitive advantage by answering the following questions:

1- Do Jordanian industrial companies apply knowledge management?

2- What is the role of knowledge management on competitive advantage of Jordanian industrial companies?

3- Do knowledge management elements (knowledge generation, knowledge storage, knowledge sharing and application of knowledge) have a role in competitive advantage?

Study Objectives and Importance

This study aims to identify the impact of knowledge management on competitive advantage in Jordanian industrial companies in addition to the following:

1. To find out to what extent industrial companies are implementing knowledge management
2. To identify the role of knowledge management elements in competitive advantage of industrial companies

This study importance stems from the importance with the subject it deals with, in addition it may contribute indicating the benefits and advantages of knowledge management implementation for those concerned.

Research Hypotheses

According and based on previous studies, the research suggests the following hypotheses:

H01: There is no statistically significant role of Knowledge management on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective

The following sub hypotheses are derived

- **H01.1** There is no statistically significant role of Knowledge generation on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective
- **H01.2:** There is no statistically significant role of Knowledge storage on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective
- **H01.3:** There is no statistically significant role of Knowledge sharing on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective.
- **H01.4:** There is no statistically significant role of Knowledge application on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective

Population and Sampling

The study population consisted of all employees of industrial companies, listed in Amman Exchange Market. Random sample amounting 240) employees were selected as research sample.

Research Instrument

The researcher designed a questionnaire to investigate the role of knowledge management in the competitive advantage in industrial companies through using previous studies. The instrument consisted of two parts: the first includes demographic data, while the second part includes statements that measure elements of knowledge management

Instrument Validity

The questionnaire was proof-read by a panel of university instructors. Their comments and amendments were taken in consideration. Therefore some items were eliminated or added to form the final form of the questionnaire.

Reliability

Cronach alpha was used to test the consistency. According to this test, the overall reliability level was equal to (0.91) which is considered as an acceptable level of reliability (

Table 1 shows values of Cronach's alpha for each variable of the questionnaire and the entire questionnaire.

Table 2 indicate that the total Cronach's alpha score was, this means the data obtained is suitable for measuring variables and are subject to high reliability.

Table 1. Instrument Reliability

Variables	Cronach Alpha	
Knowledge Management	Knowledge generation	74.3%
	Knowledge storage	72.1%
	Knowledge sharing	76.2%
	Knowledge application	75.2%
Competitive Advantage	77.1%	
The whole instrument	91%	

Data Collection Methods

Two data collection methods are available as follows

Secondary Data:

The research used published Arabic and foreign books, references, research papers, theses and articles either printed or electronic related to diversification and competitive advantage, in addition to the Internet, and different databases to obtain the latest international researches that handled study topic.

Primary Sources:

Such data was collected through a survey which was designed and developed according to research objectives based on what was presented theoretically in the literature of knowledge management and competitive advantage.

Data Analysis

The data were analyzed by using Statistical Package of the Social Sciences (SPSS) the following statistical analysis was used

1-Descriptive statistics were used for the purpose of obtaining frequencies, percents of demographic variables.

2-Central tendency Measures (means and standard deviations) for sample's responses on the questionnaire statements and to find out the relative importance of the independent variables

Furthermore simple regression and multiple regression were used to find the impact of independents variable on the dependent variables

2. Knowledge Management

Knowledge is considered important source to learn new things, solve problems, create core competitiveness in addition to establish new positions either for individuals or for organization now and for the future. Knowledge management refers to the organization's strategic efforts to achieve competitive advantage by exploiting the intellectual assets carried by employees and customers and to learn lessons. (Jamous, 2013, p. 58). In this regard Nasimi, et al, (2013) defined Knowledge management as "a process to helps organizations that identify, select, organize and publish important information and skills which are considered as the institutional memory and typically are not organized" .

Knowledge Elements Management

Knowledge management is a system adopted by the organization based on several interrelated elements and elements that are relevant to achieving the goal set. Knowledge management consists of four basic elements that are mentioned as follows: (Bakush, 2014, pp. 40-41)

A. Personnel

Knowledge and knowledge management staff is the core part of knowledge management strategy. It is not only because the individual stores the knowledge which organization and staff needs, but also contributes to all stages of knowledge management.

B. Technology:

Technology is one of the most important tools and knowledge management and one of the most important in generating and creating knowledge from people.

C. Processes:

The process provides skill and craft, which are considered the most important sources of knowledge

D. Strategy:

Means to act against threats or to exploit opportunities based on strengths, weaknesses and strategy as a knowledge management component that examines the operational methods and roles entrusted to the knowledge management officer and aims to develop the organization's knowledge and sustainability strategy.

Importance of knowledge management

The importance of knowledge can be summarized as follows: [Hamshari, 2013, pp. 110-112

- Investment of intellectual capital, as the value of organizations (and shares) are greatly affected by the value of intellectual capital (capital Intellectuals)

- Coordinating various activities of Organization for the purpose of achieving its established objectives, thus enhancing organization's commitment to these activities and objectives;
- Strengthening core competencies of organization;
- Improve organizational performance, as knowledge management generates and implements new knowledge, leading to improved and improved organizational performance;
- Providing organization with an opportunity to identify, document and develop its intangible assets, identify the knowledge required and bridge the gap between them;
- Encourage organizations to encourage the creativity of their human resources to create new knowledge, to renew themselves and to cope with unstable environmental changes
- Building a sustainable competitive advantage for organizations, through the unique adoption of innovations of new ideas, goods and services;
- Improved processes in the Organization, by increasing their effectiveness
- Improvement and development of existing products, new value-added products and knowledge-based products, thereby helping to increase the competitiveness of organization;
- Improve level of human capital by encouraging him to learn, develop his work skills, help him solve his problems, increase his ability to adapt to changes and changes in him, prepare him to absorb change and adapt to it, and increase his spirit of cooperation, teamwork and work satisfaction- ; .
- Reducing costs and raising organization's internal assets to generate new revenue;
- Support efforts to benefit from all tangible and intangible assets by providing a framework for strengthening organizational knowledge;
- Maximize the value of knowledge by focusing on content;
- Encouraging targeted organizational change and business reengineering to achieve the organization's objectives and help it to excel and lead in a rapidly changing and volatile environment.

Knowledge Management Operations

The following are the main knowledge management operations:

1-Knowledge Capture and Generation

In order to improve competitive advantage, organizations should have processes of acquiring new knowledge. One of the most important ways to achieve this is to create, generate, develop, build and create knowledge internally. If organizations are not able to develop knowledge among them, there is an alternative to acquiring knowledge from outside sources..(Lekena and Bayaga,2014)

2-Knowledge Storage

This phase is concerned with the structure and storage of knowledge that has been created or acquired in ways that make it more formal and accessible. This can include other processes such as documentation, coding, sequencing, representation and classification, and knowledge updating (Koech , et al , 2015))

3-Knowledge Sharing

If knowledge is properly organized and stored, efforts are directed towards making knowledge available to all who needs it. Knowledge that remains under the control of one individual is of little importance to organization as a whole. Since one of the objectives of knowledge management is the participation of every employee in the organization to develop a society to share knowledge, (Muhamad&Rosmaini , 2010)

4-Knowledge Application:

This phase or process involves knowledge integration into company's products, services and practices. In general, organizations need to exploit, utilize and apply knowledge in their outputs, operations and practices in order to derive value from them (Chaubey and Chanderkanta.2011)..

Competitive advantage

Sigalas, et al. (2013, p 324) defined competitive advantage as “the capability of a firm to create more economic value than the least efficient competitions”. Competitive advantage is also defined as: "All organization characteristics that distinguish it from other companies that lead to satisfy current or potential customers' wishes and reflect their impact on an increase in market share and profitability (Kadhim, 2014: 11.) In this regard Wang

(2014) mentioned that attaining this competitive advantage helps the company understand all the changes occurring in its market structure, and thereafter, it can select the most effective and beneficial marketing strategy. Kotler & Armstrong, (2012).indicated that implementing competitive strategy has many aims as follows:

- To establish company's right positioning.
- To maintain loyal customers.
- To obtain new market share.
- (4)To increase sales.
- To establish effective business performance

Characteristics of Competitive Advantage

According to Dirisu, et al (2013) competitive advantage has many as follows

- 1- it should be sustainable to take the lead in the long term and not only in the short term
2. Competitive advantages usage should match with the objectives and outcomes that the organization wishes to achieve in the short and long term.
- 3- Follow the policy of continuous change, which seeks to develop the company, and improve performance, and maximize profits.
4. It should be able to attract skilled staff, who have skills, exceptional skills, and innovators who are able to devise new plans and policies for
- 5- .It should take into consideration and adopts innovation in its policy, and seeks to be unique providing services and goods to customers.
- 6- It should be flexible in design and implementation of plans

Jeevan Jyoti,. Roomi Rani and Sindhu Kotwal (2013) Knowledge Management Practices and Competitive Advantage: The Mediating Role of Innovation Capacity ,

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Knowledge management and competitive advantage

Various studies were carried out regarding the role of knowledge management in competitive advantage for example:Jeevn, et al (2013) study aimed to investigate the impact of knowledge management on competitive advantage through innovation capacity (mediator) of an organization. The study sample consisted of 331 employees selected from the private telecommunication organizations.. The study concluded that all practices of knowledge management are being practiced by telecommunication organizations. And the innovative capacity is mediated fully the relationship between knowledge management and competitive advantage. Moses, et al (2010)r examined the relationship between knowledge management and competitive advantage, in a developing country.. The study concluded that there is a positive correlation between knowledge management and competitive advantage;

Bahram andMeiham(2013) found that knowledge management has an impact on the surface of the competitive advantage's Knowledge management and competitive advantage.. The results indicate that Knowledge management has made a significant competitive advantage. Josephine, et al .,(2018)examine the Role of Knowledge Management on the Competitive Advantage of Food and Beverage firms in South East Nigeria. The study found that enhanced collaboration had significant effect on employees' empowerment that increased sales growth in the firm

Ratib , et al (2011)assured that there's an effect for the knowledge management on achieving competitive advantage at Jordan Telecom Group(Orange) .In this context Abed Al Ghafour(2015) indicated there is a strong relationship between requirements of knowledge management and competitive advantage Mohammad (2010) found that there isa high impact between knowledge management and competitive advantage .Mohammad (2010) found that there isa high impact between knowledge management and competitive advantage Mundra , et al(2010) concluded that exploring new methods for knowledge management has large impact on companies products and services. They added that innovation is necessary to achieve competitive advantage. Goel (2010) argued that knowledge management assets in improving managerial and organizing aspects in addition to financial issues, which in its turn achieve competitive advantage. Moses, et al (2010)study shows that there is a positive correlation between knowledge management and competitive advantage; which relationship is greatly enhanced by the interaction impact of market orientation. When market-based knowledge is appropriately

responded to, it augments the competitiveness

Based on the research conducted by Zack (2000)(which included 25 organizations it was found that the relation between knowledge management and the strategic advantages of organizations. Implementing knowledge management processes in organizations should lead to benefits. Competitiveness by enabling the organization to formulate better and more appropriate application of its competitive, care-based strategy and attention to the areas of strategic knowledge in which knowledge management becomes a strategic issue and its direct support of the organization's competitive strategy, and focus on the issue of both strategy and knowledge management come together from the fact that they understand the strategic nature of knowledge itself, and that the strategists in the organizations are aware the strategic role of knowledge, and are therefore able to direct the strategic focus of knowledge and then learning Is within their organizational and strategic responsibilities in the organization, and the organizations are aware and convinced of the relationship between the strategy. Competitiveness and knowledge management that are supposed to emphasize the issue of complimentary and interrelationship among the implementers of knowledge management and necessity collaborate with their strategists to ensure that the competitive advantages of knowledge management processes are achieved

3. Data Analysis

Table 1. Frequencies and Percentages of Respondents according to their Demographic Information

Variable	Option	Frequency	Percentage%
Gender	Male	210	87.5
	Female	30	12.5
Age	Less than 25 years	60	25.0
	25- 35 years	140	58.3
	36 to -45 years	40	16.7
Education level	High School	144	60
	BSc.	96	40
Position	Head department	20	8.3
	Head section	72	30
	Employee	148	61.7
Experience	Less than 5 years	80	33.3
	5- 10 years	100	41.7
	10+	60	25

Table (1) indicates that, 87.5 percent of the total sample was male's while 12.5 percent were females. Sample's age e ranged from less than 25 years to 45+ years. 25% were 60 percent of the sample were less than 25 years, 58.3 percent were between 25 -35 years, and 16.7 percent were between 35 to 45 years. As for education level 60 percent have high school and 40 percent have Bsc degree. With respect to subject's position 8.3 percent were head department, 30 percent were head section and 61.7% were employees. With regard to years of experience 33.3 percent of the sample have (less than 5 years), 41.7 percent have between (5-10 years) and finally 25 percent have 10 + years

Table 2. Means and standard deviations of sample's responses regarding knowledge generation

N0	Questions	Mean	Deviation.S	Rank
1	The company conducts researches and development continuously	3.07	1.039	4
2	The company conducts technological studies from time to time	3.58	1.030	1
3	The company organizes brainstorming sessions	2.77	1.155	5
4	The company attracts researchers and consultants	3.33	1.160	3
5	The company has the technological infrastructure for knowledge generation	1.93	1.274	6
6	The company provides financial provision needed to generate knowledge	3.47	1.214	2
	General Average	3.03	.707	

Table 2 indicates different degrees of sample's agreement..Statement no. (2)" The company conducts technological studies from time to time" ranked the first , while statement no.(5) " The company has the technological infrastructure for knowledge generation " ranked the last. . The general average confirms the application of knowledge generation by industrial companies in Jordan.This indicates that industrial companies seek to generate knowledge because of its importance to companies activities and its impact on achieving a competitive advantage. It is clear that industrial companies recognize the importance of generating knowledge for their activities.

Table 3. Means and standard deviations of sample's responses regarding Knowledge storing

No.	Question	Mean	S.Deviation	Rank
7	The company documents new thoughts	3.60	1.196	2
8	The company uses data base to access needed knowledge	3.60	1.092	3
9	The company classifies the available knowledge	3.47	1.096	6
10	The company uses electronic means to store knowledge	3.92	.926	1
11	The company stores knowledge that facilitates its use	3.53	1.016	5
12	Technologies available in the company has the ability to store large volume of information	3.46	1.295	7
13	The company has qualified staff to store the information	3.22	1.637	8
14	The company has the ability to deal with data bases	3.58	1.030	4
	General Mean	3.55	.892	

Table 3 indicate subject's sample agreement regarding knowledge storing. Statement no. (10) " The company uses electronic means to store knowledge" ranked the first, while statement no. (13) " The company has qualified staff to store the information " ranked the last. The general average confirms company's strategy regarding knowledge storing

In general, it is clear that the industrial companies are keen to provide the techniques and means through which they can store the knowledge to benefit from them. The total average is 3.31. This indicates that the application of knowledge storage in industrial companies is high because these companies rely heavily on information Which they have to sustain in making decisions and putting these information within reach of the employees of the company-

Table 4. Means and standard deviations of sample's responses regarding sharing

No.	Question	Mean	S.Deviation	Rank
15	The company supports periodical meetings for knowledge sharing	3.27	1.260	6
16	The company enhances staff communications	3.45	1.048	3
17	The company hosts experts from outside	3.63	1.104	1
18	The company purchases the needed knowledge	3.57	1.170	2
19	The company organizes scientific different meetings	3.27	1.460	7
20	The company provides staff with the opportunity of knowledge sharing	3.30	.889	5
21	The company provides the worker with all equipment needed for knowledge access	3.37	1.193	4
	General Average	3.4071	.71493	

Table 4 shows subjects agreement regarding knowledge sharing. Statement no. (17) " The company hosts experts from outside" ranked the first, while statement no. (19) " The company organizes scientific different meetings" ranked the last. The general average confirms company's knowledge sharing..

This indicates the extent to which industrial companies understand the importance of knowledge, sharing which is one of the most important elements of knowledge management without sharing knowledge and distributing it to employees.

Table 5. Means and standard deviations of sample's responses regarding knowledge application

No.	Question	Mean	Deviation	Rank
22	The company is keen to implement its available knowledge in its activities	3.72	1.106	2
23	The provides all facilities to implement the available knowledge	3.43	1.226	4
24	The company motivates employees to implement the available knowledge	3.37	.938	5
25	The company implement knowledge to improves work procedures	3.50	1.432	3
26	The company trains some employees outside for implementing the knowledge	3.80	.840	1
	General Average	3.5633	.73507	

Table 5 indicates subject's agreement regarding knowledge application. Statement no. (26)" The company trains some employees outside for implementing the knowledge" ranked the first, while statement no.(24) " The company motivates employees to implement the available knowledge " ranked the last. The general average confirms knowledge application

Table 6. Means and standard deviations of sample's responses regarding Competitive advantage

No.	Question	Mean	S.Deviation	Rank
27	The company maintains good quality to face competitors	3.50	1.242	2
28	The company is keen to have products that match international standards	2.62	1.290	5
29	The company seeks all efforts to improve its products. The company is keen to meet market needs	3.63	1.615	1
30	The company is flexible to accept external environmental changes	3.37	1.207	4
31	The company seeks to innovate new ways to modify its products	3.42	1.700	3
General Mean		3.3611	.86964	

Table 6 illustrates subjects' agreement regarding employees competitive advantage no.(29)" The company seeks all efforts to improve its products " While statement no.(28) " The company is keen to have products that match international standards "ranked the last.

Hypotheses Testing According and based on previous studies, the research suggests the following hypotheses:

H01: There is no statistically significant impact of Knowledge management on Competitive Advantage achievement at the level $\alpha \leq 0.05$.in Jordanian industrial companies from employees perspective

Table 7. Regression model summary for main hypothesis

Variables	R	R Square	Adjusted R Square	F	Sig
	.874 ^a	.764	.747	44.468	.000

Model validity was tested through multiple regressions. Table (12) shows the obtained results of the first independent variable that were used in the model $f = 44.468$ at (0.00) level. The correlation coefficient was (R = .847) which indicate a positive relation between independent variable and dependent variable, in addition R^2 was =.764 which indicates that 76.4 %of variance in competitive may be interpreted through the variance knowledge management.

Table 8. Regression coefficient for the main hypothesis

Model	Un standardized Coefficients		S.d Coeff.	T	Sig.
	B	Std. Error	Beta		
(Constant)	.149	.324		.461	.647
Knowledge generation	.025	.109	.020	.225	.823
Knowledge storing	.523	.103	.536	5.093	.000
Knowledge sharing	-.276	.106	-.227	-2.593	.012
Knowledge Application	.624	.131	.527	4.776	.000

Table 8 showed that the regression coefficient ($\beta = 0.025, 0.523, 0.276, 0.624$) which indicates that the impact of knowledge management is significant since the values (0.225, 5.093, 2.593 and 4.776) at level (Sig = 0.000) save knowledge generation .therefore the null hypothesis is rejected and the alternative one is accepted. This means that there is statistically significant impact at ($\alpha \leq 0.05$) level of knowledge management on competitive advantage

The first Sub –hypothesis

The following sub hypotheses are derived

H01.1 There is no statistically significant impact of Knowledge generation on Competitive Advantage achievement at the level $\alpha \leq 0.05$.in Jordanian industrial companies from, employees perspective

Table 9. First sub Hypothesis

Variables	R	R Square	F	Sig	B	Beta	T	Sig.
Generation	.598 ^a	.358	32.361	.000	.736		5.689	.000

Table 9 indicates that $F = 32.361$ at (0.00) level .The correlation coefficient $R = .598$ which indicate a positive relation between independent variable and dependent variable, in addition R^2 was =.358 which indicates that 35.8 %of variance in competitive advantages may be interpreted through the variance in knowledge generation . This means that the model is valid for interpreting the variance in the dependent variable, so there is a possibility to carry out the multiple regression. Table also indicates that the regression coefficient ($\beta = 0.0736$) which indicates that the total impact knowledge generation on competitive advantage is significant since the values (5.689) at level (Sig = 0.000).therefore the null hypothesis is rejected and the alternative one is accepted. This means that there is statistically significant impact at ($\alpha \leq 0.05$) level of knowledge generation on competitive advantage in industrial companies in Jordan.

The second sub hypothesis :

H01.2: There is no statistically significant role of Knowledge storage on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective

Table 10. Second sub Hypothesis

Variables	R	R Square	F	Sig	B	Beta	T	Sig.
Storing	.806 ^a	.650	107.745	0.000	.786	.806	10.380	.000

Table 10 indicates that $f = 106.645$ at (0.00) level. The correlation coefficient was ($R = .806$) which indicates a positive relation between independent variable and dependent variable, in addition R^2 was $= .650$ which indicates that 65 % of variance in competitive advantage is due to the variance in knowledge storage.

Table 10 also indicated that the regression coefficient ($B = 0.786$) which indicates that the total impact of knowledge storage on employee performances is significant since the values (10.380) at level ($\text{Sig} = 0.000$). Therefore the null hypothesis is rejected and the alternative one is accepted.

The third sub hypothesis :

H01.3: There is no statistically significant impact of Knowledge sharing on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian industrial companies from employees perspective.

Table 11. The third sub hypothesis

Variables	R	R Square	F	Sig	B	Beta	T	Sig.
Sharing	.423 ^a	.181	12.820	0.000	.520	.423	3.480	.000

Table 11 indicated that $F = 12.820$ at (0.00) level. The correlation coefficient was ($R = .423$) which indicates a positive relation between independent variable and dependent variable, in addition R^2 was $= .181$ which indicates that 18.1 % of variance in competitive advantage may be interpreted through the variance in knowledge sharing. This means that there is a possibility to carry out the multiple regression.

Table 11 showed that the regression coefficient ($B = 0.520$) which indicates that the impact of knowledge sharing on competitive advantage is significant since t value is (3.480) at level ($\text{Sig} = 0.000$). Therefore the null hypothesis is rejected and the alternative one is accepted.

The fourth sub hypothesis

H01.4: There is no statistically significant role of Knowledge application on Competitive Advantage achievement at the level $\alpha \leq 0.05$ in Jordanian

Table 12. The fourth sub hypothesis

Variables	R	R Square	F	Sig	B	Beta	T	Sig.
Application	.785 ^a	.620	93.610	0.000	.932	.785	9.783	.000

Table (12) shows that $F = 93.610$ at (0.00) level. The correlation coefficient was ($R = .785$) which indicates a positive relation between independent variable and dependent variable, in addition R^2 was $= .620$ which indicates that 62. % of variance in competitive advantage may be interpreted by knowledge application. This means that the model is valid for interpreting the variance in the dependent variable, so there is a possibility to carry out the multiple regression.

Table 12 showed that the regression coefficient ($B = 0.932$) which indicates that the impact of knowledge application on competitive advantage is significant since t value is (9.783) at level ($\text{Sig} = 0.000$). Therefore the null hypothesis is rejected and the alternative one is accepted.

4. Conclusions and Recommendations

In light of data and information analysis, the study concluded that there is a relationship between knowledge management and competitive advantage in the Jordanian industrial companies from the point of view of administrative employee.

The result is consistent with Jeevn, et al (2013). Which concluded that all practices of knowledge management are being practiced by telecommunication organizations. and Moses, et al (2010) which concluded that there is a positive correlation between knowledge management and competitive advantage; and with Bahram and Meiham (2013) which found that Knowledge management has made a significant competitive advantage. Moreover the results are consistent with Ratib, et al (2011) who assured that there's an effect for the knowledge management on achieving competitive advantage at Jordan Telecom Group (Orange). In this context Abed Al Ghafour (2015) indicated there is a strong relationship between requirements of knowledge management and competitive advantage. Mohammad (2010) found that there is a high impact between knowledge management and

competitive advantage. Mohammad (2010) found that there is a high impact between knowledge management and competitive advantage. Mundra, et al (2010) concluded that exploring new methods for knowledge management has large impact on companies products and services. They added that innovation is necessary to achieve competitive advantage. Goel (2010) argued that knowledge management assets in improving managerial and organizing aspects in addition to financial issues, which in its turn achieve competitive advantage. Moses, et al (2010) study shows that there is a positive correlation between knowledge management and competitive advantage; which relationship is greatly enhanced by the interaction impact of market orientation. When market-based knowledge is appropriately responded to, it augments the competitiveness

In addition the data also concluded that there is a relationship between knowledge generation and competitive advantage in the Jordanian industrial companies from the point of view of the administrators. This can be explained by the senior management's understanding of the advantages of knowledge and what information can be given to assist the company in its productive activities. Also there is a relationship between knowledge storage and competitive advantage and there is a relationship between knowledge sharing and competitive advantage in Jordanian industrial companies. The study revealed that there is a relationship between knowledge application and competitive advantage...

The study recommended Jordanian industrial companies have to encourage the use of knowledge management to achieve the objectives of this use, which is to provide accurate information to decision makers in these companies. It is also recommended to identify the motives of using knowledge management and clarifying them to employees in order to gain their cooperation and motivate them to innovate, which is positively reflected on the performance of the company.

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Factors Affecting Millennials' Attitudes toward Luxury Fashion Brands: A Cross-Cultural Study

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Received: April 29, 2019

Accepted: May 16, 2019

Online Published: May 17, 2019

doi:10.5539/ibr.v12n6p69

URL: <https://doi.org/10.5539/ibr.v12n6p69>

Abstract

The millennials are an important cohort in luxury market, because of their purchasing power and the power of social media interaction. However, little is known about factors underlying their attitudes toward luxury fashion brands and online purchase intentions. This study explores whether materialism, a need for uniqueness, susceptibility to informative influence, and social media usage affect millennials' attitudes toward luxury fashion brands and online purchase intentions. In addition, this research examines cross-cultural differences between Russian and Korean millennials based on four cultural dimensions of Hofstede's model. The results indicated that all factors significantly related to attitudes towards luxury brands, and this, in turn, positively effect on online purchase intentions. Moreover, the results indicated that millennials from Korea and Russia pursue a need for uniqueness, some differences were revealed regarding materialism, susceptibility to informative influence and social media usage. Theoretical and practical implications are further discussed.

Keywords: luxury fashion brands, millennials, materialism, need for uniqueness, susceptibility to informative influence, social media usage

1. Introduction

The millennials are an important generational group of consumers who purchase luxury online and therefore to determine their attitude to luxury has become an important subject for this study. Moreover, the millennials have different attitudes compared to other groups. They are very savvy in the usage of new technologies and they are more concerned in online behavior like online shopping (Klapilova, 2016) where their purchasing rate is ranked to be the highest (Dhanapal et al., 2015).

With the increasing purchases of luxury brands online by millennials, it has become highly necessary to understand factors underlying millennials' attitudes toward luxury fashion brands from a cross-cultural context. There are a lot of studies about millennials' attitudes toward luxury brands from U.S (Beaudoin et al., 2003), China (Zhan and He, 2012), Brazil (Gil et al., 2012), but there is no study relating to South Korea and Russia. There are several reasons why we chose to compare these two countries. First, South Korea and Russia are both fast-growing luxury markets and are the biggest ecommerce markets in the world. The luxury market in Korea is very sizable and has good growth opportunities. In 2016, amounting to the US\$11 billion, luxury supplies represent 3% of the worldwide luxury goods market and it is ranked the fourth highest growing luxury supplies market next to India, Malaysia and Indonesia (Luxury Society, 2017). The luxury market in Russia is roughly at €3.5 billion which already comprises 1.4% of luxury worldwide sales (Contactlab, Exane BNP Paribas, 2016). Moreover, South Korea and Russia are in top ten of the biggest ecommerce markets in the world, with annual sales of US\$37 billion and US\$20, respectively (business.com, 2017). Second, South Korea and Russia are culturally different countries. To date, no research has yet been found to explore factors driving attitudes toward luxury fashion brands within two countries, Russia and South Korea.

Using social comparison and social impact theories, this study describes conformity (materialism, susceptibility to informative influence, social media usage) and nonconformity (need for uniqueness) behaviors driving millennials' attitudes toward luxury brands across cultures. Social comparison and social impact theories

underpinning a theoretical model of current research because they suggest that people interact, compare themselves with others and form their attitude through social impact and comparison (Festinger, 1954; Latane, 1981).

Prior studies have investigated many various factors driving attitudes toward luxury brands, including the need for uniqueness (Gentina et al., 2015; Bian and Forsythe, 2012), materialism (Gil et al., 2012; Kim et al., 2012), susceptibility to influence (Gentina et al., 2015; Zhan and He, 2012), brand consciousness (Zhang and Kim, 2013), self-monitoring (Bian and Forsythe, 2012), experiential needs (Kim et al., 2012), social media usage (Kamal et al., 2013); but, there is a gap in the literature to taken four factors (materialism, need for uniqueness, susceptibility to informative influence, social media usage) together as influencing factors affecting attitudes toward luxury goods in the context of cross-cultural.

Therefore, the aim of this research is to simultaneously explore four influencing factors - materialism, need for uniqueness, susceptibility to informative influence, social media usage – that act as independent variables of millennials' attitudes toward brands of luxury fashion and online buying intentions. Moreover, this study is designed to examine whether there are cross-cultural differences in four aforementioned factors.

This paper contributes to prior literature in two important ways. First, this research is offering a framework that shows how four factors simultaneously affect millennials' attitudes concerning luxury brands and its online purchase intentions. Second, the findings will enable marketers of luxury fashion brands to understand cross-cultural differences in influencing factors driving millennials' attitude about luxury fashion goods and develop appropriate strategies that would increase the sales among this target group online.

2. Theoretical Background and Hypotheses

2.1 Materialism

Materialism is defined as a personality-like character of people who view possessions as necessary to their identities and lives (Belk, 1984). An increase usage of luxury goods is due to the high materialism which is led by growing need for sophisticated possessions. Thus, recent studies demonstrate impact of materialism on attitude and purchase intention towards luxury within online and offline contexts (Kamal et al., 2013; Park et al., 2007; Gil et al., 2012; Kim et al., 2012; Prendergast and Wong, 2003).

Richins (1994) suggests that highly materialistic individuals tend to give more importance on expensive and publicly displayed ownership objects, which represents social status and success. They are anxious with their living status judgment which tend them to compare more both cognitive and affective contexts with others (Atay et al., 2009). Social Comparison Theory connotes that in order to establish social status; people tend to compare their own material acquisitions with the possession of significant others (Chan and Prendergast, 2008). This theory provides a crucial grounding for understanding the effect of materialism on millennials' attitudes toward luxury brands. Millennials are more materialistic, status-seeking and are more prone to social comparison than previous generations. Based upon the aforementioned arguments, this research hypothesizes:

H1: The higher the need for materialism leads to have more positive millennials' attitude toward luxury brands.

2.2 Need for Uniqueness

The need for uniqueness is the need of a person to convey his/her uniqueness from others – to be dissimilar and not “just another face in the crowd” (Fromkin, 1972; Snyder and Fromkin, 1980). This study builds on social comparison theory to lead individuals compare themselves with others to satisfy the need for being different. Clients look for the improvement of their both personal and social images by using the status meanings of the goods they buy. This indicates that categories of goods, brands, and styles are utilized to fulfilling clients' need for uniqueness. In order to identify their characteristics and to establish unique identities, individuals buy luxury brands as what they own defines them (Belk, 1988). Because luxury brands are naturally in short supply due to their high price and limited distribution leading to have uniqueness context (Snyder and Fromkin, 1980; Vigneron and Johnson, 2004). Thus, consumers with high needs for uniqueness prefer unique brands (Tian and McKenzie, 2001) and have a more likely behavior concerning a good with a first-class price (Woodside, 2012). Based upon the arguments above, this research hypothesizes:

H2: The higher the need for uniqueness leads to have more positive millennials' attitude toward luxury brands.

2.3 Susceptibility to Informative Influence

The current study based on social impact and social comparison theories to explain the effect of susceptibility to informative influences on millennials' attitude concerning luxury brands. Susceptibility to informative influence is the inclination to examine peers, search for information from them and accept it as honest and realistic for

making sound decisions (Mishra et al., 2017; Bearden et al., 1989). In online environments, information can be collected from others, manufacturer or retailer and neutral or third party (Chen et al., 2016). Millennials get information regarding fashion selections from their peers, brands on social media and even from famous celebrities. These recommendations can help them to develop brand attitudes. Moreover, as millennials post their item ratings, reviews and online experiences (Bedard and Tolmie, 2018) they are often well-informed on items that being bought by others. As was found in prior studies, susceptibility to informative influence can be highly impactful in decision-making processes and it has a significant effect on attitude toward the brand (Gentina et al., 2016; Chen et al., 2016). Based upon the arguments above, this research hypothesizes:

H3: The higher the need for susceptibility to informative influence leads to have more positive millennials' attitude toward luxury brands.

2.4 Social Media Usage

Social media usage has primarily changed the buyers' platform, and for brands to keep up with the trend, they are required to become accustomed without delay to both changing consumer attitudes and advancing technologies. Previous studies show measuring social media usage has two dimensions. First dimension comprises the types of actions such as contributing, sharing, consuming, searching, participating while the second dimension covers usage intensity such as frequency and duration (Bolton et al., 2013). The current study investigates social media usage through types of activities. As intensity of social media use increases, the main goal for luxury brands' engagement with social media is the appeal of luxury among millennials.

Through the lens of social comparison and social impact theories, this study attempts to explore the association between social media usage and millennials' attitude toward luxury brands. Social Impact Theory states that social influence affects changes in behavior and beliefs of persons after having interaction with other people (Cialdini and Trost, 1998; Cialdini and Goldstein, 2004). As social media gives users access with their friends and others, they tend to do comparison which will result to increased usage of social media (Chu et al., 2013), and thus, through this comparison individuals can develop their attitudes toward brands. Due to social networks, millennials are connected with each other's and comments/reviews of their peers related to decision-making are vital to them.

Millennials' usage of social media is becoming a vital factor in decision-making process. Previous studies have shown positive relationships between millennial's social media usage and buying intention concerning luxury items (Chu and Kamal, 2011), attitudes towards social media advertising (Kamal et al., 2013). Jin (2012) claimed that consumers who were overwhelmed with a well-known Facebook page of the luxury item showed positive attitudes concerning a luxury item, and this has been considered as one of the factors of customers' intention to use Facebook for online shopping and explore this network before doing a final purchase. Hence, this research hypothesizes:

H4: The higher the social media usage leads to have more positive millennials' attitude towards luxury fashion brands.

2.5 Attitude and Online Purchase Intention

Fishbein and Ajzen (1975) asserted that attitudes can be explained as a cultivated inclination to react in a consistently favorable or unfavorable ways with respect to a certain thing. The cognitive hierarchy framework of Homer and Kahle (1988) suggests that favorable actions are the result of attitude. This has been supported in recent studies indicating a positive connection between attitude and intention (Ha and Janda, 2012), and is further explained by Ajzen and Fishbein (1980) in their Theory of Reasoned Action. According to this framework, a person's behavioral actions rely on his or her attitude concerning the subjective norms and actions related with behavior (Fishbein and Ajzen, 1975). In line with past research maintaining that the positive association between attitude and intention (Bian, 2010; Dabholkar and Bagozzi, 2002; Sheppard et al., 1988), this study hypothesizes that:

H5: Attitude towards luxury fashion brands is positively related to online purchase intention.

2.6 Cultural Differences

Cultural differences affect consumers' attitudes and behaviors (Aaker, 2000). The South Korea and Russia were chosen for this research as these two countries ranked similar in consumption of luxury fashion brands but differ in national culture. To further explain cross-cultural differences, the Hofstede model of national culture was used. This model claims that national culture portrays the norms, values and beliefs that are present within the people of a self-governing country (Schein, 2010; Hofstede et al. 2010). This study selected four dimensions of Hofstede's (2001) model of national culture: masculinity, individualism, power distance and uncertainty

avoidance. All these four dimensions were coupled with materialism, need for uniqueness, susceptibility to informative influence and social media usage.

Materialism is closely related with masculinity. Ogden and Cheng (2011) pointed out that masculinity is related with the aspect of success and high degree of materialism. Zinkhan and Prenshaw (1994) state that high level of masculinity is representing importance of an achievement, money and material things, growth and performance. This implies that individuals belonging to high masculinity culture evaluate material possessions more than those belonging to low masculinity culture. According Hofstede's (2001) model (Table 1), Koreans have higher masculinity scores than Russians. Yoon (2003) has asserted that Korean people since 1995 particularly the younger generations have been profiled materialistic. They consider money as the status symbol for success and giving much importance on acquiring luxury items which they can boast to others. De Mooij (2004) has added that luxury brands represent the individual's material success and this is more prevalent on the people from the masculine cultures than the feminine cultures. Based on Hofstede's (2001) model and the arguments above, this research hypothesizes:

H6: Korean millennials will demonstrate a higher materialism than Russian millennials.

There is congruence between need for uniqueness and individualism. Traditionally, collectivistic or eastern culture has been known to have different luxury goods purchase behavior from individualistic or western societies (Nancy and Aaron, 1998). Collectivists are more inclined to the interpersonal - oriented construal of personality; their emphasis is on the perceptions of the public and outer personality in buying luxury brands. On the other hand, individualistic customers buy luxury items for satisfaction and personal wants as they give high importance on their self-independence (Lee et al., 2014). But aspects of individualism and collectivism can also be different in a culturally similar society (Oyserman et al., 2002). According to Hofstede (2001) scores (Table 1), Russia is collectivistic country, but at the same time, Russians do not give up their interests (Naumov and Petrovskaya, 2010) and prefer to avoid similarity regarding purchasing of luxury goods (Kaufmann et al., 2012). Based on Hofstede's model and arguments above, this research hypothesizes:

H7: Russian millennials will demonstrate a higher need for uniqueness than Korean millennials.

There is compatibility between susceptibility to informative influence and power distance. Susceptibility to informative influence, explains that people are not really having an inclination to look for and accept information from individualistic orientation but from their interpersonal sources (Mourali et al., 2005) and power distance was more expected to have an impact on interpersonal sources' usage than individualism-collectivism (Dawar et al., 1996). Lam et al., (2009) claimed that individuals in high-power distance cultures are more involved in getting information than people in low-power distance cultures. According to Hofstede's (2001) index (Table 1), Russia represents high power distance scores than Korea, and would therefore show a higher tendency towards susceptibility to informative influence. Based on the above discussion, this research hypothesizes:

H8: Russian millennials will demonstrate a higher susceptibility to informative influence than Korean millennials.

Finally, social media usage is associated with uncertainty avoidance. Dadgar et al., (2017) have asserted that people whose uncertainty avoidance is high will utilize social media to search for more information to lessen uncertainty and difficulty and concluded that the higher degree of uncertainty avoidance will lead to more social media usage. Hudson et al., (2015) indicate that if uncertainty of avoidance is high, individuals tend to lessen the risks by doing constant social communications while if there is a low uncertainty avoidance, this behavior is not that much prevalent. Moreover, members who belong to high uncertainty avoidance group are more expected to be inclined in the details from legit and knowledgeable sources on social media. On the contrary, people from the lower uncertainty avoidance tend to focus more into wider references of opinions and ideas (Lin et al., 2017). With the growing demand to acquire reliable information related with luxury fashion items of the millennials, social media can be considered as a beneficial tool for them to search for details, since this platform has the ability to generate quick connection between the clients and brands (Li and Mousseaux, 2013). According to Hofstede's (2001) model (Table 1), South Korea has lower uncertainty avoidance scores than Russia. Consequently, based on Hofstede's model and arguments above, this research hypothesizes:

H9: Russian millennials will demonstrate a higher social media usage than Korean millennials.

Table 1. Hofstede's scores for Russia and South Korea

Hofstede national culture dimensions	Power distance	Uncertainty avoidance	Individualism	Masculinity
Russia	93	95	39	36
South Korea	60	85	18	39

3. Method

3.1 Data Collection

This study was focused on handbags as this category still make up the bulk of global luxury purchases and remained the top category sold online (Bain and Company, 2017). A pre-test was conducted to choose the brands for this research. The top ten luxury brands for handbags were obtained from Brand Finance's (2017) Global 500 report and the bestseller product with price ranges for each luxury brand were shown to 15 millennials in Korea and Russia. Participants were asked to rate brands according to the familiarity. Finally, 5 luxury brands for handbags (Louis Vuitton, Gucci, Coach, Prada, Chanel) were chosen and used for this study.

An online survey was performed as main test to analyze the hypotheses. The survey was first produced in Russian and was later translated to Korean and then back-translated into Russian by a bilingual person. In order to confirm the accuracy of the translation the author was cross-checked the original and back-translated versions. A total of 300 Russian and 301 Korean millennials be involved in the research from September to November 2018. Data in South Korea was selected through true research portal Dooit survey while data in Russia by posting the survey link on Facebook group pages. (Table 2) presents the demographic profile of respondents.

Table 2. Profiles of respondents.

Characteristic	Frequency (%)	
	Russia(N=300)	Korea(N=301)
<i>Gender</i>		
Male	82(27.3%)	84(27.9%)
Female	218(72.7%)	217(72.1%)
<i>Age</i>		
20-29	143(47.7%)	97(32.2%)
30-39	157(52.3%)	204(67.8%)
<i>Monthly Income Level</i>		
Less than 2000USD	171(57.0%)	86(28.6%)
2001-4000USD	119(39.7%)	147(48.8%)
More than 4001USD	10(3.3%)	68(22.6%)
<i>Education</i>		
High school	1(0.3%)	43(14.3%)
College	78(26.0%)	46(15.3%)
University	221(73.7%)	212(70.4%)
<i>Occupation</i>		
Student	95(31.7%)	26(8.6%)
Businessman	42(14.0%)	21(7.0%)
Employee	122(40.7%)	192(63.8%)
Other	41(13.7%)	62(20.6%)
<i>How much do you spend on luxury goods online per one time?</i>		
Less than 1000USD	204(68.0%)	165(54.8%)
1001-4000USD	88(29.3%)	122(40.5%)
More than 4001USD	8(2.7%)	14(4.7%)
<i>How often do you purchase luxury goods online in a year?</i>		
Once	122(40.7%)	151(50.2%)
2 times	114(38.0%)	105(34.9%)
More than 3 times	64(21.3%)	45(15.0%)

Percentage of female respondents was high, with more than 70% in Russia and South Korea. As for age group, the dominant group of the respondents was between 20-29 (47.7%) in Russia, and 30-39 (67.8%) in South Korea. Concerning the monthly income level, the biggest group had less than 2000USD (57%) for the Russian sample, and 2001-4000USD (48.8%) for the South Korean sample. The Russian and Korean samples present a high level of education, with more than 70% obtaining university degree. In terms of occupation, the majority of the respondents, in both countries, were employee. The Russian and Korean respondents spend less than 1000USD on luxury goods online per one time, with 68% and 54.8%, respectively. Moreover, almost more than half of the Russian and Korean respondents purchase luxury goods online once a year.

The collected data were analyzed using the AMOS 24.0 program for SEM analysis to examine the impact of factors on millennials' attitudes toward luxury fashion brands and online purchase intentions. Moreover,

MANOVA analysis were conducted to examine cross-cultural differences.

3.2 Instrument Design

The questionnaire of the research included two sections which started with a screening question to assure that all participants had experience with purchasing luxury brands online during the past 12 months.

The first section contained questions about consumers' demographic characteristics such as gender, age, monthly income level, education, occupation and also included questions about participants' online purchasing behavior.

The second part consisted 12 statements that ask about factors of luxury fashion brands (materialism, need for uniqueness, susceptibility to informative influence, and social media usage). Measures for factors were rated on a seven-point Likert scale, which ranged from 1 being "Strongly Disagree" and 7 being "Strongly Agree". Materialism was measured by 3 statements revised from Richins (2004) and Prendergast and Wong (2003). Statements to measure need for uniqueness were developed from Tian et al., (2001) scale. The measure of susceptibility to informative influence depended on Bearden et al., (1989) measuring model. Social media usage was measured using 3 statements adopted from Jin (2012), Wang et al., (2012), and Hughes et al., (2012).

Finally, 6 statements to measure millennials' attitudes (Spears and Singh, 2004) toward luxury brands and online purchase intentions (Korzaan, 2003; Lee and Lee, 2015; Summers, 2006) were used in this research.

4. Results

4.1 Measure Reliability and Validity

As a first step, before performing exploratory factor analysis, factorability of data was affirmed. The adequacy of sampling was tested by the Kaiser-Meyer-Olkin (KMO) (greater than 0.6), while the strength of the relationship by the Bartlett's test for sphericity of data (should be significant). According to results, all statements were found to be appropriate for the exploratory factor analysis (KMO=0.912; Bartlett's test significant, $p=0.00$). An exploratory factor analysis using principal component method with varimax rotation demonstrated that six factors illustrating high levels of exploratory power (83.786%). In addition, Cronbach's alpha values were greater than 0.7 (Nunnally, 1978), ranging from 0.85 to 0.93, which suggested high degrees of internal consistency.

The next step was to analyze confirmatory factor analysis using AMOS 24. Following Hair et al.'s (2009) criteria for acceptable range (CMIN/df < 3.0, CFI > .90, NFI > .90, TLI > .90, RMSEA < .80) this analysis demonstrates a good fit for the measurement model (CMIN/df = 2.678, CFI = .978, NFI = .965, TLI = .971, RMSEA = .053). Three criteria of Fornell and Larcker (1981) were utilized to test convergent validity. 1) The factor loadings of all statements were more than 0.5, ranging from 0.70 to 0.92; 2) All factors had the average variance extracted (AVE) higher than 0.50 and composite reliability (CR) higher than 0.70, ranging from 0.63 to 0.82 and from 0.84 to 0.93, respectively (see Table 3); 3) Results of discriminant validity were under the average amount of variation in the dimensions square root of AVE. The square root of the AVE presented in (Table 4) were greater than its correlation estimates, confirming discriminant validity.

Table 3. Scale factor loadings

Construct	Items	Factor loadings	Cronbach α	AVE	CR
Materialism	MAT1	0.85	0.88	0.63	0.84
	MAT2	0.87			
	MAT3	0.81			
Need for Uniqueness	NFU1	0.84	0.85	0.66	0.85
	NFU2	0.91			
	NFU3	0.70			
Susceptibility to Inform. Influence	SI1	0.90	0.92	0.77	0.91
	SI2	0.92			
	SI3	0.84			
Social Media Usage	SMU1	0.89	0.92	0.77	0.91
	SMU2	0.90			
	SMU3	0.91			
Attitude	AT1	0.85	0.88	0.73	0.89
	AT2	0.85			
	AT3	0.82			
Online Purchase Intention	OPI1	0.92	0.93	0.82	0.93
	OPI2	0.91			
	OPI3	0.89			

Notes. AVE=average variance extracted; CR=composite reliability

Table 4. Discriminant validity analysis

Variable	MAT	NFU	SII	SMU	ATT	OPI
MAT	0.793					
NFU	0.418	0.812				
SII	0.565	0.515	0.877			
SMU	0.691	0.478	0.663	0.877		
ATT	0.640	0.493	0.618	0.618	0.854	
OPI	0.583	0.359	0.431	0.609	0.584	0.906

Notes. ***Correlation is significant at the 0.001 level.

Bolded diagonal elements are the square root of AVE.

4.2 Hypotheses Testing

As a first step, a structural model using the robust maximum likelihood estimation method was tested to analyze the relationships among variables demonstrated by H1 -H5. The structural model indicated an acceptable fit to the data: CMIN/df = 2.854, CFI = .976, NFI = .964, TLI = .967, RMSEA = .056. The results provided support for the following hypothesized relationships: materialism (H1: $t = 7.37$, $p < .001$), need for uniqueness (H2: $t = 3.79$, $p < .001$), susceptibility to informative influence (H3: $t = 4.21$, $p < .001$), social media usage (H4: $t = 3.64$, $p < .001$) and attitude. The findings also supported for the existence of positive association between attitude and online purchase intention (H5: $t = 14.26$, $p < .001$). (see Table 5).

Table 5. Summary of hypotheses tests

Hypotheses	Beta	t-Value	Results
H1: Materialism → Attitude	0.29	7.37***	Accepted
H2: Need for uniqueness → Attitude	0.15	3.79***	Accepted
H3: Susceptibility to inform. influence → Attitude	0.16	4.21***	Accepted
H4: Social media usage → Attitude	0.15	3.64***	Accepted
H5: Attitude → Online Purchase Intention	0.96	14.26***	Accepted

Notes. *** $p < 0.001$

In the second step, a one-way multivariate analysis of variance (MANOVA) for the total set of variables was conducted to support H6 - H9 regarding cross-cultural differences in factors driving attitudes toward luxury brands. The independent variable was country (South Korea, Russia) and four dependent variables were used (materialism, need for uniqueness, susceptibility to informative influence, social media usage). The results of a one-way MANOVA revealed that the multivariate main effect for country was significant (Wilk's Lambda = 0.806, $F(4, 596) = 35.87$, $p < .001$). The findings further indicated that three univariate F tests ($df = 1, 599$) ranged from 8.166 ($p < 0.01$) for susceptibility to informative influence to 70.510 ($p < .001$) for materialism, showing significant differences between countries for each of the three factors. However, no significant difference was detected for the two countries in need for uniqueness.

To evaluate H6 – H9 hypotheses, the scores of the both countries using four cultural dimensions of Hofstede's (2001) cultural index and mean scores using MANOVA technique were analyzed.

Hypothesis 6 predicted that Korean millennials would demonstrate a higher materialism than Russian millennials. Based on Hofstede's scores, Korea is more masculine than Russia which would be suggesting a higher materialism for Korean sample. However, on the basis of MANOVA mean scores, Russian millennials scored a higher mean ($M = 0.325$) than Korean millennials ($M = -0.324$). Therefore, Hypothesis 6 was not supported.

Hypothesis 7 proposed that Russian millennials would demonstrate a higher need for uniqueness than Korean millennials. Nevertheless, Russian millennials and South Korean millennials did not differ in need for uniqueness. This can be explained by the fact that millennials are more individualistic in nature and need for uniqueness is universally significant among them. Thus, Hypothesis 7 was not supported.

Hypothesis 8 suggested that Russian millennials would demonstrate a higher susceptibility to informative influence than Korean millennials. Russia has more power distance than Korea, and consequently Russian millennials demonstrated higher mean scores ($M = 0.116$) for susceptibility to informative influence in comparison with mean scores of Korean millennials ($M = -0.117$), supporting Hypothesis 8.

Hypothesis 9 expected that Russian millennials would demonstrate a higher social media usage than Korean millennials. Russia demonstrated to be a more uncertainty avoidance country than Korea, thus Russian millennials had a higher mean ($M = 0.274$) for social media usage as compared to Korea mean scores ($M = -0.273$), validating Hypothesis 9 (see Table 6).

Table 6. Summary of MANOVA results

Dependent variable	Mean scores (Standard deviation)		F-value
	Korea	Russia	
Materialism	-0.324(1.033)	0.325(0.851)	70.510***
Need for uniqueness	-0.003(0.868)	0.003(1.119)	0.006
Susceptibility to informative influence	-0.117(1.193)	0.116(0.745)	8.265**
Social media usage	-0.273(1.041)	0.274(0.877)	48.050***

Notes. ** $p < 0.01$; *** $p < 0.001$

To sum up, the results of a structural equation model (SEM) supported all hypotheses (H1 – H5) and found t-values significant at $p < 0.001$. Furthermore, the results of MANOVA analysis supported two hypothesized relationships (H8, H9), and two hypotheses (H6, H7) were not validated.

5. General discussion

The aim of this research was to examine the effect of materialism, need for uniqueness, susceptibility to informative influence, social media usage on the millennials' attitudes toward luxury fashion brands across countries and its' impact on online purchase intentions.

Drawing on the Social Comparison Theory, Social Impact Theory and Theory of Reasoned Action, the findings showing that four factors significantly impact on attitudes towards luxury brands, and this, in turn, positively effect on online purchase intentions. From the theoretical point of view, the findings of this research contribute to consumer attitude literature by analyzing four factors together that seem to be valuable concept. In addition to the theoretical point of view, the results bear significant practical implication for luxury managers by showing that materialism is the strongest factor leading to positive millennials' attitudes toward luxury brands. Luxury managers should devote more attention to strategies focusing on materialism. For instance, marketing strategies utilizing hedonic appeals can be beneficial.

Further, cross-cultural differences were examined to compare millennials' behaviors across countries. Russia and South Korea are culturally different countries were chosen for comparison. By using cultural dimensions of Hofstede's (2001) model as a framework, four cultural dimensions (masculinity, individualism, power distance and uncertainty avoidance) were linked with four factors (materialism, need for uniqueness, susceptibility to informative influence and social media usage) in this study. The findings show that relative to Korean millennials, Russian millennials demonstrate higher susceptibility to informative influence and social media usage behaviors. However, the findings that Korean millennials demonstrate a higher materialism than Russian millennials were not supported. These unexpected findings can be explained by the fact that statistics do not always demonstrate the real picture of a country or culture. For example, Russia can be very materialistic and would be described as more masculine culture (Stoll, 2010). Due to the lack of research regarding millennials' behaviors and attitudes toward luxury brands in Russia, these findings make significant contribution to existing literature. From the practical point of view, luxury managers aiming to reach Russian millennials need to increase efforts to emphasize status of their brands.

In addition, findings from the present research show that need for uniqueness is evaluated similarly by millennials of Russia and South Korea. Two reasons for these unexpected findings may provide additional insight to the cross-cultural studies on consumer behavior among millennial generation. First, millennials around the world attach great importance to uniqueness and desire to look different from others by possessing exclusive luxury brands. Second, according to Hofstede (2001), Russia is similar to the South Korea in being collectivistic-oriented country, where priority is given to the goals of the collective over personal goals (Lee and Kacen, 2008). However, due to globalization, collectivist cultures may adopt some components of individualism without changing their collectivist nature (Brewer and Chen, 2007). In line with previous conclusions (Bian and Forsythe, 2012; Cha and Kwon, 2018), this study also expands research by providing results that millennials from Korea and Russia (collectivistic societies) pursue a need for uniqueness (individualistic element). Considering practical implication, luxury managers should take into consideration consumers' need for uniqueness when targeting millennials, regardless of national culture.

From the practical point of view, the findings provide significant considerations for luxury managers in terms of development of positive attitude strategies among Russian and Korean millennials. Specifically, managers of luxury brands need to adapt content of online store, depending on clients' country of origin through identifying IP address. In addition, luxury managers should be aware that development of positive attitudes among millennials can emerge from distinct social and individual behaviors based on culture. For instance, for millennials from high power distance and uncertainty avoidance countries (e.g. Russia) luxury managers should

invest additional resources to social media use, social media strategies, investing in influencers, offering exclusive promotions (Bedard and Tolmie, 2018) and comprehensive information. Luxury companies could benefit by facilitating interactions between company and consumers through including a hyperlink on their website with consumers' trial experiences, assessment of their brands and ratings (Bei et al., 2004; Chen et al., 2016; Dellarocas, 2003). In addition, facilitating dialogue among consumers through creating more interesting or informed communities (chat room, forum, blogs) (Armstrong and Hagel, 2000) can be beneficial for luxury companies. To encourage millennials, luxury managers can offer rewards to users who create content for sharing information about brand. Thus, luxury managers need to be aware that millennials use social media and informational influences more in high power distance and high uncertainty avoidance countries, such as Russia. In sum, the understanding of millennials' behaviors may help luxury managers better segment their markets and direct marketing strategies accordingly.

A number of limitations in this study deserve consideration. First, as this study used cross-sectional design that can be condemned for not demonstrating causality (Echambadi et al., 2006), future research should utilize experimental or longitudinal design in order to reinforce the causal association between factors. Second, the factors in this study refers to the social and individual behaviors. Other psychological traits such as value consciousness (Zhan and He, 2012) and self-congruity (Liu et al., 2012) can be investigated in the future studies. Third, this study compared two different cultures, Russia and South Korea. In order to enhance credibility of the results, future research should replicate the same framework for reflecting wider demographic segments in more individualistic cultures, such as USA or UK.

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Customers' Perceptions about Plastic Money towards Sustainable Banking in Bangladesh: A Technological Adoption

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Received: April 24, 2019

Accepted: May 20, 2019

Online Published: May 24, 2019

doi:10.5539/ibr.v12n6p82

URL: <https://doi.org/10.5539/ibr.v12n6p82>

Abstract

To build up a sustainable banking environment, technological implementation is crucial. As a part of this, modern banks propelled plastic money. In Bangladesh, customers' perceptions about the plastic money are impressive. This is the necessity to the banks what factors influence customers positive view toward plastic money and whether they are facing any problems or not. To examine the customers' perceptions towards plastic money is one of the main focuses of this research. About 200 responses were collected to conduct the study. A quantitative research design was adopted to perform the test of hypotheses. The survey results revealed that usage and financial benefits, convenience factors, and psychological factors positively influence customers' attitude towards plastic money. Also, there are some problems identified by the respondents as customers.

Keywords: plastic money, customer perception, sustainability, bank, Bangladesh

1. Introduction

More regularly, we are progressively reliant on new innovations to make our transactions quick and productive. The proceeded and fast development of innovation has achieved noteworthy changes in our regular day to day existences (Panagiotis et al., 2018). Plastic money is a contemporary mode of payment system that is noticeably changing the traditional idea of payment system through cash. Today's competition in the banking sectors has pushed banks to reconsider to discover substitute products in banking functions at minimum cost. Plastic money is helpful for banks as it enhances banks productivity and enhances the delivery of good services to their clients (Kaur & Sharma, 2017). Every financial institution is utilizing this technique, forcefully promising all their clients to take the benefits of these systems on the grounds of straightforwardness process however an unannounced money related age to the bank (Odusina & Ayokunle Olumide, 2014). Today customers cannot perform their banking functions without having a plastic card. The plastic money reduces difficulties of carrying cash at hand and minimizes the risk of theft. Recently, banks are providing different types of plastic money cards according to their customer demands e.g., debit card, credit card, visa card, and master card. The credit cards mitigate the clients from the stress of carrying cash and guarantees security. It is the comfort of broadened credit without custom (Sunayna Khurana & Satendra Pal Singh, 2011). Now-a-days, bank provides plastic card to their customers which changed the setting of banking system in Bangladesh. The development of plastic money industry was very evident as individuals is getting more reliant on technology and plastic money business is the best result of technological innovation in banking sectors (Sumi & Safiullah, 2014). The objective of our study is to analyze the customer's attitude toward plastic money in Bangladesh. We have some specific objectives like discover perceive advantages of Plastic money to the customers, identify perceived disadvantages to the customers and scrutinize the psychological and attitudinal factors of customers for plastic money usage.

2. Research Objectives

The broad objective of this study is to analyze the consumer attitude towards plastic money. The specific objective is to:

- discover perceived advantages of plastic money to the customers
- identify perceived disadvantages of plastic money to the customers

3. Research Implications:

There are insufficient literatures found about the plastic money as a technological adoption towards sustainable banking in Bangladesh. Moreover, customer attitudes over the usage of plastic money have not yet been widely studied in a developing country – Bangladesh.

This study will provide notion about the bank's customers' perceptions regarding plastic money that will eventually assist them both in knowing the effectiveness of technological implication towards sustainable banking and customer satisfaction. Along with this, the results of this study will show implication for the banks to fix the problems in existing electronic trading devices through analyzing perceived disadvantages faced by customers.

4. Literature Review

Customer satisfaction is one of the major concerns for all kind of activities of a business organization. Almost every business organization tries to make a loyal customer base in the market to get a competitive advantage over other organization. Basically, customer satisfaction is the vital issue for the service industries like banking, health, restaurant, education etc. for their success. Bennet (1992) found that customer driven strategy is the major factor to gain competitive advantage in the banking sector. According to Coldwell (2011), a customer who is fully satisfied may support a firm to produce 2.6 times much revenue as the one who is somehow satisfied. Moreover, a completely disappointed customer may cause a 1.8 times reduce in revenue as compared to a fully satisfied customer. However, commercial banks have performed various functions for the customers and plastic money is the most vital and modern function (Deviranjitham & Thamilarasan, 2014).

Plastic money is a contemporary context taking place of conventional system of paying through paper money-cash. The use of debit cards, credit cards, smart cards, master cards, visa cards, pre-paid balance cards for paying to purchase goods and services is termed as plastic money (Panagiotis, Athanasios & others, 2018). Basically, plastic money means one kind of hard plastic card that has been used in place of bank notes and in everyday life (Sudhakar, 2014). The customer's buying behavior and lifestyle is now dominated by the plastic card. The plastic money can be defined as an electronic element which stocks all required information about the particular bank and the card holder and can be accomplished through the use of Automated Teller Machine (ATM) at any place. Moreover, Khan (2010) stated the impact of ATM service quality on customers using five key ATM service quality factors: convenience, efficient operation, security and privacy, reliability and responsiveness.

Money is always considered as a necessary medium for exchange and payment methods. In the recent years, money has turned its form from coins to paper cash and in the recent time money is usable in shapeless form as plastic money which is also called electronic money (Bishty et. al., 2015). Now-a-days, banking sector has changed their overall systems from traditional system to modern technology driven system. Plastic card facility has incorporated technology with the need of credit by the customers (Hugar & Basavaraj, 2014). Some study stated that consumer satisfaction was calculated by functional and technical conditions in the banking industry (Gronroos, 1984).

Panagiotis et al. (2018) had thrown light on the use of new technology by elderly people contributing significantly on their better quality life. The usage of innovative electronic trading devices defend the elderly population from theft and fake cases since such cards in his/her wallet can be used immediately and easily in each transaction.

Diza et al. (2017) focused on plastic money acceptance among rural communities in Zimbabwe. The communities still prefer cash over plastic money, although they cited 'anytime anywhere access as major advantage of plastic money. They concluded the greatest challenges of plastic money usage in rural area include higher transaction costs and lack of POS facilities and also lack of confidence in entire banking sector.

Jonker (2007) mentioned that the "reason for the increase in the use of plastic cards is because plastic money provides consumers with convenience, ease of use, record of transaction, transaction speed, dispute resolution capability, and reliability among other benefits hence the growing preference towards the adoption of plastic

cards". The most of the customers use and prefer to have plastic money above cash money. These plastic money or electronic payments was and used only by higher income group people (Manivannan, 2013).

Most of the customers like to use debit card rather than credit card for their transactions. Generally customers' like to use debit card for buying appeals, paying electricity bills or phone bills and others financial transactions. Many customers feel that debit card is more favorable than credit card because debit card provides more control over spending, good cash back policy and strong security. Moreover, majority of plastic money users use it for online transaction as they feel secure transaction in online but they completely avoid it when they use it for others financial activities (Bishty et. al., 2015).

According to Sumi and Safiullah (2014), with the technological revolution in financial sector, transactions in banking sector has brought a revolutionary change in Bangladesh. The various types of plastic money provided by the Bangladeshi banks like debit card, credit card, master card or visa card for their respective customers. The study showed that the usage of plastic cards in Bangladeshi banks and also showed the problems faced by the user of these cards. They also stated that customers have strong preference to accept plastic card rather than cash in hand.

i. Usage of plastic money

According to Bishty et al. (2015), customers' likes plastic money over cash money and the significant advantage that the card gives to the clients is the convenience and accessibility. The inclination to utilization of plastic money like Master card has its upsides and downsides with its convenience and moderateness (Subhani, 2011). Usage benefits might include the security, time saving, easy in carrying, travelling etc.

H1 Usage benefits significantly influence to the customers' positive view toward plastic money.

ii. Financial benefits

Credit cards additionally offer a few advantages to vendors. Shippers are generally paid in great assets inside 48 hours of presenting the exchange to their acquirers. In a U.S. overview, 83 percent of dealers said that their deals expanded and 58 percent said that their benefits expanded by tolerating Visas (Ernst & Young, 1996). Some of the financial benefits might include savings, controlling expense, interest rate or service charge.

H2 Financial benefits significantly influence to the customers' positive view toward plastic money.

iii. Shopping benefits

Shoppers do online booking for both accommodation and satisfaction (Childers et al., 2001). Forsythe et al. (2006) mentioned that the built up a scale to gauge apparent advantages and dangers in web based shopping. Their investigation demonstrates that comfort, simplicity of shopping, and item choice (which are utilitarian advantages) represent bigger fluctuation clarified altogether apparent advantages in web based shopping, contrasted with the apparent epicurean advantage while shopping on the web. Thus, it tends to be derived that a person with higher utilitarian shopping intention is probably going to see more prominent advantages in internet shopping contrasted with another individual having lower utilitarian shopping thought processes. In terms of plastic money, shopping advantage includes higher price bulk of products and overseas shopping and many more.

H3 Shopping benefits significantly influence to the customers' positive view toward plastic money.

iv. Convenience

Thought of convenience for clients is long-standing, especially in the retailing and customer conduct literary works (Anderson, 1972 & Kelley, 1958). Similarly, there is an affirmation of developing purchaser interest for convenience brought about by financial change, innovative advancement and escalating rivalry in business conditions (Berry et al., 2002; Seiders et al., 2000 & Seiders et al., 2007) regardless of whether in on-or disconnected situations. When customers' purchasing power increases, transaction mode is safe and easy to use, this might provide convenience.

H4 Convenience significantly influence to the customers' positive view toward plastic money.

v. Psychological factors

Customarily, needs have been considered as a vehicle for the investigation of human inspiration (Oliver, 1997). To put it plainly, people always endeavor to accomplish a condition of security or then again homeostasis. This psychological state is upset when they are made mindful of a need. Along these lines, require and the want to fulfill it help to create the person's inspirations as for a particular activity (Goossens, 2000). Customers' psychology toward plastic money can be considered as how it adds value, whether it's fashionable or prestigious etc.

H5 Psychological factors significantly influence customers’ positive view toward plastic money.

5. Research Methodology

Sampling method: Convenient random sampling method has been adopted for selecting the respondents. People who use plastic money have been considered for the study. Respondents were contacted based on their online activeness.

Data collection method: A structured questionnaire has been prepared for data collection. Around 500 questionnaires have been sent to the respondents and 200 were returned with the response rate 40%. All questionnaires were analyzed.

Analytical method: The objective of this study is to examine customers’ perceptions about one of the technological adoptions in sustainable banking regarding plastic money. The quantitative research design fits to the study. As statistical analysis tools, factor analysis, descriptive statistics and regression analysis have been adopted for analyzing the research framework.

6. Data analysis

i. Demographic profile of the respondents: There was participation of diverse demographic profiled respondents to validate the data accumulation. Of the 200 respondents, there were 39.6% female and 60.4% male. The study was dominated by young people (age range 18-25, 26-35) and only 10% respondents were elderly. Such result indicates the usage of plastic money in Bangladesh is comprehensive among the young people.

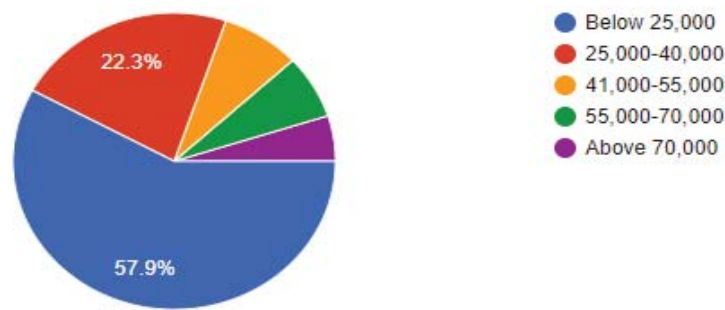


Figure 1. Income level of the respondents

Another important indication is that the plastic money usage is more prevalent among the lower-middle class people. There were about 58% respondents in the study whose monthly income was below 25,000 BD taka shown in above figure 1.

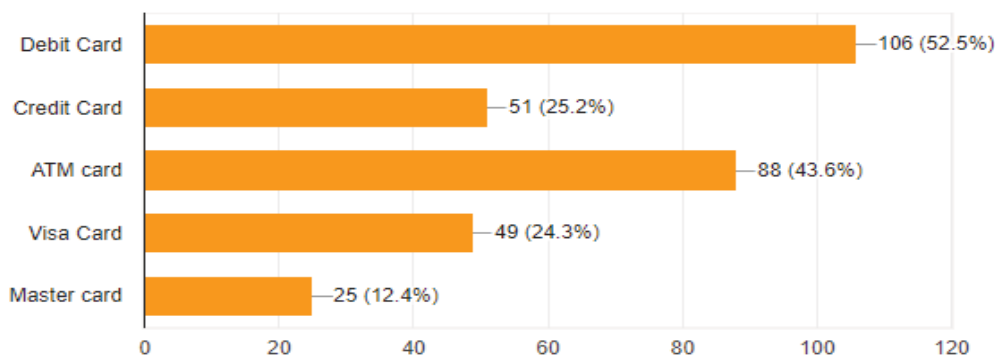


Figure 2. Type of card held by respondents

Above figure-2 shows that the most commonly used plastic card among the respondents is debit card (43.6%), followed by ATM card, credit card, visa card and master card. Day-by-day the plastic use and its users are rapidly increasing in Bangladesh as people does not want to carry cash in their pocket for their own safety and security.

ii. Factor analysis: The purpose of this confirmatory factor analysis is to support our premise in building these dimensions and the cohesion of the items creating them. Factor analysis now would support our proposition through few measures. The estimation method used in the analysis was R-type factor analysis. The analysis results indicated an acceptable overall suitability of factor analysis and the Kaiser–Meyer–Olkin measure of sampling adequacy was used to check for excessive correlations with a value equal to 0.717 (recommended value of KMO should be greater than 0.5) shows in table-1. This suggests the existence of small correlations between variables.

Table 1. KMO & Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.717
Bartlett's Test of Sphericity	Approx. Chi-Square	390.698
	Df	36
	Sig.	.000

Finally, the estimated pattern matrix shown in below table-2, where items are distributed between 14 dimensions reduction.

Table 2. Principal Component Analysis by Kaiser Normalization

Rotated Component Matrix^a				
	Component			
	1	2	3	4
1. Increase Purchasing Power	-.077	.221	.205	.677
2. Easy To Use	.321	-.134	.187	.696
3. Safest Mode	.523	.127	-.054	.633
4. Reasonable Interest Rate	-.069	.743	.213	.319
5. Risk Of Theft Minimized	.588	.267	.134	.273
6. Saves Time	.746	.156	.095	.040
7. Secure Transaction	.749	.187	.031	.116
8. Purchasing High Price Products	.078	.189	.821	.156
9. Purchasing Huge Size Products	.150	.307	.691	.254
10. Easy To Carry	.716	-.204	.342	.009
11. Ease Travelling Overseas	.582	-.135	.421	.323
12. Shopping Abroad	.490	-.050	.636	-.011
13. Easier To Control Expenditure	.170	.841	.137	-.051
14. Encourages To Save Money	.128	.839	.014	.011

Above table-2 clearly shows that the factor 1 has high coefficients for variables v5 (risk of theft minimized), v6 (saves time), v7 (security), v10 (easy to carry) and v11 (ease travelling). This factor may be labeled as a usage benefit factor. Similarly, factor 2 is highly correlated with the variables v4 (interest rate), v13 (controlling expenditure) and v14 (savings). This can be considered as financial benefit factor. Also, factor 3 has high coefficients in v8 (purchasing high price products), v9 (purchasing huge sized products) and v12 (shopping abroad) and this factor is labeled as shopping benefit factor. Lastly, factor 4 is highly related to v1 (increasing purchasing power), v2 (easy to use) and v3 (safest transaction mode) and thus factor 4 is labeled as convenience factor.

Test of hypothesis: The model is estimated through regression model and shows which dimensions significantly predict the customers' positive view to use plastic money in Bangladesh. The conceptual research model regressed all the independent variables (usage benefits, financial benefits, shopping benefits, convenience factor and psychological factor) on customers' positive view. Results in the coefficient table of regression shown in table-3.

Dependent variable: Positive view to plastic money usage

Table 3. Results of test of hypotheses between dependent and independent variables

Independent Variable	T value	F	P value	R²
Usage benefits	2.766	4.406	.006	.151
Financial benefits	2.002	2.235	.047	.059
Shopping benefits	1.260	3.253	.221	.105
Convenience	1.994	5.446	.048	.118
Psychological factors	7.309	4.665	.000	.208

The t-value is accepted when it is > than 1.96. According to the regression coefficient table t-values of usage benefits, financial benefits, shopping benefits, convenience and psychological variables are accepted.

Table 4. Summary results of test of hypotheses

Sl.	Hypotheses	Results
H ₁	Usage benefits significantly influence to the customers' positive view toward plastic money	Supported
H ₂	Financial benefits significantly influence to the customers' positive view toward plastic money.	Supported
H ₃	Shopping benefits significantly influence to the customers' positive view toward plastic money.	Not Supported
H ₄	Convenience significantly influence to the customers' positive view toward plastic money.	Supported
H ₅	Psychological factors significantly influence to the customers' positive view toward plastic money.	Supported

iii. Problems of plastic money: The total dimension means and standard deviations are shown in figure. All dimensions are measured in Likert scale measure (1 is strongly agree and 5 is strongly disagree).

Results indicate that the highest perceived dimension was fake notes at ATM (mean = 2.54) and the lowest dimension was higher service charge (mean = 2.21) (table- 5). Results indicate fake note at ATM and less worldwide access is highly problematic to the respondents, while all other dimensions are perceived moderately important to the sample.

The second issue is the dispute among respondents with respect to scarcity of taka at ATM, uncontrollable buying beyond budget and less worldwide access, where the standard deviation values are higher than other dimensions.

Table 5. Descriptive statistics of plastic money problems

Descriptive Statistics			
	N	Mean	Std. Deviation
Few vendors	200	2.36	.838
Less worldwide access	200	2.51	1.007
Damaged magnetic strap	200	2.36	.886
Higher service charge	200	2.21	.917
Mounting number of frauds	200	2.39	.843
Technological complications	200	2.25	.946
Fake notes at ATM	200	2.54	.997
Scarcity of taka at ATM	200	2.28	1.052
Uncontrollable buying beyond budget	200	2.25	1.010

7. Findings and Discussions

From demographic information, this is observed that a large proportion of the sample belong to the young group and lower- middle class people. Majority of the respondents hold debit and ATM plastic card. The perceived advantages identified in research framework have been analyzed to examine customers' perceptions. There were four dimensions identified through factor analysis. These four factors have been labeled as four benefits of plastic money - usage benefits, financial benefits, shopping benefits and convenience advantages. Along with the four benefits of plastic money, psychological factors were also inspected through hypotheses testing. Psychological factors including prestigious, adds value, eases complex transaction and fashionable were analyzed. About 80% respondents were agreed to prestigious psychology, 82% agreed to add value, 79% agreed to ease complex transaction and 76% agreed to fashionable psychology.

To validate the research model, empirical test has been conducted using survey. Factor analysis was undertaken to show whether the dimensional items have been loading together and support the study premise. Results were positive and presented all the dimensions are significant in predicting the customers perceptions toward plastic money. For hypotheses testing, regression analysis was adopted. Results shown that except shopping benefits, all variables were significant. Usage benefits, financial benefits, shopping benefits and convenience factor significantly influence to the customers' positive view about plastic money.

Some problems of plastic cards have been identified. Most of the respondents agreed to the disadvantages they face while using the plastic cards. Descriptive statistics revealed that fake note at ATM and less worldwide access were highly challenging to the respondents.

8. Conclusions

Now-a-days, transactions over plastic money become easier as there is no need to have paper money. To conduct with the overseas shopping, usage of plastic money is increasing day by day. In Bangladesh, prevalence of plastic money usage starts from lower-middle class people and perceived advantages of plastic cards are similar to all people. There is positive view toward such technological adoption of sustainable banking. People do not need to think about the money they have or not, but to carry only a plastic chip into wallet. The findings disclose that customers' positive view towards plastic money is significantly influenced by usage benefits, financial benefits, shopping benefits and convenience factor. But shopping benefits can't influence positive view of

customers. So, banks should undertake proper steps so that customers find shopping more useful by using plastic money. Some problems also have been identified in the card usage. Banks should also take note the problems customers face and initiate to take proper necessary steps to ensure sustainable and effective banking in Bangladesh.

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Impact of External Capital on Economic Growth in EMCCA Countries

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Received: January 31, 2019

Accepted: February 14, 2019

Online Published: May 24, 2019

doi:10.5539/ibr.v12n6p90

URL: <https://doi.org/10.5539/ibr.v12n6p90>

Abstract

Taking into account the effects of financial liberalization on activity, associated with the spread of financial crises in an environment of uncertainty and dependence of the economies on external financing, updates the question of the impact of external capital on growth economic.

The purpose of this paper is to examine the impact of external capital on economic growth in developing country members of a monetary union.

Following a dynamic least squares estimation on the data of the countries of the Economic and Monetary Community of Central Africa (EMCCA), we obtain that an increase in direct investment abroad positively influences the economic growth in these countries.

Keywords: external capital, economic growth, dynamic least squares, EMCCA

JEL Classifications: F31, J11, O47, O55

1. Introduction

Taking into account the effects of financial liberalization on activity (Cartapanis 2010, Arellano and al, 2016), following the spread of financial crises in an environment of uncertainty and dependence of the economies on external financing (Eichengreen and al. 1999), updates the issue of the impact of external capital on economic growth.

External capital is generally presented as the set of real or financial means that enable a country to overcome its capital shortfall. Two categories are distinguished for this purpose, including financial capital (external debt, official development assistance, concessional or non-concessional financial flows, portfolio investment, etc.) and foreign direct investment (FDI) (IMF, 2016).

Economic growth is defined as the sustained increase in gross domestic product over a long period of time (Romer 1986, Aghion and al 2010). The limitations linked to the analysis of exogenous growth to explain the origin of technical progress (Solow, 1956) have led to the analysis of its endogenous determinants, among which we distinguish between education, health and research development (Romer 1990, Lucas 1988, Barro 1997).

Much of the debate on the impact of external capital on economic growth revolves around two main lines of research related to the positive effects of external capital in the domestic country (Bekaert and Harvey, 2000), on the one hand and negative effects (Sachs, 1989), on the other hand.

On the first pillar, the analyzes lead to the idea that capital mobility allows countries with limited savings resources to attract financing for their internal investment projects. Similarly, it allows investors to diversify their portfolios, spread risk and trade inter-temporally (Eichengreen and al., 1999). In fact, the inflow of foreign capital generates diversification and better risk management because economic agents have external sources of funding in addition to internal sources (Henry, 2000). They deal with external stakeholders who face risks totally different from those borne by local stakeholders. This diversification manifests itself differently for the three capital flows retained in the context of our thesis: stock market flows, FDI and bank flows.

Regarding the second axis, two aspects related to inflows of capital are globally identified to show the negative effects of external capital on economic growth, in particular, the crowding out effect, on the one hand, and

financial instability, on the other hand.

Indeed, capital flows can cause a drop in domestic investment (crowding out effect). They will replace domestic investment when it is oriented towards a sector where there are a large number of domestic firms; this is despite the fact that it is conceivable that such an entry by multinational firms may lead to an increase in domestic investment to cope with foreign competition (Agosin and al, 2000). The main explanation is that foreign firms outpace local firms in technology. Foreign investment will therefore "drive out" the investment of local firms and even cause bankruptcy rather than an increase in their investment.

Moreover, one of the arguments generally advanced against the entry of foreign investors into a given market is its ability to disrupt the stability of financial markets, which negatively affects economic growth (Stiglitz, 2000; Arestis and al. 2005).

This literature focuses mainly on developed countries. Indeed, very few studies to our knowledge about the relationship between economic growth and external capital are devoted to developing countries.

Revisiting seminal work, we would like to examine the relationship between economic growth and external capital in developing countries participating in a monetary union. Indeed, the low attractiveness of external capital for developing countries because of the high country risk in most of them, on the one hand and the restrictions on the freedom of capital movements imposed by the monetary union (Mundell, 1960), on the other hand, particularly motivate the analysis of the relationship between economic growth and external capital in the context of developing countries that are members of a monetary union. The aim is to identify the elements that could hinder the expected positive impact of external capital on economic activity in countries seeking economic and financial emergence.

This paper proposes to analyze the impact of external capital on economic growth, taking as a field of investigation the member countries of the Economic and Monetary Community of Central Africa (EMCCA). There are two reasons for this:

- 1) the member countries of the EMCCA zone are all in the process of development. They thus need a large influx of external capital to finance investments and thus to catch up with the economic and financial emergence.
- 2) this is an environment of great uncertainty marked by macroeconomic volatility due to external shocks with a particularly high country risk.

In this respect, we organize our study in two parts. The first part presents the model of analysis of the impact of external capital on growth (I). The second part proceeds to the empirical highlighting of this hypothesis (II).

2. Analysis model of the impact of external capital on growth

In this part, it is a question of specifying the model while presenting the variables, on the one hand, and to present the method of estimation.

2.1 The Analytical Framework

The analytical framework is based on the specified model for estimation purposes, on the one hand, and stylized facts, on the other hand.

a. Specification of the model for estimation purposes

We rely on the endogenous growth studies of Romer (1986), Barro (1997) and Aghion et al (2010). Such a framework has the particularity of analyzing the determinants of economic growth from the angle of the New Keynesian Economy (NKE). It therefore takes into account the imperfection of markets (lack of coordination and information asymmetry) in the analysis of the factors at the root of economic growth.

The functional form of the model is as follows:

$$GDP = f(k_{fin}, fdi, kh, kf)$$

with

GDP, gross domestic product

k_{fin} , portfolio investment flows

fdi , flows of foreign direct investment

kh , the human capital

kf , physical capital

The model for estimation purposes takes the following form:

$$GDP_{it} = \beta_0 + \beta_1 k_{fit} + \beta_2 fdi_{it} + \beta_3 kh_{it} + \beta_4 k_{fit} + \varepsilon_{it} \quad (1)$$

with,

GDP_{it} , the country's GDP i at period t ;

k_{fit} , the inflow of financial capital from country i to period t ;

fdi_{it} , the ideas of country i at period t ;

kh_{it} , human capital, from country i to period t ;

k_{fit} , the physical capital of country i at period t ;

ε_{it} , the error term, independent and identically distributed.

β_1 , β_2 , β_3 , and β_4 being the respective coefficients of portfolio investment flows (ip), foreign direct investment flows (fdi), human capital (kh) and physical capital (kf).

The model assumes that external capital impacts economic growth in the EMCCA countries.

The variable "GDP" refers to the annual growth rate of gross domestic product. GDP is the sum of gross value added generated by the productive sectors. It measures the production efforts of the economy. Its year-over-year change reflects the rate of economic growth.

The variable "kfin", that is, inflows of financial capital. Its purpose is to show the impact of foreign financial capital on the economic growth of the EMCCA countries. It presents the first variable of interest of our study. Such a variable will have as proxy the concessional financial flows.

The variable "FDI" refers to the inflow of foreign direct investment. This variable expresses all the FDI flows recorded each year in the area as a percentage of GDP. It represents the second variable of interest in our study.

The variable "kh" refers to human capital. Because of the very large content and the difficulties in expressing human capital, we prefer proxy public sector health expenditure (as a percentage of gdp) according to endogenous growth theories (Weil, 2007, Aghion and al, 2010).

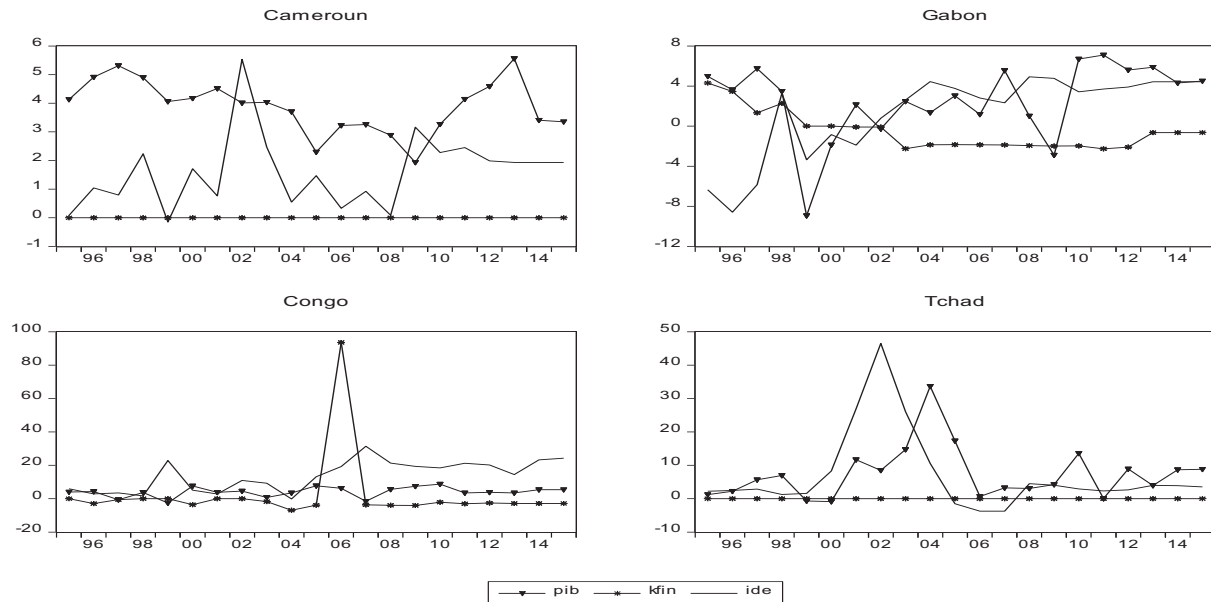
Finally, for the variable "kf", we used gross fixed capital formation as a percentage of GDP. It consists of all expenditures relating to the fixed capital of the economy, net changes in inventories and acquisitions net of value. It consists of all the fixed capital expenditure of the economy.

Fixed capital consists of land development (fence, canalization, ditch, etc.), purchase of plant, equipment and machinery; and the construction of roads, rails and others such as schools, offices, hospitals, private residential housing, and commercial and industrial buildings. Inventories are inventories of goods held by firms to cope with unexpected fluctuations in production or sales and outstanding inventories.

b. Analysis by the stylized fact

The aim is to make a graphical analysis of the variables of the model, more specifically, the analysis of the relationship between economic growth and external capital (financial capital and FDI) in the four (4) countries of the sample considered.

The data used come from the World Bank database (2016) for all variables in the model. The preferred study period is 1995-2015 due to the lack of data over a broader period of the proxy variable of human capital. However, it should be noted that we consider a sample of four (4) EMCCA member countries (Cameroon, Gabon, Congo and Chad) due to the unavailability of data on concessional financial flows over the preferred period in terms of Equatorial Guinea and the Central African Republic.



The analysis of the graphs shows that economic growth is moving in the same direction as foreign direct investment, which suggests a positive correlation between the two phenomena. On the other hand, we observe that financial capital is weakly correlated with economic growth in the case of Cameroon, Congo and Chad, and slightly correlated with Gabon.

Such an observation already shows us that foreign direct investment has an influence on the evolution of the growth rate of the gross domestic product in EMCCA zone unlike financial capital. This could be explained by the fact that financial integration in the area is still in an embryonic state, which makes it difficult for international transmission of financial capital to the area.

2.2 Estimation Method

The chosen estimator is the dynamic ordinary least squares (DOLS). It is a relevant estimator in the static panel modeling proposed by Kao and Chang (1998). Such an estimator finds its basis in the estimator of Stock and Watson (1993) for the case of time series.

Preliminary tests focus on stationarity tests to detect or not the presence of a unit root in the series of variables. Such tests avoid spurious regressions, as noted by Granger and al (1974) and Phillips (1986). The preferred test for this purpose is the Levin-Lin-Chu test, which is more suited to panel modeling (Hurlin and al, 2006).

Table 1 above presents the results from Appendix 1 of this test.

Table 1. Unit root test of Levin-Lin-Chu

	t-stat	Prob	Order of integration
gdp	-8.878	0.000	I(1)*
kfin	-7.939	0.000	I(1)
fdi	-7.258	0.000	I(1)
kh	-7.920	0.000	I(1)
kf	-8.896	0.000	I(1)

* means that the variables are integrated order 1

Source: Author from the software eviews 9

The results of the stationarity tests are conclusive. Indeed, Table 1 shows that all the variables of the model are stationary in first difference.

The results obtained previously allow us to verify the existence of a long-term relationship between the variables of the model. For this, the test of Pedroni (1999) is appropriate. Thus, in the light of the results obtained, Appendix 1 shows that there is at least one cointegration relationship between the endogenous variable and the exogenous variables, thus justifying the use of the dynamic least squares technique for estimating the model.

3. Estimation Results and Their Analysis

We first perform the econometric estimation of our hypothesis that external capital impacts economic growth. We then proceed to the analysis of the results.

3.1 Results of the Overall Model Estimate

The results of the estimation of the relationship between economic growth and external capital are given in Table 2 below.

Table 2. Estimation Results

	coefficients	t-stat	prob
kfin	0.021	0.268	0.792
fdi	0.230	3.042	0.008
kh	0.344	0.567	0.578
kf	0.103	1.390	0.184

$R^2 = 0.98$

Source: Author from the software views 9

The main statistical tests (appendix 2) support the specification of our model using the dynamic least squares method.

It also appears that only foreign direct investment flows have a significant impact on economic growth in the EMCCA countries. Indeed, a large influx of foreign capital positively and significantly impacts economic growth in EMCCA by around 23%. On the other hand, neither portfolio investment flows, nor human capital, nor physical capital affect economic growth. Such a result should lead to a reorientation of public policies within the EMCCA zone by favoring medium and long-term capital movements in the sources of financing economic growth.

Most disturbing in the results is the low contribution of human capital to wealth creation, which suggests that the zone's learning system is inappropriate in view of the real concerns of the EMCCA economies.

3.2 The Main Lessons

Two main lessons emerge from the estimation results.

1) The reform of the debt a means of intensifying the capital flows in zone EMCCA

These reforms should focus primarily on the public debt policy of the countries of the zone in terms of over-indebtedness characterize them.

It is a question of putting in place a policy of reduction of the external debt of the countries of the zone, because the over-indebtedness is analogous to the situation of an insolvent company not protected by the laws of the bankruptcy. In this case, the creditors take antagonistic actions to use the remaining value of the assets, prejudicial to the survival of the company.

In such a configuration, the debt service acts as a disincentive production tax for our countries because all of its economies have reached the optimal debt threshold for which any marginal debt supplement leads to a significant reduction in debt. The investment justifying their inability to meet debt repayment commitments, and always turn to international financial institutions.

In addition, this situation leads investors to expect an increase in current and future taxes to allow the necessary transfer of resources abroad. The anticipated reduction in the after-tax return on private investment and the use of a growing share of domestic savings for debt service purposes has the effect of crowding out domestic investment and thus discouraging investment foreign.

These effects can also motivate the flight of capital, as homeowners seek to protect the value of their assets by taking advantage of more attractive investment opportunities abroad.

Reforms must consist of implementing an endogenous incentive system to attract capital by reducing the level of debt. This same idea was developed by Krugman (1988), who shows that by increasing the incentive for an over-indebted country to undertake economic reforms, creditors will be able to see the value of their claims in the secondary market improve because the debtor's repayment will have increased.

It is thus possible to say that beyond a certain level, the accumulation of external debts discourages investment and slows down growth.

2) The reduction of uncertainty, a factor of attractiveness of foreign capital in situation of capital liberalization in the EMCCA

The uncertainty concerns in particular the macroeconomic and financial instability that limits the scope of the effects of external capital in the EMCCA zone. As a result, the abundance of external flows resulting from the liberalization of the stock markets degrades the autonomy of domestic policies and forces the monetary authorities

to maintain high interest rates to support the confidence of foreign investors. In addition, liberalization can lead to a decline in the rate of return caused by increased capital flows. This is a significant argument for the negative effect on economic growth.

The liberalization of stock markets also attracts the presence of foreign financial institutions. These institutions will compete with domestic institutions with the risk of evicting them. As for bank flows, they are also concerned by the stability problem. Foreign banks are able to reduce the credit stability of domestic banks as a whole by facilitating capital flight in times of crisis, and by increasing the risk of regional contagion as well as shocks that may occur in countries of origin foreign banks.

Indeed, foreign banks especially Western, have reduced their credit offers in EMCCA area following the financial crisis of 2008. In this case, the supply of credit does not depend on the characteristics of the economy of the host country but those of the countries of origin. Thus, the entry of foreign banks, makes the supply of credit vulnerable to both internal and external conditions (a double vulnerability). This situation is highly dependent on the uncertainty prevailing in this area.

4. Conclusion

This study, which analyzes the impact of external capital on economic growth, has shown that capital efficiency depends on the macroeconomic environment, including the debt ratio. Thus, in a configuration where the public debt raised the holders of capital are not encouraged to invest, so there is a negative effect on economic growth.

The results show that FDI has a significance impact, unlike other forms of capital, which suggests that it is useful to define an optimal level of public debt that makes external capital attractive.

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Appendices

Appendice 1. Pédroni cointegration test (1999)

Pedroni Residual Cointegration Test

Series: PIB KFIN FDI KH KF

Date: 10/09/18 Time: 23:16

Sample: 1995 2015

Included observations: 84

Cross-sections included: 4

Null Hypothesis: No cointegration

Trend assumption: No deterministic trend

User-specified lag length: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Alternative hypothesis: common AR coefs. (within-dimension)

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-1.934120	0.9735	-2.737679	0.9969
Panel rho-Statistic	-0.176114	0.4301	-1.603863	0.0544
Panel PP-Statistic	-2.854192	0.0022	-4.485529	0.0000
Panel ADF-Statistic	-1.077248	0.1407	1.342371	0.9103

Alternative hypothesis: individual AR coefs. (between-dimension)

	<u>Statistic</u>	<u>Prob.</u>
Group rho-Statistic	-0.062336	0.4751
Group PP-Statistic	-4.782062	0.0000
Group ADF-Statistic	-0.806172	0.2101

Cross section specific results

Phillips-Peron results (non-parametric)

Cross ID	AR(1)	Variance	HAC	Bandwidth	Obs
Cameroun	0.042	4.18E-28	6.96E-28	2.00	20
Gabon	0.132	10.17496	7.535176	4.00	20
Congo	-0.051	6.908798	6.782645	1.00	20
Tchad	-0.211	2.49E-28	1.58E-28	19.00	20

Augmented Dickey-Fuller results (parametric)

Cross ID	AR(1)	Variance	Lag	Max lag	Obs
Cameroun	0.554	2.14E-28	1	--	19
Gabon	-0.073	9.951431	1	--	19
Congo	-0.010	7.139830	1	--	19
Tchad	-0.645	2.26E-28	1	--	19

Appendice 2. Overall estimation of the model

Dependent Variable: PIB
 Method: Panel Dynamic Least Squares (DOLS)
 Date: 10/10/18 Time: 12:05
 Sample (adjusted): 1997 2014
 Periods included: 18
 Cross-sections included: 4
 Total panel (balanced) observations: 72
 Panel method: Weighted estimation
 Cointegrating equation deterministics: C
 Fixed leads and lags specification (lead=1, lag=1)
 Long-run variance weights (Bartlett kernel, Newey-West fixed bandwidth)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
KFIN	0.021049	0.078639	0.267664	0.7924
FDI	0.230818	0.075862	3.042621	0.0078
KH	0.344608	0.607239	0.567499	0.5783
KF	0.102710	0.073876	1.390311	0.1835
R-squared	0.981257	Mean dependent var		4.514787
Adjusted R-squared	0.916828	S.D. dependent var		5.273265
S.E. of regression	1.520786	Sum squared resid		37.00466
Long-run variance	0.436940			

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The Challenge in Pain: The Delayed Bereavement at the Origin of the Act of Entry into Business of the Widow

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Received: April 17, 2019

Accepted: May 5, 2019

Online Published: May 28, 2019

doi:10.5539/ibr.v12n6p99

URL: <https://doi.org/10.5539/ibr.v12n6p99>

Abstract

This paper is intended to explore the direct relationship between the widow's denied mourning and the influence of the loss of the husband manifested by a difficult or denied mourning. This research shows us that the widow has to assume the role of her departed husband immediately, and that it is quick, urgent and, most of the time, painful. The resulting dimensions of the difficult mourning that trigger in her the decision to resume and continue the work of the deceased.

We interviewed fifteen widows and highlighted the dimensions that surround the post-husband's loss. We thus discovered the keys of reading of this specific recovery.

Keywords: widow's mourning denied, specific recovery, immediate replacement of departed husband

1. Introduction

The recovery by the widow of the leader seems little or not treated, just as much as the human considerations which appear hidden to us, while it remains an answer to preserve the company and that to explore the human aspects which are its own could be the key to a successful recovery. This is why, for several reasons, we will pay particular attention to this work.

Firstly, we cannot ignore the death of the family business leader as a potential danger that causes a crisis due to a disruption of the organization; and, on the other hand, the grieving situation of the widow and the dimensions of her commitments in the family business (EF) (Labaki, 2013) to ensure the continuity of the deceased's work, often for a question of survival. The situation of widowhood in which she finds herself complicates her urgent and rapid entry into business. Early widowhood and bereavement are two aspects that we will explore in order to be able to find the mechanisms and the fundamental links of her intention to take over the family business. We will try to better understand the psychological springs of the "grieving widow" in mourning, to pierce her motivations for decision making recovery and how her intention to take over is manifested? But, at first, it seems fundamental to us to approach the early widowhood, then to trace the outlines of the mourning.

Early widowhood is an unnoticed contemporary phenomenon that is usually associated with older people, but it is far from being always the case. According to Delaunay-Berdaï (2006), in France, each year, around 24,000 women under 55 lose their spouse, compared to 6,000 men. In general, early widowhood affects 360,000 people, of whom almost 80% are women. These figures reflect an important phenomenon in which there is a strong gender component. A higher level of male mortality is well known to demographers and epidemiologists and, in the same vein, life expectancy of men in the socio-professional categories such as artisans, traders, business leaders is lower than that of women. This inequality is essentially linked to physical effort and occupational hazards such as accidents, suicides, etc. but also to diseases.

Early widowhood remains a poorly-known, even forgotten, phenomenon. When a spouse dies, it is clear that these "early widows" are often left alone with young children. This situation generates material and social difficulties. They thus assume a dual status, on the one hand that of "widow" and, on the other, that of "single-parent family". Studied from an anthropological point of view, the questions relating to death have made it possible to try to sketch the outlines of the behavior of men facing it. Thus, the death of a loved one does not correspond to a total disappearance from the existence of the surviving spouse. There is the disappearance of the

body, ritualized by burial, allowing people to understand that they will never see their spouse again. However, sometimes the disappearance of the spouse does not mark the end of conjugal life. Indeed, the missing person remains present for the surviving spouse, through "marital memory" Caradec (2007). The latter reconstructs the past, transforms it, and thus establishes a new relationship with the deceased little by little. As Caradec (2007) points out, re-memorization uses various channels such as certain situations that recall an episode or a particular moment in conjugal life, material supports (domestic objects or places of memory). This work of memory is not only mental, it goes through the manipulation of the material supports of the company: the creations of the deceased like the business card, the e-mail address, the cup of coffee, the office, etc. However, the surviving spouse must decide on the future, objects, personal effects of his deceased spouse and, beyond that, objects to which his image remains attached. In our research, we imagine how difficult it is for the recovering widow to separate from the business created by her late husband. The challenge of widowhood is then to reorganize one's existence by finding a new meaning for it. In this sense, it means: to continue the entrepreneurial work while keeping alive its business.

2. Ways of Understanding the Decision to Take Over the Grieving Theory

The analytical framework of bereavement will describe the stages of mourning carried out or postponed by the widow, the demonstrations or not of these stages being directly related to her personal motivations to resume immediately after the death of her husband. We will approach the concept of grief from different angles and then present the analysis grid developed from the approach that seems relevant to us.

The theory of mourning, "theory of loss", should help us better understand the steps of the business recovery of the leader's widow. We therefore approach the major event that induces mourning: death.

Without going into a long "thanatological" discussion, our goal is to present death and its representations in our contemporary society. As part of our research, talking about death and coming to the emergence of representations of its consequences to be able to answer our problematic, was not easy to the extent that death was and remains a taboo subject. Indeed, the idea of death is unbearable for most people. The idea of eternity and the illusion of invulnerability are inscribed in us. In the near-future, we are promised "the death of death", "the revolution of life or how biotechnology will upset humanity" (Alexandre, 2011). We want to live and live with those we love. We cannot accept the idea of death or the final cessation of life, as the dictionary says. And yet, since the beginning of humanity, men are aware of their mortality.

This research focuses mainly on the entry into the company of the leader's widow following a crisis situation caused by the sudden disappearance (accident, suicide) of the key man (leader). The denial of death exists and talking about the death of another or of our own death is not an easy thing. Silence weighs on death, which explains why, in most family businesses, the question is avoided and it is very rare to hear a boss discuss his own death. However, we observe that at the legal, matrimonial and patrimonial level, steps are often taken to prepare for an unexpected death (sworn and written wills, life assurance policies, etc.)

The first publications on mourning date back to Abraham (1965), Freud (1968) and Lagache (1977). We retain from these works that the theory of mourning is a "theory of loss".

The loss of the head spouse is accompanied by associated losses that are also manifested in the loss of his social circle and the relationships he has developed within his professional network, internal and external. The widow must now face up to the change in her social status ; she is no longer the boss's wife, she is now the company's leader. As a result, she must go through a "relational transaction" (Arnould-Plaud, 2010) and rebuild her own network alone. The couple no longer existing, the couple's business relations are no longer the same, especially since these were largely, not to say exclusively, forged around the disappeared. Caradec (1998, quoted by Arnould-Plaud, 2010) notes a redefinition of identity imposed on the widow since "the couple is no more, the approach and the vision of those around them, the social positioning is changing".

The loss of "object of function" (Ribes, 2000, cited by Arnould-Plaud, 2010) now forces the widow to confront alone, on the one hand, the feeling of loneliness and misunderstanding, and on the other, the business world in connection with the company's internal and external stakeholders. The resumption of the conjugal craft business puts it in a dynamic of rapid adaptability, mixed with an extreme pain which is renewed and accentuated as many times as there are new situations to manage. The loss manifests itself in extreme physical and psychological expressions, which we discuss hereafter.

According to Bacquet and Hanus (2014), etymologically, the word mourning comes from the Latin "dolere" (to suffer), which is at the origin of the word dol which gave in French "deuil", but especially pain. Mourning is a "painful emotional state caused by the death of a loved one". It also refers to a period, "the period of pain and

sorrow that follows this disappearance". Mourning is characterized by a personal experience, one speaks here of experience of mourning, and by a painful time. The word "mourning" has a social version in French terminology: "to mourn someone means to have lost and owed him a certain number of actions". Loss refers to "the fact of being separated by remoteness or by death, deprivation, the emptiness that results". "Mourning after death gives it a special character because of its radicality, its irreversibility, its universality and its implacability" (Hanus, 2000).

As we saw earlier, the loss of a loved one can cause a state of significant distress in the survivor. According to Bowlby (1980), "All available studies show that most women take a long time to overcome the death of their husbands and (...) almost always their health will suffer." According to doctors, the state that follows the death of a spouse is like a violent blow, a shock, causing insomnia, dizziness, nausea, etc. A long depression often follows. Thus, the body reacts physically to psychological suffering. There is also a state of fatigue, apathy and headaches. It should be noted that this physical upheaval, causes a deterioration in the state of health. As Bowlby (1980) points out, "if a minority of widows fail to recover their health status, the majority of those who reach it, or who approach it, will take two to three years to achieve it." These elements highlight the importance of difficulties for widows. In fact, the widowed wife will have to manage the takeover of the family business in extreme physical and psychological conditions.

The loss of the husband is a milestone event that, according to the authors cited above, is of a static and dynamic nature with a perspective considering post-loss. The notion of perspective places it in a process that is both active and reactive after the death of the leader. We are particularly interested in the notion of loss, because we think that it is at the center of the engagement of the widow's entrepreneurial act.

Death, the loss of the leader characterizes the first loss and implies the imbalance and conditions the associated losses. According to Stroebe (1996), it is "the loss of instrumental support, loss of validation support and loss of support for social support". The definitive disappearance of the person to whom we give and from whom we receive love represents a permanent state of lack. The well-established life on the functioning of a couple and the sharing of everything connected with it is no more. Feelings of security and assurance are shaken permanently, daily rituals are gone, and all forms of conjugal life belong to the past. The loss is even more painful if the spouse had the fundamental and major place in the life and survival of the couple. The impossibility of going back, avoidance, or repair, is no longer possible in time and the past is now synonymous with all representations of the husband. To deny oneself to this state of things is to keep alive the disappeared and to prevent him from definitively leaving the memory and in all that he may have left behind: the widow working to cultivate his presence through her works while fearing to forget it, she is afraid in the sense of Fauré, (2004), "not to be able to keep alive what cannot be shared anymore, (...), the loss is conjugated at all times". The feeling of instability, imbalance and disorganization results from the loss of the husband and his construct in the three time periods, the past, the present and the future. In this sense, the loss is seen as being "a crisis of life whose temporal thickness goes back to the individual past, to the definition of oneself in the present, and to the projection of oneself in the future" (Balk, 2004).

The process of mourning is also characterized by the manifestation of emotions and concerns. We can schematize it through the following stages: shock, confusion, research, acceptance, reintegration (Pereira, 1998).

According to Baudry (2003), the "Work of mourning" is done through conventions, customs, and rules that organize a framework within which the individual communicates to others his feelings. But society is not just an environment in which individuals would be actors and owners of their grief. It also gives form and, even more, existence to sorrow. According to Baudry (2003), grief is a constraint. It is a sociological approach to grief. To mourn corresponds to cultural imperatives, in which there are many external and constraining frameworks in regional variants. Basically, mourning would not be a feeling, but a "directive". Whoever does not express his sentence would escape the collective rules.

According to the psychological and psychoanalytic approach, the mourning of the spouse requires a work of mourning studied, following Freud, by the psychologists who have identified the various manifestations and the different stages with the stupefaction, the denial and the revolt, the depression with its somatic, intellectual and emotional alterations (Bacqué and Hanus, 2014). According to the authors, three steps exist (Hanus, 1994), with shock, depressive state and recovery period, five-phase (Kübler-Ross, 1975), with refusal and isolation, irritation bargaining, depression and acceptance would break down the process of mourning.

As part of our research, we mobilize mourning events according to Bowlby (1978) with its four stages. We were convinced by the relevance of the analysis of this model. We analyze the grieving process of the widow who resumes according to this model.

Mourning according to Bowlby (1978) is defined by four steps:

Emotional numbness that occurs just after the shock with the person who is in a state of distress, anger and denial of loss.

Languishing is the phase in which the person is terribly bored by the deceased and seeks him out. The person in mourning becomes preoccupied with the loss and the world seems empty and meaningless in the absence of the deceased. The bereaved person re-lives each memory, and is in search of the missing.

- Disorganization and despair, mentally re-living memories of the deceased, characterize the bereaved person who comes to accept the permanent loss and feels disoriented and agitated. Interpersonal relationships lose their warmth and spontaneity.

- It is in the reorganization phase that the mourning begins to fade and the person establishes new goals in his life by undertaking new activities. This process can take months or even years. The painful memories are less and less present and the grief is replaced by precious memories, pleasure and affection.

We can remember for our research, that this concept first enlightened us on how it is lived by the widow following the death of her leading husband; secondly, the duration and intensity of the mourning stages according to those chosen, namely, those of Bowlby (1978). These four steps are summarized in the following diagram. The process synthesized below is of course nonlinear and can see some skipped steps and have varying durations. It includes a phase of numbness in which distress and anger are manifested, a phase of languishing and searching for the loss suffered, a phase of disorganization and despair, and finally a phase of reorganization or phase of awareness and acceptance of the new situation with openness to the future.

3. Methodology

Qualitative field approach

This research is part of a comprehensive approach of the main actor of the takeover of the family business, the leader's widow, and of apprehension of the determining factors of her intentions when becoming the substitute. Based on qualitative research, we made sure to sample a number of special cases of widowed buyers. This allows us to discover what is general between them in order to be able to make possible comparisons. We therefore took into account the similarities and differences between our cases. We have selected any female survivor who has experienced a situation of widowhood and sudden entry into business, in the pain of the loss of the husband, with the diversity of their situation. This diversity was seen particularly in terms of legal status before the death of their spouse, age at the disappearance of their husband, participation or not in the creation of the case, family situation (mother or not), number of children and their age at the time of the father's death, sector of activity and geographical location. The principle of differentiability in the sense of Bertaux (2005: 29) was also observed in the selection of our cases. Indeed, although in the same situation and position of recovery, widows who took over were able to exercise their role with their own personality in the sense of "perception, apprehension, appreciation and action patterns. various manifestations closely related to those of their life course" (Bourdieu, 1986 cited by Bertaux, 2005, 29).

An ethno-sociological approach of multiple cases has been set up by favoring the method of life stories particularly adapted to the analyzed situation. We conducted interviews with 15 widows between 2013 and 2018 who took over the family business after the death of their husband, having perpetuated it and about to pass it on. The qualitative analysis made it possible to identify the key elements of the motivations of decision to pursue the family business.

4. Results

The content analysis coding manual of interview revealed that several verbatim and themes that emerged

Themes: Widows and mourners	Verbatim examples
Numbness (between anger and distress)	<p>The day when he arrived, he was already not well at all, I felt that there was a lot of tension in the company, he was driving fast, I always told him to pay attention, he was not alone, at first I was mad at him, the children asked me, I did not know what to say to them, I cried all the time, I had no more words. (Widow 1)</p> <p>It was brutal, we did not have time to prepare, in 6 months he was gone, 6 months something like that, I always see myself in August when we saw the surgeon and that he told us clearly ; it's over, there you do not see anything but black, it was not easy, it had an impact on the future. (Widow 5)</p> <p>I do not hide that there were difficult moments, I had insomnia, anxiety, and often you look at yourself and you say the pit is attracting me, here is the black spot. (Widow 7)</p> <p>These are all the things that fall on you, you did not ask anything, yes I admit, I had a hard time with that and the rest. (Widow 10)</p>
Languishing and searching for the lost object	<p>I had to leave home, it was no longer possible, I had the impression that he was going to return from his tour, and I was there waiting, while he was gone, definitely gone. (Widow 4)</p> <p>It hurts, the pain annihilates you from the inside, you do not even know what you look like so much as the days are alike and you are drowning in the problems, you are alone, you cry, but you continue because it's like that, (...), I held on with drugs, I saw him everywhere, and I told myself it's just a nightmare. (Widow 12)</p> <p>He's still here, and then I put a picture of him smiling at the store, everyone said to me: it looks like he's alive in the picture, and I said he was never dead and it's true for me, he wasn't dead: he just left before me that's all. (Widow 14)</p> <p>Sometimes I feel that he is more alive at the store just over there, when people come and talk to me about him, it makes him live again, and makes me live, at home, it's empty, at the store too his empty chair reminds me that he is no longer there; I will end up not sitting at this table at noon. I'll work or I'll open sooner, what do you want me to say to you, I cannot accept it like that; his departure, I cannot, so I speak, I talk to him, it's horrible when I realize that I am alone, I collapse. (Widow 13)</p>
Disorganization and despair	<p>I did not know where to start, except I had to start somewhere and continue (...), but I was there physically, but in my head, what happened to me was not true (Silence). (Widow 12)</p> <p>But because I had to, it's true, it's for him, and for all that, I had to make a decision, quit my job, it was a big risk for me, but I did it, and there I said to myself, but what should I begin with? The garage, the customers, (...) ". (Widow 7)</p> <p>But the drama, unfortunately we had taken this bug business recently and it was important for us and that's it, I find myself alone in front of this garage and I asked myself what should I do? (Widow 11)</p> <p>But afterwards, one is alone anyway, one is alone and if you have to make a decision you have to do it alone, the others will not decide for you; people will not go into your personal life and do it for you, but even sometimes it's too heavy, decide for everything especially there, I'm never going to have anyone saying: well, what do you think about it? It's better like that and wait for the answer, that would no longer exist. (Silence). (Widow 9)</p>
Reorganization (the rebound in the emergency)	<p>We have the most beautiful garage in the city, his dream, we have three employees so I make the decision to continue and I say: well, either I continue and then it works, or I stop everything but it was not at all what I wanted. (Widow 10)</p> <p>Okay then, then I gathered the guys, I told them: I'm leaving my job and I'm not selling, for him, for me and for you too, finding work around, it won't be easy for you, but think about it and give me your answer quickly, we have no time. (Widow 12)</p> <p>I did not shut down, Olivier opened that day, and every other day, he was like a son to my husband and me, he cried like us, I could not have gone on without him and my daughters. So he was buried on the 15th and I opened the same week, we needed a week to prepare the burial of my husband and the opening of the store. (Widow 8)</p> <p>I had to decide whether I kept it or not, it was necessary to decide quickly, (...), we shared the work, I worked on the administrative aspect and the customers who come to the store and the employees worked on the building sites, it was okay, so we continued like this. (Widow 3)</p> <p>At first, it was hard, now it's true with hindsight I realize it was hard and, you do not have time to breathe, that's to say in six months what do I do? do we shut up in six months?, do we suspend?, no we do not have time. (Widow 5)</p> <p>I think we are so rushed, and everything else is a very special situation, (...). In fact J-F died in June early in the season, we were engaged on many things; the summer, we don't question ourselves, we re-open without thinking. (Widow 7)</p>
Deferred or refused bereavement	<p>His death was a disaster, by the way it was the first on all levels, I said I was there and I was there because I felt that if I did not hold on, he would die again, and I did not want to, I did not want to forget him, and I did not even want to be called a widow; I saw a psychiatrist who</p>

	<p>told me you must mourn, mourning what? When? How to mourn my life? My husband's mourning? Of the love of my life? Is he crazy? So, I did not go there anymore and then I did not want to. (Widow 1)</p> <p>I have to go by myself, but I must do it, I can do it for him, I'm not ready to leave everything, I'm not even sure now that I want to sell, no I cannot, it's no longer possible, what would I do? (Widow 6)</p> <p>It is always difficult and then the mourning cannot be, it is not possible, to accept it is to make everything disappear with it, every day we live, it is for him, he must remain alive in us and in what he has built, every day, we do a little for that, always a little, that's it. (Widow 8)</p> <p>There you go, that's all I had to say; otherwise concerning my mourning, it is not the moment and it will never be the moment, mourning means that it is finished, I manage my pain by working and as long as I am where my husband used to work, we have lived both in this place, so he's next to me here, he's next to me and I still live precious moments. (Widow 7)</p> <p>The shelter was there not to think and not to feel pain, I could not bear the condolences; I was a widow?, I did not see myself in mourning, it was not the moment. (Widow 10)</p> <p>We did as we could to deal with the pain, in the pain, all the rest and then the mourning, yes the mourning of my husband I have not yet completely mourned, the mourning of my husband, it has only been 2 years since I could talk about it. (Widow 12)</p> <p>Afterwards, it is necessary to find the strength to keep moving forward in the fog and wait or rather make it disappear; you have to be really strong, after a lot of time and a lot of work, I was able to accept it and now I can finally mourn, his business is safe, he isn't dead. He's still here, he's not dead, he's alive. (Widow 9)</p> <p>I think that at the beginning, it was to continue, after we do not think about it; grief, yes, but I will say that in everyday life, we make sure not to do it, we do not want to let it happen, we do not think about it, and we live in a village where we talk regularly of my husband; me too, we're grieving, it's hard and we live it differently with time and every day we do it without actually doing it, every day, we do it by talking about him, finding ourselves in the place where he was, but immediately after the death, we cannot mourn or even think about it, it's abstract, and then, if we think about doing it, we get the impression that everything is crumbling, everything disappears, so we cling to something that tells us that he has not left and he will live forever; I really do not know how to explain, it's real without being real, it's without interruption, here we must not feel that it changes, we do as if he were there. (Widow 3)</p>
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The analysis of the data brings out the major specificity of this entry into business, namely the sudden death and the emergency situation in which the widow finds herself. It brings out the influence of the loss of the husband as the first loss and the refusal of a second loss which is the family business created by him. The intention and the act of taking over the family affair left are essentially motivated by the refusal of mourning.

5. Discussion

Through extracts from the life stories of the 15 widows, we can only observe that the different phases of mourning manifest themselves for each of them. The state of extreme urgency makes the manifestation of the phases of mourning very fast and not very visible. It is therefore difficult to foresee the beginning and the end of the mourning in a sequential way. Indeed, the notion of urgency is so significant that some of these stages are deferred in time. It is important to get into business, take over the business and cope with it. We can therefore speak of complex bereavement and delayed bereavement, i.e., bereavement occurring in a time-lagged manner with respect to the date of death (Paturel and Paturel, 2009). We can also speak of refused mourning, because the refusal to mourn the husband is to keep in sight the company he created (his work). The decision of recovery is impelled notably by the refused bereavement. By refusing to mourn, widows cultivate the memory of the deceased through his work. It materializes and institutionalizes its presence by the continuation of the activity of its company or a part of it.

We are here, in this case, the continuity of the deceased's work to make it live through the company. The resisting widow refuses categorically to accept the "double loss". Indeed, the results clearly show that refusing to mourn the deceased implies refusing a second loss characterized by the company's closure. Since the widows who take over cannot act on the first loss, they expend all their energy to keep the entity alive and, in fact, prevent the second death of the husband through his work and thus the second loss.

Our research consisted in focusing on the widow's entry into business by highlighting, on the one hand, the post-traumatic factors following the death of the husband, which themselves condition the immediate and urgent recovery. The mourning of the wife allows the extension of the life of the leader by preventing his second death. The maintenance and perpetuation of the work that he has created on his own or with her, is reflected in the continuation of the life of the organization.

6. Perspective and Avenues of Research

We cannot consider in our case a test of our conclusions, by the restraint of a quantitative device, or that of a device of longitudinal study, the character and the very essence of the subject there refuse. On the other hand, it seems entirely possible for us to proceed by comparison of cases, provided that we can have widowers who would agree to receive us and compare themselves to their experience of the recovery in terms of our model. Our goal is to be able to give voice to other widows by revealing the existence of this phenomenon.

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