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ATTRIBUTES OF 'DIFFUSION OF INNOVATIONS' OF BUSINESS PRODUCTS (REVIEW PAPER)

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Abstract

Innovation is an idea, practice, object, new technical product, scientific knowledge, application method, or tool that is perceived as new by an individual or unit of adoption facilitating problem solving for potential adopters or customers. Diffusion is the process to communicate innovations for adoption and gaining acceptance through certain channels over time among the members of a social system or a certain community. Diffusion process has a rate of spread or adoption by potential adopters depending on some characteristics also called attributes. These attributes are widely discussed in literature and include: relative advantage, comparability, complexity, trial-ability and observability. This paper is to discuss innovations, their diffusion and attributes on which the rate of diffusion depends.

Introduction

Innovation is an idea, practice, object, new technical product, scientific knowledge, application method, or tool that is perceived as new by an individual or unit of adoption facilitating problem solving for potential adoption (Inman, 2000; Sahin, 2006; Tolba & Mourad, n.d; and Robinson, 2009). Different adopters perceive and assess innovations in a variety of ways (Tolba & Mourad n.d). Whereas diffusion is the process by which an innovation is communicated for adoption and gaining acceptance through certain channels over time among the members of a social system or a certain community (Sahin, 2006; Al-Jabri et al, 2012) and KOÇAK et al, 2013). Diffusion is special type of communication in which the messages are about a new idea. But an innovation, no matter how well designed, would be perceived useless if it is not adopted. Therefore, one of the important duties of those responsible for an innovation is to maximize its rate of adoption (Chigona, & Licker 2008) by its diffusion. *Rate of adoption being a measure of number of individuals who adopt the innovation for a period is the relative speed with, which members of a social system adopt an innovation Sahin 2006) and depends on some characteristics or*

attributes of the innovation. Attributes are the characteristics of the innovation that may be perceived either positively or negatively, and include: relative advantage, comparability, complexity, trial-ability and observability (Bertrand, 2004). The perceived attributes of an innovation are significant predictors of the rate of adoption. Almost 49-87% of the variance in the rate of adoption of innovations is explained by these five attributes (Sahin 2006). This paper is reserved for the discussion of attributes causing the diffusion of innovation mentioned in the relevant literature.

Innovations

According to Robertson (1967) innovation is a process whereby a new thought a new, behavior, or thing is conceived of and brought into reality.

Inman (2000); Sahin 2006) and Robinson (2009) quoting some studies (Rogers, 2003) expressed that innovation is an idea, practice, or object that is perceived as new by an individual or unit of adoption. An innovation may be an idea, instead of a mechanical creation; it must be perceived and interpreted to have value; and those doing such interpretation have agency on whether the innovation proceeds in any setting. Innovations have characteristics, which explain the rate of their diffusion.

Hana (2013) after study of literature is of the view that Schumpeter at the beginning of the 20th century for the first time as such used the term “innovation” and defined innovation as product process and organizational change that do not necessarily originate from new specific discoveries, but many arise from a combination of already existing technologies and their application in new context.

Chigona & Licker (2008) referring some researches asserted that a concept or a product is an innovation if the adopters perceive it as new. Therefore an innovation does not necessarily have to be new; it only needs to be perceived as new by the would-be adopters.

Tolba & Mourad (n.d) pointed out that innovations are the new technical products, scientific knowledge, application methods, and tools that facilitate problem solving for potential adoption. Different adopters perceive and assess innovations in a variety of ways.

However Okpara (2007) argued that innovation requires a fresh way of looking at things, an understanding of people, and an entrepreneurial willingness to take risk and to work hard. An idea doesn't become an innovation until it is widely adopted and incorporated into people's daily lives. Most people resist change, so a key part of innovating is convincing other people that the idea is a good one – by enlisting their help, and, in doing so, by helping them to see the usefulness of idea.

Diffusion

According to Sahin 2006) and KOÇAK et al (2013) diffusion is the process by which an

innovation communicated through certain channels over time among the members of a social system. Diffusion is special type of communication in which the messages are about a new idea. Diffusion is also defined as the process by which an innovation is adopted and gained acceptance by members of a certain community. Innovation, communication channels, time, and social system are the four key components of the diffusion of innovation.

Al-Jabri et al (2012) view diffusion as the adoption of an innovation ‘over time by the given social system’ as a consequence diffusion processes result in the acceptance or penetration of a new idea, behavior, or physical innovation.

Peres et al (2010) stated that “the spread of an innovation in a market is termed as “diffusion”. Diffusion research seeks to understand the spread of innovation by modeling their entire life cycle from the perspective of communication and consumer interactions.

Raban & Koren (2012) also elaborated that in the DoI diffusion is described as the process by which an innovation is communicated through certain channels over time among members of a social system. As such, diffusion is a special communication concerned with the spread of messages that are perceived as new ideas.

Connotation of Diffusion of Innovation

Robinson (2009) wrote that diffusion of innovation seeks to explain how innovations are taken up in a population. Robinson mentioned that after testing more than 6000 research studies and field tests diffusion of innovation offers three most reliable and valuable insights of social sciences in to the process of social change:

- What qualities make an innovation spread?
- The importance of peer-peer conversation and peer networks.
- Understanding the needs of different user segments.

Peres et al (2010) extracting from many studies explained that diffusion of innovation is the process by which a few members of a social system initially adopt an innovation then over time more individuals adopt until all (or most) members adopt the new idea. Recent research on collective behavior has focused on threshold models and critical mass models, and some attempts have been made to apply these models to diffusion of new communication technologies. Inman (2000) is of the opinion that a new technology does not add or subtract something. It changes everything.

Sahin (2006) quoting Rogers (2003) asserted that adoption is the decision of full use of innovation as the best course action available and rejection is the decision of not adopting an innovation.

Diffusion Theory and Technological Progress

Inman (2000) and Chigona & Licker (2008) mentioned that diffusion of innovations is the process by which an innovation is communicated through certain channels overtime among the members of social system. Diffusion is as much grounded in agriculture as education, as much in anthropology as psychology.

Peres et al (2010) asserted that innovation diffusion is the process of market penetration of new products and services, which is driven by social influences. Such influences include all of the interdependencies among consumers that affect various market players with or without their explicit knowledge.

Peres et al (2010) extracting from many studies also asserted that diffusion of innovations is the process by which a few members of a social system initially adopt an innovation, then over time more individuals adopt until all (or most) members adopt the new idea. Recent research on collective behavior has focused on **threshold models** and **critical mass** models, and some attempts have been made to apply these to the diffusion of new communication technologies.

Inman (2000) is of the opinion that a new technology does not add or subtract something. It changes everything.

Attributes or Characteristics making the Innovations Spread

According to Bertrand (2004) an **attribute** is a characteristic of the innovation that may be perceived either positively or negatively, and these include: relative advantage, comparability, complexity, trial-ability and observability.

KOÇAK et al (2013) asserted that widespread use of new technologies is associated with the five basic features i.e. Compatibility, Complexity, Trialability, Observability and Relative Benefit. Understanding these features will enable a more effective and efficient use of new technologies.

Inman (2000) and Sahin 2006) expressed that all innovations have characteristics, which explain the rate of their adoption. It is individual's perceptions of these characteristics that predict the rate of innovations. Sahin 2006); Chigona & Licker (2008) and Tolba & Mourad (n.d) pointed out that the innovation-diffusion process is "an uncertainty reduction process", and generally it is agreed that innovation attributes are important considerations for potential adopters and they assess the following five proposed characteristics or attributes of innovations which help to decrease uncertainty about the innovation: (1) relative advantage, (2) compatibility, (3) complexity, (4) trial-ability, and (5) observability.

Inman (2000); Chaipoopirutana et al (2009); Tolba & Mourad (n.d) and Lee et al. (2011) and Al-Jabri, & Sohail (2012) postulated from the Innovation Diffusion Theory (IDT) five significant innovation attributes and briefly explained them as:

Relative advantage: "the degree to which an innovation is perceived as better than the idea it supersedes

or replaces”; the construct of Relative advantage is the strongest predictor of the rate of adoption of an innovation. It refers to the uniqueness of need value and the financial return.

Compatibility: “the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of potential adopters, customers or end-users”

Complexity: “the degree to which an innovation is perceived as difficult to understand and use” or the end-users’ perceived level of difficulty in understanding innovations and their ease of use.

Trialability: “the degree to which an innovation may be experimented or tested on a limited basis”; and

Observability: “the degree to which the results of an innovation are visible to other people.”

Al-Jabri & Sohail (2012) referring book of Rogers [2003] titled “Diffusion of Innovations” expressed that these attributes are viewed to determine the rate of innovation adoption.

Inman (2000) also narrated that each of these characteristics explicitly links an innovation with its social, cultural, political and historical contexts the basis for a richer collaborative relationship between individuals with different disciplinary backgrounds. More, the terms suggest a path for innovation, which is especially important for collaborative conversations among stakeholders, as it can be the subject of conversations, not the technologies always themselves.

Sahin (2006) referred Rogers (2003) who defined the *rate of adoption* as “the relative speed with which an innovation is adopted by members of a social system”. For instance, the number of individuals who adopted the innovation for a period of time can be measured as the rate adoption of innovation. The perceived attributes of an innovation are significant predictors of the rate of adoption. Almost 49-87% of the variance in the rate of adoption of innovations is explained by these five attributes. In addition to these attributes, the innovation-decision type (optional, collective, or authority) communication channels (mass media or inter personal channels), social system (norms or network interconnectedness), and change agent may increase the predictability of the rate of adoption of innovations. For instance, personal and optional innovations usually are adopted faster than the innovations involving an organizational or collective innovation-decision.

Chigona & Licker (2008) narrated that basically these attributes are economic in the sense that they relate to how much efforts must be expended in adopting compared with the benefits of adopting, especially compared with costs and benefits of not adopting.

Robinson (2009) asserted that diffusion of innovation takes a radically different approach to most other theories of change. Instead of focusing on persuading individuals to change, it sees change as being primarily about the evaluation of “reinvention” of products and behaviors so they become better fits for need the needs of individuals and groups. In Diffusion of Innovations it is not people who change, but the innovations themselves. Why do certain innovations spread more quickly than others? And why do others fail? Diffusion scholars recognize five qualities i.e. Relative Benefit, Compatibility, Complexity,

Trialability and Observability that determine the success of an innovation.

Chigona & Licker (2008) referred the study of Moore and Benbasat (1991) who added *voluntary-ness* of use and image as additional attribute of innovation adoption over five attributes mentioned in above lines. So an innovation is most likely to be adopted if individuals perceive that the adoption enhances their image within the social system. Voluntary-ness of use is defined as “the degree to which use of innovation is perceived as being voluntary or of free will.

Detailed Discussion of Attributes

Five diffusion attributes i.e. Relative-advantage, Compatibility, Complexity, Trialability and Observability are discussed below in detail.

1) Relative Advantage

Inman (2000) narrated that relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes. Neudorfer (2004) expressed that relative advantage reflects the degree to which an innovation is perceived to gratify individual needs better than one that has been previously used or another innovative product alternative. The economic benefits resulting from the advantageousness of the product, which express themselves, for example, in cost-effectiveness, are also summed up under the term ‘relative advantage’. In the meantime, the existence of network effects is also mentioned as a criterion of relative advantage worth taking into consideration, since the degree of the gratification of needs and/or benefit increases with an increasing number of users of a service (e.g., eMail).

Sahin 2006) referred that the cost and social status motivation aspects of innovations are elements of relative advantage. For instance, while innovators, early adopters, and early majority are more status-motivated for adopting innovations, the late majority and laggards perceive status as less significant. Innovations are categorized in two types: ‘Preventive’ and ‘Incremental’ (non-preventive) innovations. “A preventive innovation is a new idea that an individual adopts now in order to lower the probability of some unwanted future event”. Preventive innovations usually have a slow rate of adoption so their relative advantage is highly uncertain. However, incremental innovations provide beneficial outcomes in a short period. When faculty members face the new demands placed on them, they will adopt technology. If teachers see that technology has value in their instruction, then they will use it. Sahin 2006) further expressed that to increase the rate of adopting innovations and to make relative advantage more effective, direct or indirect financial payment incentives may be used to support the individuals of a social system in adopting an innovation. Incentives are part of support and motivation factors.

Chigona & Licker (2008) revealed that Relative advantage is the degree to which an innovation is perceived as being superior to its precursor, which is either previous way of doing things, the current way of doing things, or doing nothing. The superiority of an innovation is not only measured in economic

terms but may also be expressed in terms of enhance personal status or other benefit terms. Higher is the perceived relative advantage, the higher the rate of adoption, all other factors being equal. Note that perceived relative advantage of an innovation involves both perception (i.e., evaluation) of the proposed innovation as well as perceptions of other candidates and the status quo. It is not uniquely tied to objective characteristics of the innovation although, of course, perceptions usually, but not always, are influenced by objective reality.

Robinson (2009) and KOÇAK et al (2013) also revealed that relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes by a particular group of users, measured in terms of that matter to those users, like economic profitability, social prestige, convenience, or satisfaction. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is likely to be. There are no absolute rules for what constitutes “relative advantage”. It depends on the particular perceptions and needs of the user group. The greater relative benefit means a high rate of adaptation.

According to Jwaifell & Gasaymeh (2013) the perceived relative advantage is the strongest predictor of rate of adoption of an innovation, which refers to the benefits a person would consider while adopting any innovation.

2) Compatibility with Existing Values and Practices

Inman J.A. (2000), Sahin 2006) Chigona & Licker (2008), Robinson (2009); Jwaifell & Gasaymeh (2013) and KOÇAK et al (2013) all expressed referring Rogers (2003) that compatibility is the degree to which an innovation is perceived as being consistent with existing values, past experiences, and needs of potential adopters.

According to Neudorfer (2004) the compatibility reflects the degree to which an innovation is perceived as being compatible with the existing values, norms, experiences, and needs of consumers. Often, the technological innovation demands changes in one’s behavior, which leads to only a low degree of compatibility.

Sahin 2006) quoted that a lack of compatibility in IT with individual needs may negatively affect the individual’s use of IT. If an innovation is compatible with an individual’s needs, then uncertainty will decrease and the rate of adoption of the innovation will increase. Thus, even naming the innovation is an important part of compatibility. What the innovation is called should be meaningful to the potential adopter. What the innovation means also should be clear. This is part of the complexity attribute.

Chigona & Licker (2008) stated that compatibility is positively correlated with the rate of adoption. In developing countries, cellular technology is directly compatible with the need for mobility for urban poor, who often do not have the luxury of long-term fixed addresses and whose lifestyles dictate

that they are often in transit and do not have access to fixed lines.

According to Chigona & Licker (2008) compatibility played a role in the adoption of the innovation. Compatibility was relevant on the following five account: compatibility with 1) other forms of technology that the members of the community are exposed to, 2) functions of the hosting institution, 3) the need of the potential adopters, 4) the financial status of the member of the community, and 5) the “nominal” ways of doing things. Chigona & Licker (2008) discussed compatibility with references to following other things.

Compatibility with other forms of technology

Chigona & Licker (2008) referring some researches revealed that without training, the adoption rate seems to higher in the urban-based project compared with equivalent rural-based projects. This could be explained by the difference in the level of exposure to technology in general. The urban population is most likely to be confronted with other forms of technology. For instance, cell phone ownership is higher in the urban areas compared with the rural areas, e.g. more than 50% of the Cape Town and the immediate surrounding areas population owns cellular phones and the cell phone ownership among the Black community in metropolitan cities in South Africa had reached 63%—this is in contrast to the national average of 35%. It can be said, therefore, that the compatibility of computing facilities with other technologies that participants were exposed to had a positive impact on adoption.

However, the use of open source software had a negative impact on compatibility and adoption. Most of the users who had prior or alternative access to computers were used to proprietary products and, consequently, found the open source products different and difficult to use.

Compatibility with functions of hosting institution

Chigona & Licker (2008) quoted that the computing facilities were also compatible with the core functions of the libraries where they were hosted (i.e., they were a source of information for the general public). It is also interesting to note that many adopters became aware of the facilities while using the library.

Compatibility with the normal way of doing things

According to Chigona & Licker (2008) a fifth meaning of the term fifth meaning of the term “compatibility” is compatibility with precursor procedures and skills. It is likely that users of libraries are literate at least to some extent, thus it is likely that these users are used to using library resources to locate information. The opposite effect of compatibility with “normal” ways of doing things was noted by some of the users who had previous or alternative access to technology. Most of these had used proprietary products and, therefore, found the open source products difficult to use.

Compatibility with technology to which the urban poor are exposed, the functions of the hosting

institution, and the normal way of doing things positively contributed to the adoption. Lack of compatibility with open source software negatively impacted adoption.

Robinson (2009) expressed that an idea that is incompatible with the values, norms or practices will not be adopted as rapidly as an innovation that is compatible.

KOÇAK et al (2013) are of the opinion that an idea that is more compatible is less uncertain to the potential adopters, and fits more closely to the individual's life situation. Such compatibility helps the individual give meaning to the new idea so that is regarded as familiar.

According to Jwaifell & Gasaymeh (2013) the process of adopting an innovation can be accelerated if the individuals feel that new innovation is compatible with their needs and experiences.

3) Complexity or Simplicity (and Ease of Use)

According to Inman J.A. (2000), Sahin 2006), Chigona & Licker (2008), Robinson (2009) and KOÇAK et al (2013) complexity is the degree to which an innovation is perceived as difficult to understand and use. This attribute correlates negatively with the rate of adoption. Sahin 2006) quoted that opposite to the other attributes, complexity is negatively correlated with the rate of adoption. Excessive complexity of an innovation is an important obstacle in its adoption. And innovation might have different levels of complexity.

Neudorfer (2004) also had almost similar opinion expressing that the complexity reflects the degree to which an innovation is perceived as something that is hard to grasp. In general, the complexity is higher, the more the individual subjectively perceives the technological novelty of the product, the more dynamic the innovation processes are, the more difficult the anticipation of the consequences of an adoption are, and/or the greater the investment volume is. A consumer with a relatively high degree of knowledge regarding the innovation will be inclined to perceive a lower degree of complexity than a consumer with a relatively low degree of knowledge regarding the innovation. A technological innovation is often characterized by a relatively high complexity, which shows itself in the existence of different product attributes, which are partly unknown to the consumer.

Chigona & Licker (2008) explained that in terms of use of computers, the main challenge has been lack of training. The Smart Cape project does not offer training to users or potential users. Therefore Robinson (2009) is right being of the opinion that new ideas simpler to understand are adopted more rapidly than innovations that require the adopter to develop new skills and understandings.

4) Trial-ability

Inman (2000); Sahin 2006); Chigona & Licker (2008); Robinson (2009) and KOÇAK et al (2013) wrote quoting Rogers (2003) that trialability is the degree to which an innovation may be experimented within a limited basis.

Neudorfer (2004) narrated that the trialability reflects the degree to which the adopter can test an innovation beforehand. In particular, the insecurity connected with the adoption can be reduced by means of the possibility of testing the innovation's suitability. In general, the trialability is impeded by the existence of different product attributes, which are partly unknown to the consumer. Whether innovations are tested or not depends, however, on the individual's feeling of whether he or she can finish the testing phase without difficulties or negative consequences. An example of this would be the automatic termination of a test subscription.

Sahin (2006) asserted that trialability is positively correlated with the rate of adoption. The more an innovation is tried, the faster its adoption is. During the implementation stage of the innovation-decision process and trial of innovation reinvention may occur. Then the innovation may be changed or modified by the potential adopter. Increased reinvention may create faster adoption of the innovation. For the adoption of an innovation, another important factor is the vicarious trial, which is especially helpful for later adopters. However earlier adopters see the trialability attribute of innovations as more important than later adopters. An innovation that is trialable represents less risk to the individual who is considering it.

Chigona & Licker (2008) revealed referring some studies that trialability is sometimes linked to divisibility of an innovation. Trialability/divisibility is the degree to which an innovation can be adopted in phases, with each phase leading to a greater adoption. Trialability might also be influenced by cultural values, the task and its associated stresses and even social influences (particularly where others might be observing the trials). Innovations that can be tried in pieces are inherently more trialable than those for which the entire technology has to be mastered before any use can be made. In these latter cases, the "trials" are often simply unproductive and unconvincing play-acting or marketing.

KOÇAK et al (2013) asserted that the personal trying-out of is a way to give meaning to an innovation, to find out how it works under one's own conditions. This trial is a means to dispel uncertainty about the new idea.

5) Observable Results or Observability

Inman (2000); Sahin (2006); Chigona & Licker (2008); Robinson (2009) and KOÇAK et al (2013) defined observability as: "the degree to which the results of an innovation are visible to others."

Neudorfer (2004) expressed that the **observability** of the innovation refers to the recognizability of the innovation's qualities and the benefit linked to it. This quality can be divided up into the communicability and visibility of the innovation. The communicability reflects the degree to which the qualities of new products can be introduced to potential adopters. One can assume a quicker adoption of an innovation when there is a relatively simple communicability of a series of product qualities determining the purchase than when there is a relatively difficult communicability. The visibility aims at the "visual perceptibility" of the qualities.

Sahin 2006) quoted that role modeling (or peer observation) is the key motivational factor in the adoption and diffusion of technology. Observability is positively correlated with the rate of adoption of an innovation.

Chigona & Licker (2008) extracted from some studies that in some innovation, it is easy for others to see the results of adoption from those who have already adopted technology. However, this is not the case with all innovations. Observability is split in to two: result demonstrability (the ability to demonstrate that positive results have occurred for the user) and visibility (the ability to share those demonstrations with others). Observability is positively correlated with the rate of adoption. To the extent that something has to be explained in complicated ways to others (i.e., complexity), it becomes less “observable,” too. Language and culture might also affect observability for text-oriented technologies. Abstract or ambiguous innovations are generally difficult to observe and therefore diffuse slowly. Chigona & Licker (2008) further narrated that the question of the impact of observability on adoption can be addressed from the following two angles: 1) from the visibility of the technology or people using the technology, and 2) from the observability of the results of adoption. In terms of visibility of the infrastructure, there are two answers to the question depending on whether one is inside or outside the library. In all the libraries the computers are placed near the main entrance, and it is almost impossible for anyone entering the library not to see them. Moreover, at peak times there is a group of people using and queuing for the computers. The fact that most adopters first learned about the facilities while using the library is a testimony to this.

Robinson (2009) expressed that the easier it is for individuals to see the results of an innovation, the more likely they are to adopt it. Visible results lower uncertainty and also stimulate peer discussion of a new idea, as friends and neighbors of an adopter often request information about it. Robinson (2009) also expressed that reinvention is a key principle in Diffusion of Innovations. The success of an innovation depends on how well it evolves to meet the needs of more and more demanding and risk-averse individuals in a population (the history of the mobile phone is a perfect example).

KOÇAK et al (2013) asserted that the results of some ideas are easily observed and communicated to others, whereas some innovations are difficult to observe or to describe to others. Observability of an innovation, as perceived by members of a social system, is positively related to its rate of adoption.

Uncertainty Avoidance and Innovation

Tolba & Mourad (n.d) revealed by extracting from some researches that uncertainty avoidance, which refers the level of tolerance to risk is also a critical cultural dimension that influences innovation adoption. High uncertainty avoidance leads to a generation of rigid rules within the society and is expected to slow the acceptance and diffusion of innovations.

The Role of Culture in Innovation Acceptance and Diffusion

Tolba & Mourad (n.d) quoting some studies pointed out that while most innovation research has

focused on the innovativeness of idea, there is an urgent need to consider consumers' perception of adoption. They confirmed that diffusion of innovation is greater in high-context cultures. It is claimed that the value system of the individual is critical to innovation adoption. Further, the adoption of IT products is not fully understood; partially because of the lack of fit between technology and culture.

Reverse Innovation

There is also Reverse Innovation a concept attached to diffusion of innovation. DePasse & Lee (2013) pointed out that "Reverse Innovation" is a principle well established in the business world, which describes the flow of ideas from emerging to more developed economies. There is strong and growing interest in applying this concept yet there is currently no framework for describing the stages of reverse innovation or identifying opportunities to accelerate the development process. DePasse & Lee (2013) suggested a model, which includes the following steps:

- (1) identifying a problem common to lower- and higher-income countries;
- (2) innovation and spread in the low-income country (LIC);
- (3) crossover to the higher-income country (HIC); and
- (4) innovation and spread in the HIC. The crucial populations in this pathway, drawing from diffusion of innovation theory, are LIC innovators, LIC early adopters, and HIC innovators.

Re-invention

According to Mark & Poltrock (2001) once an innovation is adopted, it may be used in a different way than how it had been used when the user first learned about it or began using it. This process is known as re-invention. Because collaboration can occur in many forms, especially in distributed organizations like Boeing, the interest was to discover the extent to which users may have discovered new uses for technology after adoption. Strictly speaking, re-invention refers to changing the technology itself, whereas interest is focused on how the use of technology may have changed to support different types of collaboration.

Raban & Koren (2012) depicted that the concept of re-invention was introduced in the Diffusion of Innovation (DoI) in 1970's and is defined as the degree to which, users modify an innovation in the process of adoption and implementation. Thus, reinvention widens the choices available to potential adopters. Instead of either adoption or rejection, modification of the innovation or selective rejection of some components of the innovation may also occur. Most research on the topic of reinvention was done in the fourth stage of the diffusion process – in the implementation stage. In the context of our work, new information diffuses in a network by being passed on to others. Information may be passed on as is, or in modified form. Reinvention of information occurs when individuals in a network modify it thus expressing their creativity and sense of ownership over it.

References

- Al-Jabri, I. M. and Sohail, M. S. (2012) "Mobile Banking Adoption: Application of Diffusion Innovation Theory", Journal of Electronic Commerce Research, Vol. 13, No. 4, 2012, pp. 379-391
- Bertrand Jane T. (2004) "Diffusion of Innovations and HIV/AIDS" Journal of Health Communication, Vol. 9, pp. 113–121, 2004
- Chaipoo Pirutana, S.; Combs, H.; Chatchawanwan, Y. and Vij, V. (2009) "Diffusion of Innovation in Asia: A Study of Internet Banking in Thailand and India" Innovative Marketing, Vol. 5, No. 4, 2009
- Chigona, W. and Licker, P. (2008) "Using diffusion of Innovations Framework to Explain Commercial Computing Facilities Adoption among the Urban Poor", Information Technologies and International Development, Vol. 4, No. 3, Spring/Summer 2008, pp. 57-73
- DePasse, Jacqueline W and Lee, Patrick T (2013) "A model for 'reverse innovation' in Health care" Globalization and Health 2013, Vol. 9, No. 40
- Inman J.A. (2000) "The importance of Innovation: Diffusion Theory and Technological Progress in Writing Centers", the Writing Center Journal, Vol. 21, No. 1, Fall/ Winter 2000
- Jwaifell, Mustafa and Gasaymeh Al-Mothana (2013) "Using the Diffusion of Innovation Theory to Explain the Degree of English Teachers' Adoption of Interactive Whiteboards in the Modern Systems School in Jordan: A Case Study" Contemporary Educational Technology, 2013, Vol. 4, No. 2, pp. 138-149
- KOÇAK, N. G.; KAYA, S.; and EROL, E. (2013) "Social Media from Perspective of Diffusion of Innovation Approach, the Macro-theme Review, Vol. 2, No. 3, spring 2013
- Lee, Y. H., Hsieh, Y. C., & Hsu, C. N. (2011) Adding Innovation Diffusion Theory to the Technology Acceptance Model: Supporting Employees' Intentions to use E-Learning Systems, Educational Technology & Society, Vol. 14, No. 4, pp. 124–137
- Mark, Gloria and Poltrock, Steven (2001) "Diffusion of a Collaborative Technology Across Distance" *Proceedings of the 2001 International ACM SIGGROUP Conference on Supporting Group Work, New York: ACM Press, pp. 232-241*
- Neudorfer, Reinhard (2004) "Critical Success Factors for the Management of innovative Mobile Business Models", "Merkur Day 2004", 6th Undergraduate and Graduate Students e-Conference
- Okpara, Dr. Fridat O. (2007) "The Value of Creativity and Innovation in Entrepreneurship" Journal of Asia Entrepreneurship and Sustainability Vol. 3, No. 2, September 2007
- Peres, R.; Muller, E and Mahajan, V (2010) "Innovation Diffusion and New Products Growth Models: A Critical Review and Research Directions", International Journal of Research in Marketing Vol. 27, (2010) pp. 97-106
- Raban, Daphne and Koren, Hila (2012) Is Reinvention of Information a Catalyst for Critical Mass Formation" Proceedings of the Chais Conference on Instructional Technologies Research 2012: Learning in the Technological Era
- Robertson, Thomas S. (1967) "The Process of Innovation and the Diffusion of Innovation", Journal of Marketing, Vol. 31, January 1967, pp. 14-19

Robinson, Les (2009) “A Summary of Diffusion of Innovation” in Changeology, the book published by Amazon licensed under a Creative Commons Attribution-Non Commercial-ShareAlike 4.0 International License

Sahin, Ismail (2006) “Detailed Review of Rogers’ Diffusion of Innovations Theory and Educational Technology-Related Studies Based on Rogers’ Theory” The Turkish Online Journal of Educational Technology, Vol. 5, No. 2, Article 3, April 2006

SAHIN, Ismail (2006) “Detailed Review of Rogers’ Diffusion of Innovations Theory and Educational Technology-Related Studies Based on Rogers’ theory” The Turkish Online Journal of Educational Technology, April 2006, Vol. 5, Issue 2, Article 3

Tolba, Ahmed H and Mourad, Maha (n.d) “Individual and Cultural Factors Affecting Diffusion of Innovation” Journal of International Business and Cultural Studies

BUILDING LINKAGE BETWEEN FDI AND EXPORTS OF MACEDONIAN PRODUCTS

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Abstract

Prices of domestic products on international markets are often underestimated because of the poor reputation or ranking the products with a low degree of processing. Namely, it is necessary small and medium enterprises to make efforts in this domain to contribute in a way that they will make the promotion of domestic products, have organized a joint presentation on external markets, will exhibit initiatives for creation of distribution centers. In this regard, the entry of FDI in manufacturing is expected to contribute to the production of high quality products, and distinctive products, which would lead to higher absolute prices, higher productivity and lower unit labor costs of products.

This paper aims to focus on contribution for developing the strategies that could help to strengthen the SME sector. From one side it could be done through their promoting of integration into, and potential benefits from external markets. Implementation of the strategies should increase the attractiveness of the transition and developing countries for foreign investors which will improve the capacity of the SME sector. From the other side, the policies will strengthen the benefits from FDI to local economies trough facilitation of SME trade and capacity building of local SMEs to use the opportunities from the external markets.

Key words: FDI, company, profits, business, opportunity.

1. Introduction

Globalization brings the threat of a weakened SME sector, since its role in (direct) exporting is less than proportional to its size; this reflects the economies of scale characterizing big markets. But globalization can also increase the importance of a strong SME sector, either where direct SME exports are feasible or where SME subcontractors help keep the country's large exporters competitive. Many markets are too small to have enough large firms to curtail the use of monopoly and oligopoly power, so price-competition and quality-based competition tends to come from SMEs.

Prices of domestic products on international markets are often underestimated because of the poor reputation or ranking the products with a low degree of processing. Namely, it is necessary small and medium enterprises to make efforts in this domain to contribute in a way that they will make the promotion of domestic products, have organized a joint presentation on external markets, will exhibit initiatives for creation of distribution centers. In this regard, the entry of FDI in manufacturing is expected to contribute to the production of high quality products, and distinctive products, which would lead to higher absolute prices, higher productivity and lower unit labor costs of products. So the recommendations are on building relationships with financial institutions, especially with banks, to facilitate funding to SMEs. In this context, it is useful to identify where SMEs are dealing in foreign currency and seek opportunities to provide value-adding advice in areas such as managing foreign exchange risks and forecasting currency needs.

In this context, the key factors for realization of these aims are innovation and knowledge that would help for increasing competitiveness as the role of FDIs for productivity and efficiency growth, with support of real exchange rate by stimulating the growth of export, too. The domestic industry by using knowledge, innovation development and upgrading the capacity of the small and medium enterprises can take the necessary changes for its output and increase export performance. All of this can contribute to sustainability of the economic growth and economic integration especially of small economies on which mainly this paper is focused with special emphasis on the Macedonian economy.

Strengthening the competitiveness of enterprises implies the company itself to possess features such as, to use resources efficiently and effectively, to be prepared and capable of growing capacity, to be ready to invest, and to show willingness to accept innovation and more advanced technology, looking aggregately - to contribute to the improvement of our economy.

In literature is known that for developing and transition economies, FDI represents a potential means of growing and diversifying the SME base and achieving greater integration within global networks. In this way, if we thinking how to promote the connection between FDI and SME, the answer is creating effective policies which are based on seeking large number of locations in the world with similar characteristics, which clearly affect the bargaining position of individual governments with potential investors and represent key factors that policy makers need to consider for attracting and exploit the potential benefits of FDI. In the absence of other locational advantages, competition between places typically focuses on offering lower costs.

2. New economic trends

Globalization has created new opportunities for SMEs. Progressive globalization has created a new international environment for SME exports from developing countries. The process of world economic integration has involved a broadening and deepening of inter-relationships between international trade and foreign investment flows. Several influences – falling trade barriers, increasing technological

progress, migration of technical and professional manpower and highly mobile multinational corporations (MNCs) seeking out new investments – have combined to drive globalization. The end result has been the creation of an international marketplace for goods and services that seems indifferent to national borders and state regulation.

Globalization also brings new challenges. The new international environment provides new opportunities for SME exports from developing countries. It has the potential to offer SMEs in developing countries with access to a global pool of new technologies, skills, capital, markets and hence faster export growth and profits than ever before. At the same time, globalization brings a lot of trade challenges and increase in competition from imports and the entry of new foreign investors for SMEs in domestic markets. SMEs in developing countries have to adjust to the competitive strategies of MNCs in different countries, to public and privately set standard, to changes in international tastes, prices and competitive conditions.

Many transition and developing countries, in particular face a need to promote and strengthen the long term development of the SME sector, which requires access to market opportunities, as well as to new technology and management know-how, often in a situation of considerable resource scarcity.

Implementation of the strategies should increase the attractiveness of the transition and developing countries for foreign investors which will improve the capacity of the SME sector. From the other side, the policies will strengthen the benefits from FDI to local economies through facilitation of SME trade and capacity building of local SMEs to use the opportunities from the external markets.

Wignaraja suggests that globalization opens up new opportunities for export expansion and growth to about 5-10% of SMEs in developing economies.¹ These dynamic SMEs have designed well-adapted marketing strategies and invested in their manufacturing capabilities to bring them up to world standards of price, quality and delivery, hence complying with new technical, environmental and labor standards in export markets. Some have even formed networks or industrial clusters with other SMEs or MNCs to stimulate the emergence of production networks among firms and increase value addition. Such SMEs have expanded their existing domestic market shares, broken into new export markets and continuously upgraded their products and processes. Experience of exporting SMEs from developing countries illustrates the fact that they have pro-actively upgraded themselves.

3. Literature review

Foreign direct investment is an integral part of an open, international economic system and a major potential catalyst for development. The potential benefits of FDI for host economies include (Lall, 2001):

- increasing the supply of capital;
- technology and knowledge transfer;
- the generation of employment and human capital;

¹ Wignaraja, G.2003"Competitiveness Analysis and strategy."In Wignaraja, G.,ed.2003.*Competitiveness Strategy in Developing Countries*.London:Routledge.

- the effect on enterprise development, through linkages and spillover effects.

An additional source of capital is clearly important in countries where financial constraints act as a major barrier to development. The extent to which potential positive externalities from FDI are achieved in practice is likely to be affected by a variety of factors at the macro- and micro- levels. There is example where FDI has also made a significant contribution to the development of the “high tech” cluster, through linkages between technology partners (Khalid, 1995). In this case, the role of policy was to enhance the development of an initial clustering of research centres by contributing to the attraction of the city as a destination for inward investment. This was achieved through a combination of establishing a consistent policy framework, offering a degree of predictability for foreign investors and an active promotion programme to attract FDI (OECD, 2002).

In transition and developing countries the development of FDI-SME connection would be assisted if the provision of support for the internationalisation of domestic firms in developed countries included co-operation with business support agencies in transition and developing countries. This could help to facilitate partner searching and assisting firms to prepare to co-operate with local suppliers, including raising awareness and understanding of the local business culture; planning for co-operation; and training management and key staff (Boshkov and Kokaroski, 2014).

4. SME AND FINANCE ENCOURAGING

Access to SME trade finance at competitive interest rates can be strengthened through export credit guarantee schemes for SMEs and subcontracting and specialist soft loans for SME export activities. Government should encourage banks as well as private enterprises to provide financial services tailored to SME export-related needs.

The agribusiness sector is important in almost all developing countries, including the more developed ones. The sector is characterized by SMEs that have high backward linkages with the rest of the economy, contribute particularly towards poverty reduction, job creation and improved health and nutrition. Stability of the agribusiness sector also requires diversity of both products and markets and primary attention to sustainability of resources. Also, the agro-industry sector can in Macedonia provide a domestic basis for scaling up of enterprises to the point where they become capable of export. There are also practical difficulties involved in starting up an agribusiness enterprise targeting an international export market from the beginning. In many cases, the domestic and regional markets tend to provide a stepping stone from which SMEs can learn important lessons concerning product quality, timely deliveries and managing risk involved in international business. Where there is an inadequate domestic market, or the products are only attractive for export, considerable effort needs to be put into strategic positioning and reliable production so as to reduce risk of failure. Such effort is obviously costly and requires capacity building of SMEs and export development institutions, including sectoral membership organizations.

The prospects of intensive competition have also given the stakeholders an impetus to assess the

weaknesses and strengths of their garment industries. Developing countries having diversified product ranges, including high-end products and markets and countries that have invested in backward linkages and started developing forward linkages are in a better position. Strategies that would support diversification, differentiation and specialization within economies, sectors and at the level of firms appear viable and need to be given consideration in designing trade-related technical assistance. A value chain approach to identify bottlenecks and opportunities for designing strategies aimed at strengthening the competitive edge of firms may be appropriate.

Cluster development strategies are attracting more interest as local SMEs are linking to global value chains. In this respect, cluster development strategies serve both improving competitiveness and improving the ability of local SMEs to insert themselves into global supply chains through linkages with FDI and may be a useful tool for an SME export development and promotion agency, with or with a function in promoting linkages with FDI. Framework conditions for building up SME competitiveness include an SME enabling legal, regulatory and administrative environment, SME access to finance, a supportive SME institutional support structure, availability of appropriate skills and supporting infrastructure, mainstreamed into the national development framework. In this context it is also interest to analyze the particular group of SMEs that are exporting or have export potential and those that are able to insert themselves into the supply chains of FDI enterprises.

5. BENEFITS OF BUILDING LINKAGE FDI-SME

Foreign direct investment is an integral part of an open, international economic system and a major potential catalyst for development. The potential benefits of FDI for host economies include:

- increasing the supply of capital;
- technology and knowledge transfer;
- the generation of employment and human capital;
- the effect on enterprise development.

An additional source of capital is clearly important in countries where financial constraints act as a major barrier to development. The extent to which potential positive externalities from FDI are achieved in practice is likely to be affected by a variety of factors at the macro- and micro- levels.

Human capital spillovers from FDI in developing countries appear to be mainly indirect, occurring more as a result of government policies seeking to attract FDI through enhanced human capital, than directly from MNEs themselves. However, human capital spillovers can occur where FDI involves the acquisition of a local firm by a foreign company. As capital investment often follows acquisition in such cases, in order to upgrade equipment and machinery, many employees are likely to require training. Moreover, indigenous managers are likely to enhance their knowledge through interaction with foreign managers, with some possibly benefiting from spending working periods abroad.

In literature is known that for developing and transition economies, FDI represents a potential means of growing and diversifying the SME base and achieving greater integration within global networks. In this way, if we thinking how to promote the connection between FDI and SME, the answer is creating effective policies which are based on seeking large number of locations in the world with similar characteristics, which clearly affect the bargaining position of individual governments with potential investors and represent key factors that policy makers need to consider for attracting and exploit the potential benefits of FDI. In the absence of other locational advantages, competition between places typically focuses on offering lower costs.

Key policy issues are related with creating conditions to attract foreign investors together with policies to encourage and facilitate different forms of cooperation between inward investors and domestic SMEs.

In this way, defining the role for policy to attract FDI includes¹:

- promotional activities;
- creating an appropriate and effective legal and regulatory framework;
- capacity building programmes for potential suppliers that include training and quality assurance;
- wider role of business support services and other intermediaries, which might include partner searching facilities.

6. FDI impact in Macedonia

Foreign Direct Investments are an integral part of the open, international economic system and are a major potential catalyst for development, which is a reason to be challenged on the agenda of politicians and as a theme for analysis and suggestions of the academic environment.

As far as Macedonia and FDI are concerned, the review shows that they are reduced to -17.63 million euros in September 2015. In the period from 2003 to 2015, FDI an average of 36.87 million euros, reaching the highest level for the entire period of 506 million euros in November 2007 and the lowest record -48.03 million euros in July 2010.

Apart from the fact that the reports show that our export driver is FDI (Bunardzik), as benefits from FDI for Macedonia, we can mention:

- increasing the supply of capital;
- transfer of technologies and knowledge;
- generating employment and human capital;
- the development of enterprises, through network links and "spillover" effects.

¹ Srinivasan,T.N. and V.Archana.2011."Determinants of Export Decision of Firms." *Economic and Political Weekly*, 46(7):49-58

An additional source of capital is particularly important for countries where financial constraints are a major obstacle to their development. The extents to which potential positive externalities of the FDI are exercised in practice are likely to be influenced by various factors at the macro and micro level.

In this context, it is already known that in Ireland, Irish firms are focused on international supply opportunities realized through the formation of a new agency called the Enterprise Ireland. This agency works with the indigenous industry to improve sales, exports and profitability through a range of support programs with a worldwide network of resource provision offices that serve to identify international supply capabilities. This agency is deemed particularly deserving of the appearance of Irish MNC in achieving its foreign goals.

Key policy issues are related to creating conditions for attracting foreign investment, along with policies to encourage and facilitate various forms of cooperation between investors and domestic enterprises. In this way, the role of the policy to attract FDI involves the inclusion of:

- promotional activities;
- creating an appropriate and effective legal and regulatory framework;
- capacity building programs for potential suppliers involving training and quality assurance;
- various business support services and involved intermediaries.

Strengthening the competitiveness of enterprises implies the company itself to possess features such as, to use resources efficiently and effectively, to be prepared and capable of growing capacity, to be ready to invest, and to show willingness to accept innovation and more advanced technology, looking aggregately - to contribute to the improvement of our economy.

Another important strategy for promoting and strengthening the link between FDI and enterprises is the availability and facilitation of access to credit, to improve trade and investment capacity of enterprises. The access to finance for the purpose of development can be increased by ensuring that contracts are easily applicable; collateral and security issues are competitively solved; the legal framework provides sufficient number and type of financial instruments to be used, etc. In transition countries, the link between companies and FDI will be helped if the provision of support for the internationalization of domestic firms in developed countries is realized through cooperation with business support agencies in a transition country. This could help facilitate the search for a partner and, at the same time, companies to prepare themselves for cooperation with local suppliers, including raising awareness and understanding of local business culture, a plan for collaboration as well as training, employee choice, and so on.

Since FDIs derive from developed countries, they can see it as a challenge, except for profit, that is, policy makers should be a benchmark for the importance of social responsibility, developing the more current supply chain management, technical support projects, or infrastructure for companies in developing countries.

Another important strategy to promote and strengthen the connection between FDI and SME is facilitation availability and access to loan and equity finance, particularly medium to long-term opportunities to improve trade and investment capacity of SMEs. Access to finance for development purpose may be enhanced by ensuring that contracts are easily enforceable; issues of collateral and security are managed competitively; financial institutions are managed prudently and are trusted by

depositors; legal frameworks enable a sufficient number and type of financial instruments to be used; financial institutions other than banks are functioning; SMEs are encouraged to keep good accounting records.

7. Valorization of Promoting/Exporting Macedonian Products

We always see Macedonia as country which is on the crossroad of major routes in Southeast Europe, meaning that the country provides a link between four main regions in Europe: Central Europe, Aegean Sea, Black Sea and the Adriatic Sea. We use this as translation for interesting country for investments. But about our positioning and branding on the EU market? How to move from contacts to contracts? One is sure, new markets – new opportunities.

In general, linking Macedonian business with the EU is a process that will undoubtedly accelerate Macedonian business success and market operations. Regional and local businesses are entitled to require co-financing of their business in the direction of improvement of quality and meeting standards of the business. Exporting the business in the European Union requires a lot of knowledge of both local and international EU regulations, standards, export strategies, international partnerships with EU companies, Legal consulting – EU legislation, Marketing strategies.

Maybe for the most Macedonian companies will be easy to think (and act) for Croatia as a link to get know better the EU market competition and consumers desires.

Another important moment in branding on international markets is emotion of the customers. Emotions are what drive decisions. Emotions make consumer decisions easier and create an added value for the enterprise or the product. In a consumer society like ours, it becomes more difficult for companies to distinguish their product from the competition. A good cost-performance ratio is often not sufficient enough. Companies must differentiate their products of functionally equivalent competition products by emotions, because emotions make products become brands. Brands create emotions, provide values, they activate, connect, strengthen the loyalty of the customer and are seldom substituted with other brands.

In order to activate emotions and communicate suitable values as well as to set up a long-term strategy, it is necessary to be totally aware of the needs of the target group. Macedonia disposes of a huge number of recognizable and strong brands, which develop steadily to a good competition of international brands. Despite, there is a lack of inquiries and assistances regarding the establishment and long-lasting supervision of brands. So existing agency which offer brand rankings, based on a quantifiable emotional value is very important. In order to get more competitive - also compared to international brands - companies need to have the possibility to measure their additional value, in relation to the existing competition, and to steer it strategically. Furthermore, Macedonian brands will be compared with international brands and classified in the respective categories, concerning brand loyalty, brand consciousness, perceived quality and brand associations.

Also, very important thing is an internet based marketing and sales strategy to penetrate the EU market which is a necessary but not a sufficient strategy to develop EU sales. It cannot deliver sales of any significance. An effective strategy involves a comprehensive, consistent and adequately funded approach embracing a full range of marketing and public relations tactics.

8. Conclusion

Macedonian business are too looking forward to increasing exports in the region, as well as, becoming more competitive on the domestic market. Interestingly enough, some Macedonian companies even see Croatia's EU accession as an opportunity to introduce their products to the wider European market. Yet others warn that Macedonian exports to Croatia will now face a steeper competition from all European products, some of which might very well be offered at prices cheaper than the ones of the Macedonian exports.

On a different note, all countries in the region are hoping to attract Croatian investments; namely, with the higher tariffs and quotas, it might be a wise move for Croatian business to move part of their production facilities to the CEFTA countries. Thus, their products would not be facing the CEFTA import regulations. Additionally, this would allow them to evade the higher production costs that come with Croatia's EU membership. Some Croatian factories have already acted to move part of their production facilities to the CEFTA countries, mainly to Bosnia and Herzegovina. Thus, Podravka (a food company) already has part of its production facilities in Macedonia, and Vindija (dairy products company) is investing in increasing its production facilities in Serbia. Krash (a confectionary factory) and Franck (a coffee and snacks factory) have both relocated some of their production facilities to Bosnia and Herzegovina, and TDR (cigarette manufacturer) is doing the same. Cigarettes, in particular, will face much higher import tariffs in CEFTA.

Yet many Croatian companies report that they don't let prices in the CEFTA market rise due to the new tariffs and quotas; instead, they would accommodate the costs. Some, like Atlantic Group, already have production facilities both in the CEFTA region and in some EU countries.

Hence, some leading analysts in the region even go as far and stand that there is no major changes in the CEFTA market after Croatia became EU member. Thus, what remains is to observe the trends and changes in trade in the CEFTA and EU markets and to let statistics shed light on the future market developments.

Reference

1. Bishev, Gligor and Boskov, Tatjana (2015) *Exchange rate and export-led growth in SEE6: Economic convergence machine – What happened? What next?* In: Održivi ekonomski razvoj - savremeni i multidisciplinarni pristupi - ERAZ, 11-12 June 2015, Belgrad, Srbija.

2. Boskov, Tatjana and Bishev, Gligor (2014) *How to accelerate export-led growth in contemporary world?* In: SMEs Development and Innovation: Building competitive future of South-Eastern Europe, VIII International Conference, 03-04 Oct 2014, Ohrid, Macedonia.
3. Boskov, Tatjana and Kokaroski, Dimko (2014). *SME development and FDI: oportunity or necessity*. In: SMEs Development and Innovation: Building competitive future of South-Eastern Europe, VIII International Conference, 03-04 Oct 2014, Ohrid, Macedonia.
4. Business Info Group: Foreign Direct Investment in Serbia 2001-2011, Belgrade, 2012, p. 19.
5. Helpman, E., Melitz, M.J., and Yeaple, S.R. (2003), "Export versus FDI", NBER Working Paper 9439, Cambridge, MA: National Bureau of Economic Research, Cambridge
6. Lall, S., (2001), "Competitiveness Indices and Developing Countries: An Evaluation of the Global Competitiveness Report", *World Development*, Vol. 29, No. 9, p. 1501-1525.
7. Mencinger, J. (2003), "Does Foreign Direct Investment Always Enhance Economic Growth?", *Kyklos* 56(4): 491-508
8. OECD (2002) Small and Medium Enterprise Outlook, Paris.
9. Serbian Development Agency: Why Invest in Serbia, 2016. Available at: <http://ras.gov.rs/uploads/2016/02/why-invest-site-2016-2.pdf>.
10. Tas, Nilgün (2002), "International Experience in SME Promotion", paper presented at the *Public-Private Consultation Workshop on SME Development*, UNIDO-Center for Industrial Research and Development, Vientiane, 25 April.

THE NEED FOR FINTECH COMPANIES AS NON-BANK FINANCING ALTERNATIVES FOR SME IN DEVELOPING ECONOMIES

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Abstract

Stricter banking regulation implemented in the post crisis period limited the access to finance for SMEs even further. Limited access of funds combined with the riskiness of SMEs influenced banks' readiness to lend funds to this sector. Thus, the development of small and medium enterprises is significantly hindered. Considering the importance of SMEs for economic development, limited access to finance consequently results in impeded economic growth.

Aside of obstructing the traditional financing channels, the post crisis period is characterized with development of new financing alternatives. These non-bank financing alternatives enabled the expansion of SMEs by providing new financing channels.

While in the developed countries fintech companies are going through a boom period, developing countries still lag behind. Even though the fintech financing is offering numerous benefits for SMEs, some countries are neglecting them and postpone their implementation.

Keywords: SME, fintech, financing, bank, developing countries

1. INTRODUCTION

Small and medium enterprises are crucial part of every economy. Their importance is consisted in the fact that they have significant contribution toward the job creation and social development. This in turns leads toward economic growth, which is the primary goal of every economy. Irrespective of the importance of SMEs sector for the economy and economic growth, this sector faces major obstacles, especially in developing countries.

These obstacles are hindering the possibility for creation and growth of small and medium enterprises. Maybe one of the most important obstacle is the limited access to finance. SMEs are faced with tight lending environment from the traditional banking channels. Due to changes in banking regulation, the banking sector is opting for limited exposure to SME sector. This unwillingness of the banking sector to provide funds to SME segment, has created the potential for development of alternative

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financing sources. The alternative financing models are utilizing technological innovations and are evolving as new financing channel for entities with limited access to funds, and financial products.

These alternative financing models (fintech platforms) are increasing the financing possibilities for SME sector. Specifically, SMEs can decide whether they want to finance their activities through debt financing, equity finance or crowdfunding.

One limitation when it comes to fintech platforms is that alternative financing sources may not be available in some developing countries. Even though they offer numerous benefits, these economies are lagging behind the creation and implementation of fintech sources. Thus, SMEs in the developing economies are highly dependent on the banking sector for securing the needed funds.

2. IMPORTANCE OF SME'S FOR DEVELOPING COUNTRIES

Small and medium enterprises are particularly important for the economy i.e. the economic growth because of the numerous benefits they provide. First and foremost, SMEs are creating new jobs within the economy, and second, they have significant contribution toward social development (Angela, R., 2011). Namely, Nelson Duarte (2004) is stating that the economy benefits from SMEs not only from job creation and social development point of view, but also, there are benefits in terms of taxes, innovation, and most importantly, economic growth.

The importance of SMEs for the economy can be depicted from the fact that SMEs portion in the business worldwide is up to 90 percent, where SMEs are also creating from 50 to 60 percent of the jobs. Nicoleta Raluca Robu and Ludovica Ioana Savlovschi (2011) are supporting the aforementioned by stating that from statistical point of view, SMEs constitute around 99 percent of all companies. Moreover, more than 60% of the newly created jobs are created by the SMEs (Nicoleta Raluca Robu and Ludovica Ioana Savlovschi, 2011). The participation of SMEs in the economy also contributes toward the GDP growth. According to Dalberg Global Development Advisors (2011) SMEs growth is positively related with the GDP growth because SME increase the level of output produced in the economy. In addition, SMEs can provide support when it comes to income equality and more importantly they provide support for poverty alleviation. Taken into consideration the number of job positions created by SMEs, any policy aimed and augmentation of the SMEs sector can be directly related to the goal of reducing poverty. The creation of new jobs and improvements in the living standard means that the SMEs development and growth can contribute toward improvements in income distribution as well (Peter Raynard and Maya Forstater, 2002; Al Berry, 2001).

Regardless of the importance of SMEs for the economy, the potential for creation of new SMEs as well as growth potential of existing SMEs is impeded by plentiful obstacles, especially in the developing economies (Thorsten et al. 2008). Because of the vast social and economic benefits arising from the creation and development of SMEs, policy makers are making efforts to remove the obstacles responsible for hindered SMEs creation and growth. Whereas one of the biggest obstacle for SMEs creation and expansion is the limited access to finance.

3. PRESENT SME FINANCING ENVIRONMENT

As it has been noted by (Yao Wang, 2016; Parmendra Sharma and Neelesh Gounder, 2012) one of the major obstruction for SME development and growth is the limited access to finance. With insufficient level of funds SME can perform only limited number of activities, thus growth potential of these enterprises is also restricted (Angela, R., 2011).

The traditional funding sources for small businesses have long been consisted of funds from friends and families, as well as personal funds (personal savings). But although these funds might be sufficient for the initial phase of starting the SME, in most cases they can only finance operating activities for a short period of time. These funds are not enough to cover any growth related activities. Thus, limiting the growth potential for SMEs. Aside of this category of funds, SMEs traditionally have used another channel through which they could obtain financing. Stated differently, SMEs have traditionally borrowed money from the banking sector to finance their operating as well as investment activities. The problem nowadays, the post-crisis period, arises in terms of bank willingness to finance certain sectors and groups of clients, more precisely the SME sector. Namely, the last financial crisis had widespread negative effects regarding the financing activities of higher risk sectors.

One such adverse effect arising from the 2007-2008 crisis, is the implication for SMEs financing. Specifically, SMEs are now operating in an environment in which they have difficulties to obtain financing through the traditional lending channels. This difficulty is direct result from the increased regulation and higher capital cost imposed on the banking sector for certain types of loans, and lending to certain categories of borrowers (World Economic Forum, 2005). Bank are generally trying to avoid customers who are characterized with increased riskiness. In case they provide financing to these risky customers, then banks will charge higher fees and interest rates.

3.1 CHARACTERISTICS OF SME SECTOR FOR POTENTIAL FINANCING

Although banks are providing financing to the private sector, they do prefer the larger companies over the SME especially start-up firms. This preference by banks to finance large companies is mainly because of the characteristics of small and medium enterprises. According to Laura Vasilescu (2014), the characteristics of SME because of which banks avoid to provide finance are:

- Weaker financial structure or lower capitalization
- Low level of diversification
- Low or non-existing credit ratings
- Mainly depend on credit to finance activities
- Limited financing options, limited access to financial markets
- Inadequate level of collateral or no collateral
- Higher transaction costs

These characteristics of small and medium enterprises are the reason why banks are disinclined to provide funding for this sector. First and foremost, the cost for banks to finance this sector are high especially taking into account the fact that SMEs usually require smaller loans. Thus, high costs for banks to service small businesses segment are not justified by the loan amount demanded by SMEs. Moreover, the riskiness of this sector is perceived to be high because of lack of collateral and lack of financing

options. Because of the way assessment is performed by banks, lack of credit history is hindering the ability of potential borrowers, this is also the case with small and medium enterprises.

Aside of the aforementioned characteristics, there are also some other aspects of the SME responsible for their limited access to banks' funds. One such aspect is the asymmetric information that exists when it comes to borrowing funds to SMEs. The existence of informational asymmetries between SMEs and banks means that small business owner might withhold relevant information.

Moreover, Thorsten et al. (2008) are stating that banks have lower exposure to SME because they have higher level of non-performing loans coming from this sector, which is one indicator about the riskiness of this sector. In addition, they are also pointing out that banks charge higher interest rate and fees for loans provided to SME.

The above mentioned characteristics of SME are pushing banks to limit the funding provided to this sector. But on the other hand, SMEs have certain characteristic which makes them attractive for funding. Namely, small and medium businesses are operating in highly profitable environment. Because of the growth potential of SMEs, they have the potential to be highly profitable enterprises and/or investment.

Some of the characteristics of small and medium enterprises are major reasons why banks avoid to finance their activities. Banks are becoming additionally discouraged to lend to the SMEs sector after the 2007/08 financial crisis. This crisis resulted in numerous changes in regulations. The new environment has witnessed increased capital requirements for riskier loans because of augmented regulation (namely, Basel III). These new requirements are increasing the cost of capital for banks when providing riskier financing.

Considering the importance of SMEs for the economy and the fact that banking sector avoids to provide financing to this sector, the access to finance is impeded even more. Hence, the possibility for development of alternative financing sources has been created. This opportunity has been grasped by numerous non-bank financing firms willing to provide funding for the SMEs sector.

4. FINTECH FINANCING OPPORTUNITIES FOR SME'S

It was noted that the crisis had negative impact on the SME financing opportunities. But, it should be mentioned that the crisis had two sided effects. On one side there has been the increase in regulation and financing costs for the banking sector. On the other side it created an environment for development of new and innovative financing models. Thus, although the financial crisis had negative impact on traditional SME financing channels, it did provide ground for development of innovative funding channels. Namely, the obstacles faced by SME in terms of financing have created the opportunity for development of new business models regarding the offer of financial products (World Economic Forum, 2005, pp3.). These new and innovative financing alternatives have been explored in the FinTech area. FinTech companies are increasing the availability of SME financing alternatives, because of changes in the risk assessment techniques and funding sources.

According to the World Economic Forum (2015) the potential of new FinTech financing alternatives is vast for SMEs. This in a way that their business models are efficient for a low scale financing, something SMEs need, and banks usually avoid.

These new financing models are fulfilling the financing gap for SMEs. The alternative financing models are utilizing the technological innovations through the employment of different types of financing platforms. The basic forms of alternative financing platforms are crowdfunding model or peer-to-peer lending (P2P) model. Worth mentioning is that there are also other types of financing platforms depending on the characteristics of specific financing and funding model (Robert Wardrop et. al., 2016).

Some of the most common alternative financing models as defined by Robert Wardrop et. al. (2016) are presented in table 1. These alternative financing models differ in terms of the financing sources and/or the funds disbursement model, as well as the market they serve.

Table 1: Overview of online alternative financing models

Alternative financing models	Definition
Marketplace/P2P consumer lending	Individuals or institutional funders provide a loan to a consumer borrower
Balance sheet consumer lending	The platform entity provides a loan directly to a consumer borrower
Marketplace/P2P business lending	Individuals or institutional funders provide a loan to a business borrower
Balance sheet business lending	The platform entity provides a loan directly to a business borrower
Marketplace/P2P real estate lending	Individuals or institutional funders provide a loan secured against property to a consumer or business borrower
Real estate crowdfunding	Individuals or institutional funders provide equity or subordinated-debt financing for real estate
Invoice trading	Individuals or institutional funders purchase invoices or receivable notes from a business (at a discount)
Equity-based Crowdfunding	Individuals or institutional funders purchase equity issued by a company.
Reward-based Crowdfunding	Backers provide finance to individuals, projects or companies in exchange for non-monetary rewards or products.
Donation-based Crowdfunding	Donors provide funding to individuals, projects or companies based on philanthropic or civic motivations with

	no expectation of monetary or material return.
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Source: Robert Wardrop et. al. (2016) “Breaking New Grounds – The Americas alternative finance benchmark report”, Cambridge Centre for Alternative Financing, pp.30.

Going through the different alternative models, it can be noted that SMEs can finance their activities in a most preferred manner. Namely, the fintech platforms offer the possibility for debt financing or equity financing, even crowd funding. Furthermore, SMEs have access to funds from individual funders or institutional funders.

Noteworthy mentioning is that the aforementioned alternative financing models are some of the basic non-banking financing models utilizing the technology innovations, there are some other models as well. For instance, Peter Baeck, et. al. (2014) are stating the community shares and pension-led funding as additional financing alternatives. Fintech industry is highly innovative, and new alternative sources are created regularly.

5. BENEFITS ARISING FROM FINTECH FINANCING ALTERNATIVES FOR EMERGING ECONOMIES

Although initially online financing alternatives have been neglected by the banks, nowadays they are perceived as the major disruptor for the financial sector, especially banking sector. Thus, they are attracting attention and gaining on popularity among the customers as well as the potential investors. For instance, according to Robert Wardrop et. al. (2016) the peer-to-peer consumer lending model has accrued more than \$25 billion in 2015 in the Americas, while balance sheet consumer lending segment has accrued a little more than \$3 billion.

It is more that obvious that new financing alternatives should be developed and implemented, especially in the emerging countries where access to finance for SME is highly limited. Positive aspect from creating non-bank financing alternatives creation in developing markets are the new opportunities not only for borrowers, but also for investors (depositors). When talking about the benefits of alternative sources for financing, both sides should be taken into consideration i.e. borrowers (SMEs) and investors (entities willing to save or invest their funds).

Major benefit for SMEs coming from the fintech sector is access to finance, through which major obstacle impeding SMEs growth is eliminated. Another benefit would be consisted in the fact that fintech platforms are decreasing the transaction costs as well as the service cost for smaller loans. Meaning that there is justification to lend funds to small and medium enterprises, which is not the case with the banks service costs. Moreover, these platforms are reducing the search costs for borrowers, because platforms are bringing all investors at one place. Thus, it is much easier for the SME to find investors willing to lend (or invest) money in their start-up or growth plans.

One reason why banks avoid to lend funds to SMEs is the lack of adequate information. This

means that the assessment process can have high costs not justified by the smaller loans demanded by SMEs. This problem is overcome with the fintech financing alternatives. Because of the way credit scoring is performed by the lending platforms, lenders have lower assessment costs, consequently they are able to provide smaller loans to SMEs (Miriam Segal, 2010). According to Miriam Segal (2010) the benefits are also felt by the SME sector as well in terms of simplified and less costly application process (through online application).

On the other hand, investors also enjoy benefits from these alternative lending sources. Namely, with the trend of decreasing interest rates, certain instruments offer very low return. Consequently, investors are on a constant search for profitable investments. This search is eased with the creation and development of fintech platforms. Because platforms have lower operating costs and borrowers have higher level of riskiness, investors are able to earn higher returns. At the same time, these returns demanded by investors, are not hindering the growth potential of SMEs. Also, the fintech platforms offer the possibility for risk dispersion for investor, through diversification of their portfolio. Namely, investors (lenders) are financing the activities of different SMEs by providing fraction of their funds to different borrowers. In case of a borrowers default, different investors stand to lose small fraction of their funds, instead of one investor losing all of the funds.

Even though there are many benefits arising from the FinTech financing sources, there are also some risks involve. Risks that should be mentioned according to World Economic Forum (2005) are:

- Limited protection of investors
- Providing funding for unreliable borrowers
- The possibility for systematic risk as a result of insufficient regulation of this sector.

In addition, fintech platforms also come with certain risks for the SMEs. Namely, because of lower regulation, it is easy for a product or service idea to be stolen. Moreover, depending on the type of financing sources of fintech platforms, the SMEs might end up with non-professional investors. This is especially important drawback for equity financing platforms.

One of the primary benefit for developing countries arising from the availability of alternative financing sources for SME is the increased access to finance. Namely, Ross P. Buckley and Sarah Webster (2016) are pointing out that these new financing sources offer the possibility for the unbanked sector to be able to gain access to much needed funds (working capital, investment capital, etc.)

It should be noted that regardless of the benefits arising from non-bank alternative for financing SMEs activities, some developing economies still lag behind in the adoption of new technological trends. There are economies where the benefits of fintech platforms have not been considered or even identified yet.

CONCLUSION

The data shows that SMEs are particularly important for economic growth. They contribute toward job creation, social development, income distribution, higher taxes, and innovation. All these benefits coming from the SMEs sector are imposing the need for removal of possible obstacles which are hindering the

creation and growth of small and medium enterprises.

One such obstacle is the limited access to finance. This obstacle is augmented even further after the last financial crisis. Because of changes in regulation, banks have limited their exposure to the small and medium enterprises sector. In turn, this created the possibility for new financing channels to enter the financing market. These new entrants have different business models, in which the latest technology is incorporated. Fintech firms are providing alternative financing sources for SMEs (debt financing, equity financing, etc.). Fintech business models could additionally differ in terms of the type of investors (individual or institutional investor).

Considering the importance of SMEs for economic development, developing economies should pay special attention to these fintech platforms. Enabling SMEs to have alternative financing channels will eliminate their dependence on the banking sector, a sector which is becoming conservative in its lending policy. Unfortunately, numerous developing countries are not implementing policies and procedures aimed at the creation and promotion of fintech platforms.

REFERENCES

- Al Berry (2001). *The Role of the Small and Medium Enterprise Sector in Latin America: Implications for South Africa*. Trade and Industry Policy Secretariat (TIPS), Working paper No. 5.
- Angela, R. (2011). *SMEs' sector access to finance: an overview*. Annals of the University of Oradea, Economic Science Series, 20(1), 431-437.
- Dalberg Global Development Advisors (2011). *Report on Support to SMEs in Developing Countries Through Financial Intermediaries*. Dalberg Global Development Advisors.
- Laura Vasilescu (2014). *Accessing finance for innovative EU SMEs – key drivers and challenges*. Economic review – journal of economics and business, vol. xii, issue 2, November.
- Miriam Segal (2010). *Peer-to-Peer Lending: A Financing Alternative for Small Businesses*. Office of Advocacy Issue Brief Number 10
- Nelson Duarte (2004). *The role of SMEs for development: a literature review*. 44th Congress of the European Regional Science Association: "Regions and Fiscal Federalism", 25th - 29th August 2004, Porto, Portugal
- Nicoleta Raluca Robu and Ludovica Ioana Savlovschi (2011). *The Role of SMEs in Modern Economy*. Economica. Seria Management Volume 14, Issue 1.
- Parmendra Sharma and Neelesh Gounder (2012). *Obstacles to bank financing of micro and small Enterprises: empirical evidence from the Pacific with some policy implications*. Asia-Pacific Development Journal Vol. 19, No. 2,
- Peter Baeck, et. al. (2014). *Understanding alternative finance – The UK alternative finance report 2014*. NESTA.
- Peter Raynard and Maya Forstater (2002). *Corporate social responsibility: Implications for Small and Medium Enterprises in Developing Countries*. United Nations Industrial Development Organization.

Robert Wardrop et. al. (2016). *Breaking New Grounds – The Americas alternative finance benchmark report*. Cambridge Centre for Alternative Financing,

Ross P. Buckley and Sarah Webster (2016). *FinTech in Developing Countries: Charting New Customer Journeys*. The Capco Institute Journal of Financial Transformation

Thorsten Beck, et. al. (2008). *Bank Financing for SMEs around the World - Drivers, Obstacles, Business Models, and Lending Practices*. Policy Research Working Paper 4785, pp.

World Economic Forum (2015). *The Future of FinTech - A Paradigm Shift in Small Business Finance*. Global Agenda Council on the Future of Financing & Capital, October, REF 131015.

Yao Wang (2016). *What are the biggest obstacles to growth of SMEs in developing countries? An empirical evidence from an enterprise survey*. Borsa Istanbul Review 16-3 (2016) 167-176.

ECONOMIC AND POLITICAL IMPLICATIONS OF CREDIT EUROIZATION: THE CASE OF MACEDONIA

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Abstract

Removal of all obstacles to international trade and financial flows, and the development of communications and Internet technology contribute to the direct connection of all financial centers and markets in the world. Thus they become internationally integrated, which use different currencies as a result of the exchange process. The constant currency exchange is carried out with various arrangements and exchange rates. While movements in exchange rates have significant effects on the same and can be left its profound effects on sales, costs, profits. So the choice of exchange rate regime is an important aspect of economic development of the competitiveness of a country, macroeconomic stability. Considering the exchange rate experience of Macedonia, it's likely to remain significantly euroized country for an extended period. IMF considers that the appropriate strategy is the one which provides support for the gradual de-euroization for maintaining macro-prudential policy, development of the domestic market and maintain prudent policies that mitigate the risks of foreign currency. The investigation indicates that macroprudential policies are becoming an important driver of de-euroization. In terms of other drivers of euroization the findings of this analysis support the conventional view that deposit euroisation and the interest rate differentials were the main determinants of credit euroization in Macedonia. Also, this paper analyzes political implications of credit euroization in Macedonia.

Key Words: euroization, political implications, foreign currency, economy, growth.

1. Introduction

Western Balkan governments are known for their views that these countries have a prospect of joining the European Union. But support from the Brussels bureaucracy and politicians from EU Member States have somehow been undermined. After thirty years, the prospect of accession has become a political means of calming this part of Southeast Europe. But its credibility will largely disappear, and the poorest people give up hoping for improvement and achieving a dignified life.

It is inevitable to mention that this region is characterized by economic stagnation and the political crisis. The first Western Balkan Conference, sponsored by the German government, took place in Berlin. Political and business leaders in the region, the European Union and Member States met with the primary

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goal of fostering economic cooperation between the Western Balkan countries and the European Union. It is believed that this mechanism will speed up EU membership, uncontrolled emigration, and reduce the interference of external forces.

Economic and political situation has led to the eviction of better educated young people, and a reduction in the social base for liberal and progressive political options. The standard of living begins to fall, political institutions are exacerbated, and political power is concentrated in the hands of individuals, while freedom of speech and media suffers.

Better governance and reform of political and economic institutions are demands by EU leaders, referring to the economic weakness of the countries concerned and alleviating poverty. For example, the labor market can be liberalized in relation to the low employment rate. The fact is that political reforms will remain without influence without economic growth. It is clear that the countries of the Western Balkans are striving for EU entry, employment and investment generation, initiated and supported by EU Member States. Candidate countries must also have greater access to the EU labor market in order to cope with uncontrolled emigration. Furthermore, the Western Balkan countries should be fully involved in many EU policy areas as energy, transport, environment, climate change and agriculture, the use of funding. In the context of finances, euroization is extremely important for consideration. Namely, high euroization is a common occurrence in European developing countries, and in countries that have a fixed exchange rate regime, and are generally more euroized. The high degree of credit euroization is usually considered as policy challenge. The reasons for the high degree of Euroization in Macedonia as well as the political implications and experiences from other countries will be presented in this paper.

2. Theoretical review

Empirical research has shown that credit euroization is reduced by exchange rate volatility (Zettelmeyer et al.). This discovery is supported by the exchange rate regimes and within the existing regimes. This is in line with the South East Europe (SEE). There is also a tendency for unstable inflation to be linked to a higher level of foreign currency lending. In addition, credit euroization is lower than the higher credibility of macroeconomic policies and institutions, and the higher the interest rate differential is, the higher the financial development (for example, GDP credits) and higher foreign (and domestic FX) financing of bank loans will be.

Theoretical literature show that the interest rates on foreign currency loans are lower than in local currency loans, which is due to the devaluation / depreciation of the risk. Debtors can not understand or may underestimate or ignore the risks associated with borrowing in FX. In that case they will opt for the obvious cheapest option, by ignoring the risk factors. The outcome is suboptimal both by the individual and the social aspect. Thus, in order to solve this problem, supervisors in Austria, Hungary, Latvia and Poland, for example, are instructing banks to disclose the risks to the exchange rate of the clients, assuming that with better debt information, the demand for FX loans will be reduced.

FX borrowing can be an individual and socially optimal decision in the context of a lack of

credible macroeconomic policies or institutions. For example, borrowing in an FX can be a more risky strategy in an environment where inflation is difficult to predict. Debtors are committed to nominal payments in the future (including the risk of inflation). The income of residents is usually denominated in local currency, but adjusted by inflation. When inflation is more variable than fluctuations in the exchange rate, borrowing in the FX may be better and help hedge debtors against inflationary risk.

Residents may choose to borrow in the FX because they do not expect to have full costs that are dampened by depreciation and insolvency (moral hazard). This may be the case of explicit or implicit government guarantees to debtors. In addition, debtors can not fully intensify the collective benefits of borrowing in local currency, for example when foreign exchange exposure is at risk or has a serious crisis, but individual borrowers do not take into account the impact of their decision on collective risks. As a result, euroization could be optimal from an individual point of view but has a suboptimal social outcome.

By supply side, banks can make FX loans more attractive than the relative loans in national currency, to correspond to the currency structure and their assets and liabilities. This may be the result of regulatory requirements or banking bickering to assume currency risk directly. This explanation is important when the bank's liabilities are biased towards FX (for example, high euro deposit or FX financing from abroad). Rosenberg and Tripak, as Luca and Petrova have documented this discovery for new EU member states and transition economies.

3. Euroization in the Republic of Macedonia: Causes and Political Implications

Inflation and the rate of real foreign exchange instability of the devaluation play a role behind the level of euroisation in Macedonia. For the new members of Europe, De Haas (2010) states that high foreign exchange depreciation and instability of the devaluation discourage foreign currency loans, and according to Zettelmeyer-Nagy-Jeffrey (2010), FX lending is more prevalent in countries with greater inflationary instability. While the successful fixed exchange rate helps Macedonia achieve the low level of inflation, the volatility of inflation is not low compared to other countries in the region. The volatility of the exchange rate on the other hand is at a low level as a result of a fixed exchange rate. Therefore, the rational choice will be with a lower risk, that is, the foreign exchange rate risk, and thus will use foreign currency funds for financial transactions.

Expectations of instability in inflation and institutional credibility also play a key role. Expectations of inflation instability may differ from the observed unstable inflation as people tend to have long memories of past hyperinflations, even if the current regime manages to reduce the level of inflation and volatility to a significant level. In the case of Macedonia, although over a decade of hyperinflation has taken place in 1993, there is evidence that people still view the euro as a better value store (OeNB Euro Survey, 2007).

The stability of the fixed exchange rate is crucial for the health of the financial system and debtors can consider the implicit state guarantee. The regulation in Macedonia requires a net open FX position that does not exceed 30% of their own funds. Therefore, there is no significant currency mismatch of banks' balances. However there is a significant indirect credit risk, as many borrowers of FX loans do not pay attention. Loans naturally protect the accounts of companies by 9.9% of the total FX and FX index of

loans. In the event of the risk of a major devaluation, the consequences for the financial system can be dramatic, and debtors can expect the government to take extraordinary measures to maintain the fixed exchange rate for all costs or, in case of devaluation, to reduce the costs of devaluation associated with insolvency.

On the supply side, deposit euroization is widespread, which contributes to high credit euroization. It is documented that the need of banks corresponds to the currency structure of their assets and liabilities and plays a role in foreign currency lending. In the case of Macedonia, the financing of foreign currency from abroad is limited. Deposit euroization is, however, among the highest in the region. In addition, foreign currency deposits appear to be highly sensitive to perceptions of residents and to macroeconomic risks.

In Macedonia, authorities have put in place several protection measures and an initiative to reduce the risk of euroisation and building shock absorbers. These include differential mandatory reserves, restrictions on the net open position clauses, and prudential requirements that require banks to assess and control the indirect risk clause.

4. Regulation of FX-induced credit risks in the NBRM's supervisory framework

Macedonia has a prudential regulation that acts as an impetus against euroization, risk mitigation, or the creation of shock absorbers.

Differential mandatory reserves. The obligatory reserve is 10% of the Denar deposits, 13% of the foreign currency deposits and 20% of the FX indexed deposits.

Net open foreign currency position. The aggregate net open foreign currency position at the end of each day should not exceed 30% of banks' own funds. The foreign currency position includes the clause and foreign exchange assets and the indebted liabilities.

Capital Adequacy. Additional capital requirement for currency risk is calculated by multiplying the sum of the absolute amount of the net position in gold and the aggregate position of the bank, with 8%.

Identification of uninsured foreign currency debtors. The bank should have a system of assessment and monitoring of the compliance of the client's foreign currency position. Especially the banks should:

- monitor and assess the claims and liabilities of the foreign currency structure and debtor's maturity structure
- stress test of the debtors on cash flows in terms of their ability to repay the liabilities to the bank after decreasing the value of the denar relative to the currency in which the loan is denominated or indexed, at least on an annual basis
- determining the appropriate amount of the guarantee, in accordance with the assessment of the debt creditworthiness and the capacity to repay its debt after the decrease in the value of the denar
- determining the quantitative limit of the amount of each clause or FX indexed loan to the residents, as well as the quantitative restriction on the share of foreign exchange and / or FX indexed credit exposure of residents in the banking total credit exposure.

- assessment of the impact of changes in the exchange rate on the bank's loan portfolio, stress tests or other types of simulation, at least once a year, if the clause and foreign currency loans indexed to the bank of residents exceed 15% of the total loans to residents, the net foreign currency deposits the bank and the FX indexed investments of securities created by the Government of the Republic of Macedonia.

The client considers that he has a hedged foreign exchange position if his expectations of foreign exchange inflows, foreign exchange and FX indexed claims cover at least 80% of his total expected foreign exchange outflows, foreign exchange and foreign exchange indexed liabilities.

Documentation of FX exposure. The credit file of the bank must contain all relevant data of the bank for determining the client's identity, creditworthiness, ability to perform its obligations and the quality of the collateral, including the approval and monitoring of exposures that are part of the bank the portfolio of small loans and analyzes of the borrower's exposure to the exchange rate risk.

5. Consequences of de-euroization on the policy of the Republic of Macedonia

Although de-euroisation will bring benefits, they are more limited in a fixed exchange rate regime, like Macedonia, than in a more flexible regime. In general, the literature identified the following main benefits of financial de-euroization.

Avoiding the loss of the difference between the value of money and the costs of their production. If there is a high degree of currency substitution (using euro-banknotes) then the loss of the value of money and the cost of their production can be high. Although the data are not available for the value of money and the cost of their production there is little evidence of a significant currency change. Therefore, de-euroization is unlikely to affect the economic cost of producing the currency within a given economy or country.

Improving the effectiveness of monetary policy. As monetary policy can have a direct impact only on local currency rates, a high degree of euroization will limit the efficiency of the transfer of monetary policy. However, given the Macedonian exchange rate regime (for example, the linkage to the euro), which serves Macedonia well, the last decade is seen as the most important principle of affiliation (not only for monetary policy, but also as a tool for defining the fiscal policy), and the amount of autonomy of monetary policy is limited. Therefore, under the current exchange rate regime, there can be no big gain in this area, and even with a zero degree of euroisation.

Reduction of the balance sheet balance is the main benefit for de-euroization in Macedonia. Direct or indirect exposure to the currency of the banks' balance sheets makes the banking system vulnerable to large exchange rate movements. By the perspective of an individual banker, this is a small risk for Macedonia that is firmly committed to maintaining the exchange rate, and even if the devaluation occurs, the state is the one that should provide support if the banks have losses. However, at an aggregate level, when the balance sheet impoverishes Macedonia, it should use the exchange rate flexibility as a shock absorber in the script. Although this crisis scenario seems unlikely at this point, reducing the balance sheet balance will allow the "safety valve" to be available.

6. Experiences and lessons

Domestic experience suggests that progress towards euroization to achieve will take time. Several important lessons can be drawn from the past of successful cases

In principle, countries that have managed to de-euroization successfully tend to have a flexible exchange rate regime. The instability of the exchange rate makes the foreign exchange risk more obvious, to provide a disincentive euroization. The credible fixed exchange rate regime, on the other hand, can be seen as an implicit guarantee, thereby fostering euroization, the four successful de-euroization cases identified by Reinhart, Rogoff, and Savastano (2003) are Chile, Israel, Mexico and Poland-all have a flexible exchange rate regime. Considering the position of the Republic of Macedonia with fixed exchange rate, it could be even more difficult for fast de-euroization. Macedonia's long-term commitment to joining the EU and the Eurozone adds credibility to the exchange rate regime and makes it move towards greater flexibility of the exchange rate with less probability.

De-euroization should be supported by macroeconomic stability, and with the support of public debt management and development of the domestic financial market. For example, Israel, Chile and Poland began their process of de-eroization by lowering inflation, and gradually stabilizing the economy, as well as the liberalization of the financial sector and the capital account. Macedonia is able to achieve macro stability under a fixed exchange rate and prudent fiscal policy in recent years, and managed to overcome the global crisis relatively well. The active management of public debt and the development of the domestic financial market are important policies to support de-vroisation. The issuance of the local currency -denominated public debt can devoirise the government's balance sheet, continue the curve and yield domestic currencies and encourage the domestic debt market. Macedonia has made progress in this area, under the global crisis, and then moved in the opposite direction by relying more on the foreign currency on the denunciation of public debt. Finally, the development of a deep and liquid domestic financial market will increase with the choice of the local currency-the denominated securities and can contribute to the reduction of foreign currency-denominated assets (for example, foreign exchange policies). Encouraging the development of a smoky base of investors, such as pension funds, is likely to support the demand for long-term local currency instruments and markets.

De-euroization can be a long process and can last after achieving macro stability. The public tends to have long memories of past crisis episodes, and thus can keep local currency acting as riskier. Also, when the public becomes accustomed to using foreign currency in financial transactions and does not internalize the negative externality by using the clause of the whole economy, de-euroization does not happen automatically, even if successful macro stabilization increases the attractiveness of the local currency. For example, Chile continues to experience indexing and after that it manages to stabilize the economy in the 1990s and adopt inflation targeting and allow the pesos to sail freely in 1999.

Prudential regulations should remain in place until settlement of euroisation. This will help ensure the management of foreign exchange risks and provide shock absorbers, and will be given a soft initiative for de-euroization. Macedonia may also consider prudential improvement policies with measures taken by other countries, including 1) higher liquidity requirements for foreign currency deposits (Angola and Uruguay) or foreign currency loans (Croatia), 2) greater capital and the provision of foreign currency terms loans in particular to uninsured borrowers (Angola, Honduras and Vietnam) and 3) a lower credit value ratio in order to improve buffers of foreign currency loans that are denominated (Hungary).

7. Conclusion

In this paper the main reasons for Euroization in Macedonia were analyzed as the political implications from it. High credit euroization in Macedonia seems to be managed by inflation instability, including current volatility and memories of the past of hyperinflation; the low instability of the exchange rate and potential implicit guarantees are seen under the fixed exchange rate, along with the increased demand and supply of Euros, when Macedonia becomes more integrated in the region as in the trade and financial flows.

Even with initiatives to de-euroize, Macedonia is likely to remain euroized for a long time. Both literature and evidence suggest that it is difficult to deal with reverse Euroization, which is constant, even when macro stability is well established. In addition, some regional models of euroization appear to emerge, Europe remains highly evolved in the last two densities despite significant progress in achieving macro stability and efforts to de-euroization. This is probably related to regional economic integration with the EU and aspirations to joining the Eurozone.

De-euroization is desirable to provide a safety valve for potentials and future risks, although the benefits are somewhat limited by the fixed exchange rate. The main advantage of de-euroization in Macedonia is to reduce the balance sheet risk that can be made by the banking system vulnerable to larger exchange rate movements. De-euroization will allow the "safety valve" to work when the circumstances guarantee. Other advantages of de-euroization, such as avoiding the loss of the difference between the value of money and the costs of their production and improving the effectiveness of monetary policy are limited in Macedonia. Especially in line with the fixed exchange rate, there is a limited amount of monetary autonomy for de-euroization.

Maybe the best strategy is to provide incentives and support the macro-financial context for gradually reducing euroisation through prudent policies and maintaining macro stability and developing the domestic debt market. Macedonia implements prudent macro policies and has achieved macro stability in the coming decade, including the time of the global financial crisis. Maintaining such policies is a prerequisite for de-euroization. Given the fixed exchange rate and the restriction of the scope of monetary policy to respond to inflation, fiscal policy can play a greater role, including improving public debt management and reliance on longterm loans in Denars. This will be an important step to de-euroized the balance sheet of the public sector and to continue the yield curve, encouraging the development of the domestic debt market. A deep and liquid capital market can provide more opportunities for investing in

denars as a substitute for FX-denominated assets and thus helping de-euroization.

The high degree of credit euroisation is usually considered a policy challenge. Euroization is a balance sheet of the state of the risks to the economy, as well as to FX debtors, but with local currency earnings and assets that are susceptible to sudden changes in the exchange rate. As a result, currency risk can be converted into an indirect credit risk. In addition, high euroization reduces the efficiency of the transfer of the monetary policy of the central bank to affect the rate of local currency through its interest rate, but has a small effect on foreign currency rates.

8. Reference

- [1] Baliño T., Bennett A., and Borensztein E., (1999), Monetary Policy in Dollarized Economies, IMF, Occasional Paper No. 171
- [2] Basso H., Calvo-Gonzales O. and Jurgilas M., (2007), Financial dollarization—The role of banks and interest rates, European Central Bank Working paper 748, May
- [3] Brown M. and De Haas R., (2010), Foreign currency lending in emerging Europe: Bank-level evidence”, EBRD working paper 122,
- [4] Brown M., Onega S. and Yesin P., (2009), Foreign currency borrowing by small firms”, CEPR Discussion paper 7540,
- [5] Brown M., Onega S. and Yesin P., (2010), Foreign currency loans – Demand or Supply driven?”, CEPR Discussion paper 7952,
- [6] Chaillouk A., Ohnsorge F. and Vavra D., (2010), Euroisation in Serbia, European Bank for Reconstruction and Development, WP 120, October
- [7] De Haas (2010), Migration and Development: A Theoretical Perspective, International Migration Review, Volume 44, Issue 1,
- [8] International Monetary Fund (2012), Former Yugoslav Republic of Macedonia: Selected Issues, IMF Country Report. No. 12/134, Washington
- [9] International Monetary Fund (2015), Former Yugoslav Republic of Macedonia: Selected Issues, IMF Country Report. No. 12/134, Washington
- [10] International Monetary Fund (2013), Former Yugoslav Republic of Macedonia: Selected Issues, IMF Country Report. No. 12/134, Washington
- [11] Kokenyne A., Ley J. and Veyrune R., (2010), Dedollarization, IMF Working Paper, WP/10/199,
- [12] Luca A., Petrova I., (2007), Why drives credit dollarization in transition economies, Science Direct, Journal of Banking & finance, 32
- [13] Reinhart C, Rogoff K, and Savastano M., (2003), Debt Intolerance, NBER Working Paper, No. 9908, IFM

INFLUENCE OF ‘ISLAMIC PRINCIPLES’ ON ‘HUMAN RESOURCE MANAGEMENT’

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Abstract

Human Resource refers workforce working in an organization whereas HRM refers designing of management systems or practices enabling organizations to achieve success through people and ensuring effective and efficient use of human talent for achievement of organizational goals with focus on HRM practices i.e. recruitment, selection, development, motivation, appraisal, compensation and to achieve organizational goals. Effective HRM is crucial for success of every organization because quality of human resources, their sense of fair treatment, enthusiasm and satisfaction with their jobs and their experience all affect the organization’s reputation, productivity, customer service and even its survival. In the organizations many HRM issues have their foundations in religions. As regards management issues from Islamic perspective, much emphasis is given on behavioral aspects of organizations. Islamic management principles are unique in their nature as they shape the behavior of individuals spiritually and morally. In Islam the Holy Quran and sayings of prophet are a source of guidance for the principles of management and work ethics. Holy Quran clearly states on significance of honesty, fairness and justice in employees employer relationship. The Islamic approach of HRM refers to the performance of basic HRM functions which are recruitment, selection, training, performance appraisal, and compensation in accordance with guidelines as prescribed in Qur’an and Hadith. This paper is dedicated to explain these Islamic HRM practices in the light of Qur’an, Hadith and practices of pious caliphs.

Human Resource and Concept of ‘HRM’

Human Resource (henceforth HR) refers to individuals, workforce or personnel working in an organization accountable for responsibilities assigned to them for attaining organizational goals and objectives (Alarimy, 2015). Human Resource Management (henceforth HRM) emerged in a fully fledged

form in 1980s which refers designing of management systems or practices enabling organizations to achieve success through people and ensuring effective and efficient use of human talent for achievement of organizational goals. Therefore HRM focuses to include the recruitment, selection, placement, motivation, appraisal, development, providing direction, communication with, utilization and overall accommodation of people or employees working in the organization to achieve organizational goals (Alkahtani, (2014); Razimi et al 2014; and Kamaluddin & Kasim, 2013). Effective HRM is crucial for success of every organization because quality of human resources, their sense of fair treatment, their enthusiasm and satisfaction with their jobs and their experience all affect the organization's reputation, productivity, customer service and even its survival Hashim (2008). HRM practices are defined as a process of acquisition, development, motivation and maintenance of human resource. The main task of HRM practices in complex businesses is to manage the employees smoothly for enhancing their psychological attachment to organization Ab. Rahman et al (2013). Human Resource and issues concerning HRM are pertinent in any organization and major aspect of consideration to improve and promote administration of organization for its success in the modern times (Alarimy, (2015)).

Kamaluddin & Kasim (2013) expressed that conventional HRM is founded by principles of ethics. Every organization has to make a plan to have an accurate estimate of number of employees required, with skill requirements to accomplish organizational goals. Kamaluddin & Kasim (2013) further narrated that, HRM is also needed to determine the types of knowledge and skills workforce possesses to carry out the organizational strategy, identify hiring and training needs, and align the performance management system with strategic goals. HRM also ensures that strategy is implemented in fair way. In the recruitment process the employees will be hired on skills and competency. The compensation will be notified to employees by employer upon recruitment process. Besides this employees are also entitled to rewards that will be given based on their performance.

Alkahtani, (2014) mentioned that HRM relates to the utilization and management of human capital to attain organizational goals. HRM entails four basic functions, acquisition, development, motivation, and maintenance of human resource. Acquisition is starting point of HRM, dealing with planning, recruitment & selection and socialization of workforce for organization ensuring that exact and capable individuals are available at right time and right place. Development of employees is second component of HRM, dealing with improving employee performance by divulging knowledge, changing attitude, and improving employee skills to enhance organizational performance. Motivation is the third component of HRM which is indispensable for achieving improved performance of employees. Motivation function encapsulates job specification, performance evaluation, reward and punishment, work performance, compensation management and discipline and so on. Maintenance is the fourth component of HRM concerning with process of retaining employees, who add value to organizations by performing well. HRM also requires organizations to perform additional functions by providing additional facilities, safe working conditions, friendly work environment, and satisfactory labor relations. These activities facilitate an organization, the retention, of capable and competent employees at work.

Such employees are satisfied with their jobs so more committed to organization.

Khan, (n.d.) is of the opinion that here is more emphasis on HRD than HRM due to increasing focus on material ends and progress in commercial organizations. In HRD the emphasis is on skills with particular focus on skills contributing to material benefits and maximization of profit. Even in modern HRM the importance of moral values is on the decline and the real objective has become the maximization of profit and material goals of the organization. Thus here man is not considered as human being or best of all creatures but a mere resource and means for achieving commercial goals. In Islamic HRM, however, the HRD is premised on the status of human beings as the best of creations. Islam tends to create a balanced human personality by creating to all important dimensions of its personality and developing human resource in a comprehensive manner. These dimensions are physical, intellectual, social, moral and spiritual to which Islamic HRD emphasizes to develop simultaneously with a balance of giving equal importance. Islamic HRD can provide a corrective check to the materialism and isolationist approach that characterize much of contemporary HRM theory and practice offering compassion, humility, forbearance, highest level of sense of motivation, job satisfaction, employee loyalty and optimum achievement of organizational performance and objectives.

Islamic Approach to HRM in the Organizations

Hashim (2008) expressed that many HRM issues have their foundations in religions and all religions call for justice in treating employees. Islam urges all Muslims to promote and practice justice in every field of life. Razimi et al (2014) expressed that as regards management issues from Islamic perspective, much emphasis is given on behavioral aspects of organizations with focus on operational areas of management such as quality management, performance appraisal of employees and marketing and selling.

Ashtankar (2015) asserted that Islamic management principles are unique, shape the behavior of individuals spiritually and morally, have socioeconomic and political effects besides individuals' mutual relations. Employer-employees relations are based on religion and both are accountable to Allah almighty for their deeds. In Islam the Holy Quran and sayings of prophet are a source of guidance for the principles of management and work ethics, which clearly stress on significance of honesty, fairness and justice in employees employer relationship. Islam also stressfully encourages learning skills and struggle for good work in the organization and for benefit of community.

Khan (n.d) asserted that Islamic HRM practices are based on ethical values, trust and voluntary motivation, and consider employees more than mere resources as the modern practices do. Khan (n.d.) also revealed that Islam integrates material and spiritual progress, individual and collective growth and well being. No aspect of human being is allowed to develop unduly and at the cost of others. Islam combines its laws of justice (Ad'l) and spiritual morality (Ihsaan and Taqwa). Islamic HRM practices are

based on ethical values, trust and voluntary motivation, and consider employees more than mere resources. Application of Islamic HRM principles can significantly help in overcoming crisis in leadership, training, knowledge and attitude, and essential professional skills required for productive careers in the organization and useful role in the society. These principles and practices are also helpful to tackle the challenges arising due to increasing Muslim population leading to the cultural gaps, diversity and leadership issues, and managing effectively the increasing number of Muslim employees in multi-cultural and multi-national organizations. Following these Islamic principles and practices can enhance harmony, trust & mutual cooperation, motivation, commitment, and development of human resources and reduce conflicts.

Ab. Rahman et al (2013) asserted that Islamic HRM suggests that employees are valuable assets and not just a servant and should be considered source of dynamic powerful workforce asset. Islamic HRM practices emphasize on the development of employee's individual skills, abilities, attitudes and job knowledge to contribute for accomplishing organizational objectives. Islamic HRM practices and trust in the organizations are vital factors associated with job satisfaction, high performance, and low turnover in workplace.

Alkahtani, (2014) expressed quoting some studies that from Islamic perspective management is "the process of planning, organizing, leading and controlling the efforts of organizational members, and by using all other organizational resources, depending upon the guidelines of Allah (SWT) and his prophet (PBUH) with accountable mentality, integrity and skills to achieve the predetermined objective". Islamic management guides the managers in managing the organization more effectively and efficiently. It assists CEO's General managers, Senior managers, and Managers to properly set organizational objective, vision and mission, company's values codes of conduct and ethics, the process of decision making, recruitment, employees' training and development and strategies in managing the business that meet the overall Muslim mindset.

Alarimy (2015) narrated that Islamic HRM, which is derived from Islamic principles guided by Quran and sunnah and is Allah Almighty's gift for human beings enabling them to their society happily. The importance of HRM in the organizations is explained as coming together is beginning, staying together is progress, and working together is success, and for any organization to register success effective HRM is critical to ensure quality of employees.

Alarimy (2015) also expressed that the Islamic approaches to HRM are based on three aspects; (1) Taqwa which is piety, uprightness, devotions, and God-fearing. (2) Itqan which means that the person does things in the right order and of the desired quality as Allah Almighty stated in surat an-Naml of holy Qur'an (27:88). (3) Akhlak which refers to attitude, feelings, dispositions among others which employees possess. Akhlak are morals to be portrayed in HRM. HR managers should have good moral and should make holy prophet (PBUH) as model about whom Allah almighty acknowledged in Holy Qur'an (68:4)

Kamaluddin & Kasim (2013) expressed that in Islam Shariah law becomes guidance and will take place in daily activities of Muslims. The Islamic approach of HRM refers to the performance of basic HRM functions which are recruitment, selection, training, performance appraisal, and compensation in accordance with guidelines as prescribed in the holy book of Quran and Hadith. Besides this the values of trustworthiness, responsibility, sincerity, discipline, dedication, diligence, cleanliness, co-operation, good conduct, gratitude, and moderation are believed to act as guiding principles for HRM. Kamaluddin & Kasim (2013) also asserted that Islamic HRM are equipped with values and norms of Islam that provide justice and fairness to society and if followed strictly by organizations will contribute to firm competitiveness and performances. Kamaluddin & Kasim (2013) mentioned four policy areas in HRM, which are: the employee selection and development, reward system, employee influence mechanism, job design and work organization.

Ab. Rahman et al (2013) stated that HRM is an integrated strategy and planned development process for effective utilization of their employees' ability and efforts to accomplish organizational goals and outcomes. Several HRM issues in organizations have their foundations in religion especially, Shariah principles. Ab. Rahman et al (2013) and Razimi et al (2014) quoted five Islamic HRM practices based on Quran and Hadith i.e. recruitment & selection, training & development (knowledge management), performance (appraisal) management, career development & reward (compensation) system and leadership and employee relations.

In the lines below recruitment & selection, training & development (knowledge management), performance (appraisal) management, career development & reward (compensation) system are explained in details.

Recruitment and Selection

(a) Employees' Recruitment

Ilhaamie (2015) asserted that recruitment process starts from drawing up the people and job specifications when advertising the job, the short-listing process, the interview process, the selection decision and the job offer.

Siswanto (2014) expressed that in the organizations selection is one of the most complicated tasks, because there are many candidates applying for job and employers have plenty of potential candidates to choose.

Ab. Rahman et al (2013); Kamaluddin & Kasim (2013) and Siswanto (2014) squeezing from literature quoted that Islam has set following principles for recruitment process:

- 1 – Principle of justice
- 2 – Principle of Competency
- 3 – Principle of honesty
- 4 – Principle of assignment of work according to capacity

Ab. Rahman et al (2013); Kamaluddin & Kasim (2013) and Siswanto (2014) explained that in recruitment process Islam has set principles of justice, competency level, honesty, and assignment of work according to employee's capacities and prohibits favoritism in recruitment since it infringes the ethical principles of justice (Al-Adl), contract fulfillment with the employer, to look after the interest of the organization (Ifa Al-Aqd), and right of others in dealings.

Siswanto (2014) reported from some studies to elaborate principle of justice, that organizational justice is an important issue related to human resources and a common problem in all human resource management practices e.g. in recruitment and selection of employees nepotism and favoritism always affect the hiring decision. To ensure fair treatment given to all applicants in recruitment process, Islam requires person responsible for recruitment to be righteous and just.

According to Qur'an (Qs. 28:26) 'the best one you can hire is the strong and trustworthy'. Siswanto (2014) expressed that Islam prohibits work assignment exceeding the individuals' capacity. For example Qur'an says (Qs 2:233) "No person is charged with more than its capacity". Employers must inform the applicants the truth about the offered job including job requirements, criteria of the job holder, and compensation to be paid so that they can evaluate and adjust the work with the competencies, skills interests, and rewards.

Ab. Rahman et al (2013) regarding recruitment and selection wrote that in Islamic human resource practices that should be hired who qualified in terms of spiritual, personality or characters (akhlak), mental and physical requirements. For principle of justice quoted Ali Ibn Talib (fourth pious caliph of Islam); who did not nominate officer on account of favoritism or egoism because these two attributes reflect injustice and treachery. Employees should be selected on their competencies and not on kinship or blood relationship, friendship, wealth, age, race and political power of alike. For honesty both the applicant and recruiter have to be honest. Finally Islam forbids assignment of work exceeding the capacity of worker.

Alkahtani, (2014) mentioned that Islam advocates justice and equality based recruitment system wherein all candidates should be given equal chance and employer should disclose and convey information regarding job requirements and compensation to candidates which will help them in assessing their responsibility for job. As Allah (SWT) says: "Allah doth commands you to render back your Trusts to those to whom they are due; and when ye judge between man and man, that ye judge with justice" (Qur'an: 4:58). Applicants should be offered jobs as per their capabilities and they must be provided with

accurate information about their qualifications. Such exchange of information will allow both parties to look after their future interests.

Allah (SWT) says: “And cover not Truth with falsehood, nor conceal the Truth when ye know” (Qur’an: 2:42). And holy prophet Muhammad (peace be upon him) saying: “we do not or shall not employ a person who desires to be so appointed”, is a guideline for selecting people from a pool, based on competency rather than on their eagerness to hold a job. Islam prohibits jobs advertisement in a manner benefiting a pre-identified person or a group, which negates justice (Al-Adl), violates contract of serving in the best interest of employer (Ifa Al-Aqd) and also denies the rights of deserving candidates (Huquq Al Ibad).

(b) Employee’s Selection

Khan (n.d.) advocated in employee’s selection the criterion of right man for the right job and quoted translation of a verse of holy Qur’an: “Verily God directs you to assign trust/duties/things to the care of whom they are due and to judge with justice when you decide between people” which reveals that all posts and positions of public offices are trusts of God whose repository are those people who have the power of hire and fire the employees. Thus these positions are given to those (like trust) who deserve for them on merit having integrity and competence (professionalism) and who are best in available lot. The holy prophet Hazrat Muhammad (PBUH) also said “*Whosoever appointed on a (public/official) post such a person who is not the best among the available lot, he cheated God, His prophet and all the Muslims*”. That is merit would be the only criterion of appointment of man power in the organizations. Color, creed and race have been ousted from influencing the selection and appointment.

Khan (n.d.) revealed that for performing various functions holy prophet (PBUH) made appointments of successors at Madina for administration and followed the principle of merit (that is competence for respective job and integrity) so critically, cardinally and essentially that in some cases young persons were preferred over companions who joined the Islamic faith earlier and who had immense services to Islam at their credit. One of such example is appointment of Osama bin Zayd (r.a) in the presence of old companions. Khan (n.d.) further narrated that by strictly observing the principle of merit and right man for right job, enforcing a system of strict accountability, giving importance to integrity and ability (skills), treating his appointees equitably, granting adequate freedom and salaries to state functionaries, and among others the second caliph Omar is known as one of the most outstanding Islamic leader.

Khan (n.d.) expressed that one of the important established practice in modern commercial relationships is that there should be an employment agreement between employer and employees, comprising all essential elements of a modern employment agreement such as job specification, job description, place of work, working hours, number of holidays and leaves from duty, pay and allowances, period of employment and rights and duties of parties of agreement, for optimum achievement of organizational goals. Islamic theory and practice also provides for such an agreement. The holy Qur’an

and Sunnah of the prophet (peace be upon him) encourage that such agreements should be put to writing.

Al-Khasawneh et al (2015) regarding employee selection quoted that where it was clearly appeared in word's Allah, that the selection of an employee with good qualities in work formed a fundamental point in achieving material gains of the organization and also achieving justice in selection of most efficient employee in personal & cognitive qualities, and qualifications, and there are a lot of verses of holy Qur'an in this regard.

Alkahtani, (2014) squeezing from literature asserted that in Islam selection is based on the principles of justice, competency, honesty and assigning work as per employees' capacity. Selection of employees should be on the basis of competency— knowledge and skills, and not on the basis of friendship, relationship, race, wealth, age, and political power or the like. Alkahtani, (2014) mentioned five criteria for employees selection i.e. competency, shouldering responsibility, experience, organizational fit, and reputation within community. Islam recommends a fair and free of biases selection system. Holy prophet (PBUH) admonishes leaders of violating the commands of Allah almighty, and his messenger by appointing incompetent people on the job. Second caliph Omar (r.a.) said that any person if selects an inappropriate person based on personal relationships and prejudice, cheats Allah almighty, holy prophet (PBUH) and the community. Fourth caliph Hazrat Ali declared the selection equivalent to treachery and injustice, made on the basis of favoritism or egoism.

Ab. Rahman et al (2013) expressed that in contemporary Muslim countries the main factor affecting selection of employees is friendship network. They quoted that holy prophet Muhammad (peace be upon him) refused to accept the request of his close friend Abu Zarr who sought to work as governor and told him kindly that Abu Zarr was weak (not suitable for work), and employment process is based on the values of trust and responsibility.

Ilhaamie (2015) reported that selection is the most important human resource practice in an organization as it helps to achieve the organization's objectives. The emphasis of Islamic recruitment and selection practice is on just and fair procedure. The main criteria for Muslim workers to be selected are: 1- akhlak i.e. to possess good moral values and being pious (Saheh Tirmizi), 2- amal jama i.e. spirit of team work (Saheh Abu Daud), 3- being competent and expert (Surah al-Qassd: 26; and Saheh Bukhari & Saheh Muslim) in terms of qualifications, skills and experience, 4- should be dedicated, committed, hardworking, responsible and trust worthy (Saheh Muslim) and 5- loyal and disciplined. These criteria could be assessed by interview panel by asking situational questions. For selection of employees under these criteria the selection process should be fair and just (Surah al-A'raaf: 157). During selection process interview panel should consult each other (musyawarah) for suitability of candidate should not decide due to their whim and fancy (Surah al-Imran: 159). If candidate is selected employment terms such as job requirements, criteria of job holder, and compensation (salary, allowances, facilities etc) should be clearly stated in the appointment letter.

(c) Selection of the Managers

Tosanloo & Mahmoudi (2014) revealed that managers' selection in Quran is also taken notice to which depicts 10 prerequisites and features necessary for managers as given in the following table.

Features and adjectives for managers that are mentioned in holy Quran

S. No	Characteristic	Number of Ayat
1	Being innovative and inventive	29
2	Avoiding waste	5
3	Being gentle and tolerant	28
4	Being fair	5
5	Being gallant	11
6	Being stable and consistent	5
7	Being forgiving	8
8	Scaring from God	7
9	Being kind	5
10	Helping and contributing	3

Jamil (2015) mentioned core competencies required for selection of managers are competence, integrity, dynamism, effective communication, embodiment of familiarity and compensation, influential power, and personal accountability.

Training and Career Development

(a) Training

Ab. Rahman et al (2013) stated that training refers the process of increasing knowledge, skill, attitude, abilities, aptitude and potential of employees for better job performance to accomplish the organizational goals. Islamic training and development focuses on purifying one's soul (Tazkiyah al-nafs). Islam encourages human beings to acquire knowledge, skills and technology and to strive to earn for living because possessing knowledge is man's basic qualification to be representative of Allah almighty on earth. Training is process of developing qualities in HR enabling employees to be more knowledgeable and skilled and consequently making them more productive. Allah said "are those who know equal to those who know not? But only they who are endowed with understanding keep this in mind" (Quran 58:11). Therefore Muslims are urged to seek knowledge from cradle to grave diligently and to obtain excellence in performance to serve their employers.

Khan (n.d.) expressed that Islamic training encompasses all aspects of the human resources including physical, spiritual, intellectual, social and psychological.

Alkahtani, (2014) referring some studies asserted that Allah (SWT) elevated human beings to the status of vicegerents on earth because of knowledge and among human beings accorded higher status to the knowledgeable people and revealed in holy Quran as: *“Are those equal, those who know and those who do not know? It is those who are endowed with understanding that receive admonition”* (Qur’an: 39:9). Therefore Islam proposed training and development for improving knowledge, skills and attitude (KSA) of employees at all levels because knowledge is not restricted to basic understanding of religion, but includes, skills and knowhow required to carry out one’s job as per terms of employment contract. As improving attitude is difficult so focus of Islam is on attitude as development of attitudes leads to behavior which is of utmost importance. Therefore second pious caliph Omer (r.a) and fourth pious caliph Ali (r.a) emphasized the importance of training and development and adopted the concepts of probationary appointment and apprenticeship in recruitment process.

Ilhaamie (2015) stated that employees should undergo various training programs according to their nature of jobs and responsibilities. Muslim should undergo training sincerely in order to enhance their capabilities and also to seek for blessing of Allah almighty. Islamic training and development practice stress the Islamic values to be instilled in the employees which, focus on purifying one’s soul from bad and evil attributes and to observe good and holy attributes of the most honored people in the sight of Allah almighty are most righteous (Surah al-Hujurat: 13). The Islamic principles and values that need to be emphasized in training are knowledge and deeds (Surah al-Alaq: 3-5), working as teamwork (Surah al-Saff: 4). Employees of modern days should be sent to training centers according to their needs and to make them more competent in their work. Ilhaamie (2015) mentioned that, the concept of teamwork and good values should be steadfast, instilled and adopted by Muslim workers.

Jamil (2015) concluded that training is a vital factor for human resource development (HRD) in any organization or society and includes:

- Comprehend your role of training subordinates
- Attain the perceptions and talents obligatory to recover the aptitude to train subordinates
- Have group exercise to apply the skills learnt in practice.

Training humanizes work knowledge and expertise, emerging effectiveness for the production and services as well as inspires on alteration of employees’ behavior and attitude for achievement of commission. Organizational structure and cultural factors strongly influences on training outcomes.

(b) Career Development

Ilhaamie (2015) expressed that Islam does not want its people to be left behind and remained satisfied in their positions but encourages them upgrade their career by striving and enhancing their positions in the organizations. Islamic career development practice is based on just and it is employers’ responsibility to facilitate the employees. Therefore employers are required to provide facilities and

assistance such as special assignments, leave and mentoring system to employees to enhance their career and these employers would gain reward for this in this world as well as in the hereafter world (Surah ar-Ra'd:29; Surah al-Anfaal: 25) as not only as authority but as trustee as well. Similarly employees should also be honest and consistent in their career development and should strive for this as Allah loves hardworking and disciplined employees. Allah says He cannot change anyone unless they change themselves. So employees should take efforts themselves as well to enhance their career.

Performance Appraisal

Siswanto (2014) asserted that performance assessment is another HRM practice subject to justice.

Ab. Rahman et al (2013) and Ilhaamie (2015) mentioned that performance appraisal is the process of assessing an employee's contribution to the organization during a specified period of time. To obtain objectives of the organizations, performance should be appraised, revised and managed regularly. Islamic performance management can be looked from two angles i.e. angle of employees and from angle of employer. In Islamic perspective measurement of performance of employees should be based on fairness, justice, responsibility and accountability (Surah an-Nahl: 90; Surah alA'raaf: 85; Surah al-Hujuraat: 13). Appraiser should be imparted training for appraising (Surah an-Nisaa: 58) and appraiser should get realized that their task is of trust and they should not publicize the weakness of employees (Surah an-Nisaa: 149) and should not discriminate the employees on the basis of religion, race and color.

Ilhaamie (2015) further asserted that the appraisers come from many sources e.g. client, colleagues and superiors. If employees are not satisfied appraisal score given by the employer, they should be given permission to appeal against the score.

Alkahtani, (2014) asserted that holy prophet (PBUH) had made it obligatory for the employees to make their work perfect; and they should be held responsible for their actions. Muslim employees are expected to indulge in self-appraisal, as Allah (SWT) says: "Nay, man would be evidence against himself" (Qur'an 75:14). The objective of performance appraisal is to reward the efforts of employees or to recognize the good performance and sincere efforts even if they fall short of expectations. Improper performance appraisal may result in causing frustration among employees and leads to less productivity whereas proper appraisal and reward system boosts morale leading to higher productivity.

According to Siswanto (2014) performance appraisal is formal system for, assessing performance, setting standards and providing feedback to employees for making correction, enhancing motivation and continuation of their performance. Information obtained from the process of performance appraisal is base for decisions of promotion and pay rises. According to Quran and sayings of holy prophet (PBUH) there are rewards and punishments in this worldly life and hereafter (Qur'an 18: 87- 88). Muslim managers should be aware of and remember the concept of accountability and responsibility, while

appraising performance. Thus Muslim managers while assessing must be equitable (fair) and take care for their employees. Siswanto (2014) also mentioned that there are a dozen known phenomenon proving supervisors assess employees likely to be inaccurate due to subconscious tendencies. The ineffective, biased and incorrect assessment may be due to religious considerations, personal relationships and bureaucratic tendencies.

Compensation, Remuneration and Wages

Alkahtani, (2014) expressed that Islam laid special emphasis on compensation and quoted that in early years of Islamic state, compensation was governed by: 1) Fulfillment of contract between employer and employee, 2) differential in wages according to the level of competency and situation of employees' 3) fixation of wages in advance and immediate payment after completion of work, 4) increment in wages according to circumstances, and 5) sufficiency of wages to fulfill employee's living needs. Islam disdains exploitation of labor and favoritism in setting wages and compensation especially in labor abundant market. And it is incumbent on the employer to inform the employees about compensation and wages. Holy prophet (PBUH) clearly said "whosoever engages a worker on work should mention the wages in advance". Caliphs Abu Baker and Ali adopted equity principle in wages while caliph Omer paid differential wages, set according to living standard in the region, hardship, nature of task, and needs of subordinates.

Ilhaamie (2015) asserted that reward practice is a very important component in human resource management. According to principles of Islam the amount of reward should be adequate for employees to purchase food, clothing, transportation, and place to stay (Masnad-i-Ahmed). Islam stresses employers to pay rewards to employees according to their capabilities, qualification, knowledge, experience and amount of work they do, and payment of reward as soon as workers complete their work. Delaying the payment of reward is act of cruelty and not allowed in Islam. No discrimination in rewards on the basis of gender (Surah al-Nisa':32). All the terms of monetary and non-monetary payments should be clearly specified in the offer letter for the employees to consider before they accept the offer (Masnad-i-Ahmed) and if employees are not satisfied with the terms of payment, they can negotiate with their employer as musyawarah is also the principle in Islamic reward practice (Surah al-Imran: 159). Employers not paying the workers or do not pay full amount are enemies of Holy prophet and Allah almighty (Surah al-A'raf: 85) and these enemies will receive punishment either in this world or in the Hereafter (Surah al-Anfaal: 25).

Kamaluddin & Kasim (2013) expressed that in Islamic management it is compulsory for management to declare the compensation and wages of employees upon recruitment. Islam stresses that the wages must be fair for employees and employers as well, which will prevent employees' exploitation. Islam emphasizes payment of fair, reasonable and adequate wages depending on the work done by workers and other factors such as needs and requirement of workers, quantity and quality of work done by workers, and overall economic conditions of the society. Kamaluddin & Kasim (2013) also expressed

that according to Islamic HRM principles compensation should be parallel to the contribution of the employees, as outlined in holy Qur'an (83: 1-3); "Woe to those who deal in fraud, those who take the full measure when they receive from others, but give less when give them in measure or weight".

Ahmed et al (n.d) expressed that in Islamic teachings regarding employees are very strict. Employees must be paid well they work well, delay in payments of wages or salary without a solid reason, low wage rates, taking benefit of some one's problems and overtime by force are forbidden.

Kamaluddin & Kasim (2013) asserted that the events of favoritism of employees are also prohibited with regards to the pay and promotion since it is against the Islamic principles of people's rights and justice and fairness.

Al-Khasawneh et al (2015) estimated that the motivations and rewards play important role in increasing the effectiveness and human being performance about the seeking for the best, especially if the human beings realized that this work will be rewarded, so Allah has mentioned in several verses of holy Quran.

Al-Khasawneh et al (2015) regarding the justice in wages stated that Allah Almighty has exhorted in many verses of holy Quran the necessity to pay the wages with equity and not being unfair with laborer or worker and employees be given the deserved wages accordance with their performance and the size of the burden that carried out by them. Holy prophet (PBUH) told that Allah (SWT) said "three I opponent their on the day of judgment: a man gave me then betrayed, a man sold a free man and ate its price, and man who hired employees, interpolated him and did not give him a wage (Bukhari, 114:488).

Khan (n.d.) advocated reasonable increase in salaries and found it a means of retaining the employees and reducing turnover and enhancing employees' motivation, commitment, saving of public and state interest and quoted that during the reign of second caliph Hazrat Omer (r.a), there was a reasonable increase in salaries depending on seniority and performance.

Ab. Rahman et al (2013) are of the view that in Islamic perspective compensation is based on some principle such as, firstly, wages must be determined with mutual consultation and consent before workers start work (Qur'an 28: 26-28); secondly they should be proportional based on the amount of work done, capabilities, and competencies (Sunan Ahmed, Sura al-Yasin: 54; Surah an-Najm: 39); thirdly amount of salaries should be fixed according to current market rate (Sunan Ahmed, Surah al-Syua'ra: 183); fourthly the workers should remunerated as soon as their work is complete (Sunan Ibn Majah); and finally there is no discrimination in rewardson the basis of gender in Islam (Surah an Nahl: 97; Surah al-kahf: 30; Surah al-A'raaf: 85). Moreover Islam strictly forbids force labor and coercion.

Conclusion

From the above literature it is concluded that HR is workforce working in an organization and HRM is designing of management systems to achieve goals through effective and efficient use of human talent with focus on HRM practices i.e. recruitment, selection, development by training, motivation, performance appraisal, compensation & rewarding. Effective HRM is crucial for success of every organization because quality of human resources, their sense of fair treatment, and organizational justice, their enthusiasm and satisfaction with their jobs and their experience all affect the organization's reputation, productivity, customer service and even its survival. In the organizations many HRM issues have their foundations in religions. As regards management issues from Islamic perspective, much emphasis is given on behavioral aspects of organizations laid by Islam almost one and half millennium ago. Islamic principles of management are unique in their nature as they shape the behavior of individuals spiritually and morally. In Islam the Holy Quran and sayings of prophet are a source of guidance for the principles of management and work ethics. When the Islamic approach of HRM practices which are recruitment, selection, training, performance appraisal, and compensation are applied in accordance with guidelines prescribed in Qur'an and Hadith, and practices exercised by pious caliphs, enhance sense of honesty, fairness and justice in employees and strengthen employer employees relationship, increase the motivation level and job satisfaction of employees, leading to enhancement of productivity, improvement of customer service, and reputation of organization, which are the real goals of organization.

References

- Abbasi, Tajmal Farooq (2015) "Impact of Work Overload on Stress, Job Satisfaction, and Turnover Intentions with Moderating Role of Islamic Work Ethics", *Management Studies and Economic Systems* Vol. 2, No. 1, pp. 27-37, Summer 2015
- Ab. Rahman, Nik Mutasim Nik; Mohamad Adnan Alias; Sharmin Shahid, Mohamad Abdul Hamid; and Syed Shah Alam (2013) "Relationship between Islamic Human Resource Management (IHRM) Practices and trust: An empirical study" *Journal of Industrial Engineering and Management*, Vol. 6, No. 4, 2013 pp. 1105-1123
- Adelzadeh, Parvaneh (2012) "Management of Human Resources from Holy Quran Perspective" *Arabian Journal of Business and Management Review (Kuwait Chapter)* Vol. 2, No.4; Dec. 2012
- Ahmed, H. Z.; Khan N.A. and Ahmad, Z (n.d) "The concept of Performance Measurement System in Islam" *AL-ADWA* 45:31, pp. 101-116
- Alarimy, Aisha Salim Juma (2015) "Islamic and Western Approaches to Human Resource Management in Organizations: A Practical Approach" *International Journal of Information Technology and Business Management*, 29th July 2015. Vol. 39, No.1

Alkahtani, Ali (2014) “An Application of Islamic Principles in Building a Robust Human Resource Management System (In Islamic Countries)”, *International Journal of Recent Advances in Organizational Behavior and Decision Sciences*, Vol. 1, Issue 3, 2014, pp. 183-194

Al-Khasawneh, Akif Lutfi; Hamdan Rasheed Al-Jammal and Masha'el Al-khasawneh (2015) “Human Resources Stature from the ISLAMIC Perspective: Deductive Analytical Study from Qur'an”, *International Journal of Academic Research in Business and Social Sciences*, Vol. 5, No. 12, Dec 2015

Ashtankar OM (2015) “Business Management from Islamic Perspectives” *International Journal of Applied Research* 2015; Vol.1, No.10, pp. 809-812

Garah, Wafa El; Beekun, Rafik I.; Habisch, Andre'; Lenssen, Gilbert and Adai, Cristian Loza (2012) “Practical wisdom for management from the Islamic tradition” *Journal of Management Development*, Vol. 31 No. 10, 2012

Hashim, Dr. Junaidah (2008) “The Quran-Based Human Resource Management and its Effects on Organizational Justice, Job Satisfaction and Turnover Intention” *The Journal of International Management Studies*, Vol. 3, No. 2, August, 2008, pp. 148-159

Ihaamie Abdul Ghani Azmi (2015), "Islamic Human Resource Practices and Organizational Performance: Some Findings in a Developing Country", *Journal of Islamic Accounting and Business Research*, Vol. 6 Issue 1, 2015,

Jamil, Muhammad Yousaf (2015) “Islamic Perspective of Leadership: A Role Model for Today’s CEOs” *Journal of Islamic Thought and Civilization* Vol. 5, Issue 2, fall 2015

Kamaluddin, Amrizah and Kasim, Nawal (2013) “The Relationship between Human Resource Management and Islamic Microfinance Providers’ Performance: The Mediating Role of Human Capital” *International Journal of Business and Social Science* Vol. 4, No. 16, December 2013

Khan, Shah (n.d.) “Islamic Perspective of Human Resource Management: Some Salient Features”, ‘The Dialogue’, Vol. XI, No. 1, pp. 83-106

Najjaria, Reza; and Davoudi, Seyed Mehdi Mousavi (n.d) “Islamic Ethics at Workplace and Its Influence on Job Satisfaction of Iranian Employees” *International Journal of Social Sciences and Humanities Research*, Vol.1, Issue 2, pp. 15-29

Rafiki, Ahmad and Kalsom Abdul Wahab (2013) “Influences of Islamic Practices on Small Firm Performance: A Study in North Sumatera, Indonesia” *EJBM-Special Issue: Islamic Management and Business* Vol.5 No.11 2013, www.iiste.org, Co-published with Center for Research on Islamic Management and Business (CRIMB), <http://www.crimbbd.org>

Rafiki Ahmad & Kalsom Abdul Wahab (2014) “Islamic Values and Principles in the Organization: A Review of Literature” *Asian Social Science*; Vol. 10, No. 9; 2014, Published by Canadian Center of Science and Education

Razimi, Dr Mohd Shahril Bin Ahmad; Dr Murshidi Mohd Noor and Dr Norzaidi Mohd Daud (2014) “The Concept of Dimension in Human Resource Management from Islamic Management Perspective” Middle-East Journal of Scientific Research, Vol. 20, No. 9, pp. 1175-1182, 2014

Rokhman, Wahibur (2010) “The Effect of Islamic Work Ethics on Work Outcomes”, Electronic Journal of Business Ethics and Organization Studies, Vol. 15, No. 1 (2010)

Rokhman, W. and Hassan, Arif (n.d.) “The Effect of Islamic Work Ethic on Organizational Justice” Retrieved on February 11, 2017, from:

[http://irep.iium.edu.my/25132/1/APMC_Paper_\(WR_%26_AH\)\(1\).pdf](http://irep.iium.edu.my/25132/1/APMC_Paper_(WR_%26_AH)(1).pdf)

Salahudin, Shahrul Nizam bin; Siti Sarah binti Baharuddin; Muhammad Safizal Abdullah, and Abdullah Osman (2015) “The Effect of Islamic Work Ethics on Organizational Commitment” 7th International Economics & Business Management Conference, 5th & 6th October 2015, Procedia Economics and Finance 35, (2016), pp. 582 – 590

USING THOMAS-KILMANN INSTRUMENT TO EVALUATE THE MODES/METHODS OF CONFLICT RESOLUTION IN PAKISTAN'S INSURANCE COMPANIES

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Abstract

The purpose of the study is to determine the role of conflicts in organizations and the modes/methods of resolving them in an effective and efficient way. The study is qualitative in nature, as it focuses on the attitude of managers towards conflict resolution. The data has been collected from 79 top and middle managers of private and public insurance companies in Pakistan's capital city, Islamabad, through Thomas-Kilmann instrument. The results have been derived from this instrument for sound policy conclusion. After analyzing the data, it indicates that most of the conflicts in insurance companies are resolved through the 'collaborating' mode of conflict resolution. The conflicts are usually solved through collaborative and sincere efforts of both the parties; however, it may be a necessary condition but not the sufficient condition for conflict resolution. It is imperative that subject of conflict should be resolved by the nature of that particular conflict that will helpful to address the cause of the issue and its appropriate right action for its resolution. The study is limited to the Pakistan's insurance sector, while its further may be extended by including the larger sample and wide sectoral analysis at countrywide. The study provides different conflict resolution methods to the managers, which is deem desirable for understanding the reasons of conflicts in an organizational setting.

Keywords: Thomas-Kilmann instrument; Conflict resolution; Accommodating, collaborating, compromising, avoiding, competing, conflict resolution; Pakistan's insurance companies.

1. Introduction

Just like other natural phenomenon in this world, conflict can also be counted among this natural phenomenon and can be found in all aspects of life involving human beings. Conflict is an unavoidable reality of human life. If we work to comprehend and handle it efficiently, we can advance in our career and social life (Omisore and Abiodun, 2014).

Due to the very commonness of conflict, humans always keen to adopt the best coping strategies to resolve the issue efficiently and further try to convert it into something positive for the organization. Guttman (1999) argued that a conflict is beneficial or healthy if it is open, fair and entertain the other person's interests. A work place lacking of tension is eventually boring and inactive, not likely to encourage creativity and growth. According to Koester (1998, p.381-382) conflict is defined as "A perceived divergence of interests [in which the primary] source of the conflict lies in the minds of the people". Thomas and Kilmann (1974, p.8) defined conflict as "...the situations in which the concerns of two people appear to be incompatible".

In Human Resource perspective, conflict resolution is considered as the best coping strategy that may reduce the conflict between two parties in some mutual agreeable nodes. The positive outcomes may further entrenched in to some positive feelings that may bind the two parties in some long-term relationship. This decisive role not only may reduce the conflict dysfunctional occurrence, while its helpful to coordinate and collaborate in the team work, organizational goals, and social community development. According to Roloff (1987, p.496), "*organizational conflict occurs when members engage in activities that are incompatible with those of colleagues within their network, members of other collectivities, or unaffiliated individuals who utilize the services or products of the organization*".

Organizations suffers a lot from conflicts and results in problems like low performance, poor compliance on organizational policies, disciplinary issues, and some occasions severe threats. Lloyd (2001) argued that the conflicts in which the purpose of the interaction is to hurt someone physically, psychologically or both, is extremely intolerable. Goldsmith (1999) argued that conflicts can also result into court case, damage, unpleasantness, strikes, decreased productivity, poor confidence, cost overruns, waste of time, damaged relationships, separated communities, negative behaviors and low opportunities for learning and change. Hirschman (2001) and Mekenzie (2002) argued that conflict is a serious issue in organizational setting, which may affect the strategic goals of the organization in the form of higher turnover, lawsuit, and poor productivity. Booher (1999) argued that the chances of arising conflict would be high if the people come from different and diverse backgrounds and they communicate differently and uniquely. Goldsmith (1999) concluded that in some occasion, conflict is not as much serious as we made, which easily be reduced by simple counseling technique, clear arguments, drawing meaningful outcomes, and dialogues. These conflicts usually arises when both the parties are not on a similar page, both perceived things as per their judgment and beliefs, and both parties have a loose temperament that do not intend to resolve the things as per against expectations. However, after proper counseling and dialogue, both the parties mutually understand and resolve the issue accordingly. Elangovan (1998) argued that conflicts that arise between the individuals in the organization are on the basis of different issues, which include implementation of policies, job performance, organization decisions and discrimination. This

conflict leads to group conflict and then leads to departmental conflict.

VanDer wall (2000) argued that the conflict occurs due to different reasons including lack of communication, failure of meeting of expectations, pressure and misunderstanding. Jordan and Troth (2004) confirmed the role of emotional intelligence in team performance, individual performance and conflict resolution styles, while it further act with different conflict styles under team management skills. Wood and Bell (2008) found that contemporary personality factor significantly affect the conflict resolution styles in an academia, which indicates the strong motivation of students towards different negotiation situations to resolve conflict among them. Halperin (2014) argued that conflict resolution is influenced by emotional regulations and discrete emotions that rarely discussed under the management of conflict in psychological theory. There is a strong need to test different psychological theories under the domain of conflict resolution for conclusive findings. Fisher (2016) concluded that conflict may affects human lives either social and/or work life, while it has to manage by three different methods, including, ignorance, compliance, and strong decisions. In addition, the mediation of third-party may further helpful to resolve the conflict by taken their part as arbitrator and conciliation. Webb et al. (2017) emphasized the need of effective strategy that helpful to reduce the subject of conflict, in this regard, 'regulatory mode theory' understands the individual motivations and occurrence for conflict resolution.

The importance of conflict resolution have a significant place in an organizational setting, while effective strategies may lead to cope the conflict styles that gives good insights to the managers to identify the conflict area under the debate for possible remediation.

1.2 Problem statement

Conflict is a part of every organization and it is an unavoidable part. People use violence to resolve conflict. So the first rational of the study is to understand the mechanism and strategies that would helpful to resolve the conflicts peacefully. Secondly, to evaluate different conflict theories to understand the coping mechanism for conflict resolution. Both strategies provide formal insights to understand and resolve the conflict subject.

1.3 Significance of the study

The humans are the vital component in organizational setting, while human capital is the desirable asset for the organization to maintain and progress economic benefits. Conflicts among humans are not as much surprising as we react; however, the manager task is vital in a sense that he/she sort out the factors due to which the conflict is arises and make necessary actions to resolve the issue on the priority basis. There are two schools of thoughts, which widely provoked in organizational performance, i.e., one of the side highly sensitized by the conflict issues that intend to reduce the conflicts as soon as possible, while the other, warmly welcome to the new ideas and counter arguments, which ultimately leads to some meaningful conclusions to promote organizational performance. It is undeniable fact that higher level of dysfunctional conflicts affects organizational productivity that have to be resolved by coping strategies and reconciliation.

1.4 Objectives of the study

The objectives of the study are as follows:

- To determine different methods or strategies for conflict resolution and reconciliation.

- To find out the conflict resolution methods that used in insurance companies to solve conflicts.
- To choose the best method/strategy to resolve conflicts successfully.
- To identify the reasons for arising conflicts, in order to minimize the probability of arising conflicts again and again, and
- To identify the importance of conflicts in organizations.

2. Literature Review

Conflict resolution and reconciliation play an important role in organizational performance, while it has a considerable place in the academia and in practice. Blake et al. (1964) identified three different situations to deal with the conflict, i.e., i) win-lose approach, ii) lose-lose approach, and iii) win-win approach. The first approach, i.e., win-lose situation is mostly common, where one party is 'win' in their arguments, while the other party may 'lose' their arguments. This approach is generally visible in election campaigns, where one party 'win' the election and other party 'lose' the elections, and the conflict may resolve either for the time being or for the longer time period. The second approach is lose-lose approach. This approach mostly ends up with some mutual compromises and both the parties may sacrifice the equal share in conflict zone. Finally, the third approach is 'win-win' approach. This approach is mostly ends up with the mutual agreement through collaborative mechanism and satisfied both the parties with the general outcome.

Thomas and Kilmann (1974) identified different styles of conflict resolution, i.e., i) Competitiveness: this style mostly exhibit in organizational setting, where one's intend to move on the higher ranks and make a hard work to achieve it on certain time period, while after unexpected outcome, he/she may not understand the management concerns and go for conflict zone, which ultimately ends up with the serious consequences, ii) Collaborative efforts: this is a desirable style in organization to work like a team member and help the others in thick and thin times, while this softness sometimes make it in a discomfort zone and conflict may arise, however, it is overcome in a shorter time period, iii) Compromising: it is also a soft form of conflict resolution, where the equal power opponents show grater aggregation, however, this softness attitude helpful between the two parties where the differences of conflict is larger than the cost of losing, iv) Accommodating: generally, this style occupy higher level of cooperation and lower level of assertiveness, which ultimately finished the conflicts in accommodating mode, and finally v) Avoiding: it is difficult, however, its consider a good strategy to resolve the issue timely, while it is not seems like a situation where one party looks weaker and the other is strong, but the avoiding party is considered in a safe hand due to avoid the issues in a company's best interest. The study further used 'assertiveness' and 'cooperativeness' as intervening variables in his model. They argued that competing method of conflict resolution is adopted when the manager is highly assertive in achieving his/her own interests and less cooperative with the conflicting parties. The accommodating method of conflict resolution is adopted when the manager is highly cooperative with the individuals in achieving their goals at the expense of his/her own goals, objectives or outcomes. Compromising method of conflict resolution is adopted when the manager is moderately assertive as well as cooperative. Collaborating method of conflict resolution is adopted when the manager is highly assertive as well as

highly cooperative, finally, avoidance method of conflict resolution is adopted when the manager is neither assertive in achieving his/her own goals nor cooperative with others to achieve their goals.

Booher (1999) discussed different models of conflict resolution, including, i) accommodation, ii) compromise, iii) collaboration, and iv) over-powering. All these four models generally had been made in favor of organizational personnel and performance to reconciliation the subject issue accordingly. DeVoe (1999) further extended the model in some pronounced agenda, i.e., first, the conflict subjects are identified and setup some time to listen his/her issues to resolve it in a passive environment. Secondly, to give some accommodating space between the two conflict parties and listen the main concern area of conflict. Thirdly, to discussed the problem with the experts to make a fair deal between the two parties. Fourthly, discussed the solutions between two parties either simultaneous or individually. Fifth, make a deal in written form to take consent with the both parties to resolve the issue. Sixth, to go for implementation and follow-up the issue accordingly. These factors may helpful to resolve the issue in acceptable modes. Covey (1999a,b) suggested the number of steps to resolve the conflict issue, including, i) apology, ii) recognizibility, iii) commitment, iv) sacrifice, and v) forgiveness. These steps are highly recognized for resolving dysfunctional activities in an organization. Gutmann (1999) discussed the set of dealing rules with conflict, i.e., i) try to avoid third party concerns, iii) don't believe on others, iii) No need to intervene in personal matters of others, and iv) do not involve in some other actions. These steps may substantially reduce the conflict origin and reduce the conflict occurrence. Cropanzano (1999) suggested four different ways to resolve the conflict subject, i.e., first to resolve the issue by appropriate advising, secondly, make a role of arbitrator; thirdly, provide reasonable handling tactics to the issue, and finally, to avoid the issue.

After careful review of different strategies, theories, and action plans to resolve conflict area, the study used number of factors that have a considerable meaning under organizational setting. Thomas and Kilmann (2002) presented some antecedents that used in this study to resolve conflict subject in Pakistan's insurance sector. The following are presented with their operational meanings, i.e.,

2.1 Operational definitions of variables

- **Conflict Resolution:** According to Thomas and Kilmann (2002), Conflict Resolution is a systematic structure for cooperative disagreement.
- **Competing:** It is the high resolution factor that one's may used to dissatisfy others by their actions in the form of low degree of cooperativeness and high assertiveness.
- **Accommodating:** It is opposite to 'competing' to satisfy others by their actions in the form of higher degree of cooperativeness and lower level of assertiveness.
- **Avoiding:** This is the simple rule of 'tit-and-tat', where one person may avoid the other actions by high level of ignorance, which postponing a conflict issue on given time.
- **Collaborating:** It is the higher degree of mutual collaboration, where one's fully cooperative to the others and integrates the social connections to reach up to win-win situation.
- **Compromising:** It acts as an intermediary in between both the cooperativeness and assertiveness to find some mutual way out of conflict resolution.
- **Cooperativeness:** The higher degree of positive cooperation satisfies others to resolve the concern, and

finally

- **Assertiveness:** It acts as a binding force between two conflict subjects to satisfy others with higher degree of assertiveness.

2.2 Research Framework

The research framework of the study comprises different antecedents of conflict resolution, including competing, collaborating, compromising, avoiding, and accommodating that have a high resonance in organizational conflict literature. The study used the following factors for sound policy implications, i.e.,

Dependent Variable: The response variable is 'Conflict resolution'.

Independent Variables: The explanatory factors are as follows:

- i) Competing
- ii) Collaborating
- iii) Compromising
- iv) Avoiding, and
- v) Accommodating.

Intervening Variables: The set of intervening variables used in the study, i.e.,

- i) High assertiveness and low collaboration.
- ii) High assertiveness and high collaboration.
- iii) Equal level of assertiveness and collaboration.
- iv) Low assertiveness and low collaboration.
- v) Low assertiveness and high collaboration.

The research framework of the study is presented in Figure 1 for ready reference.

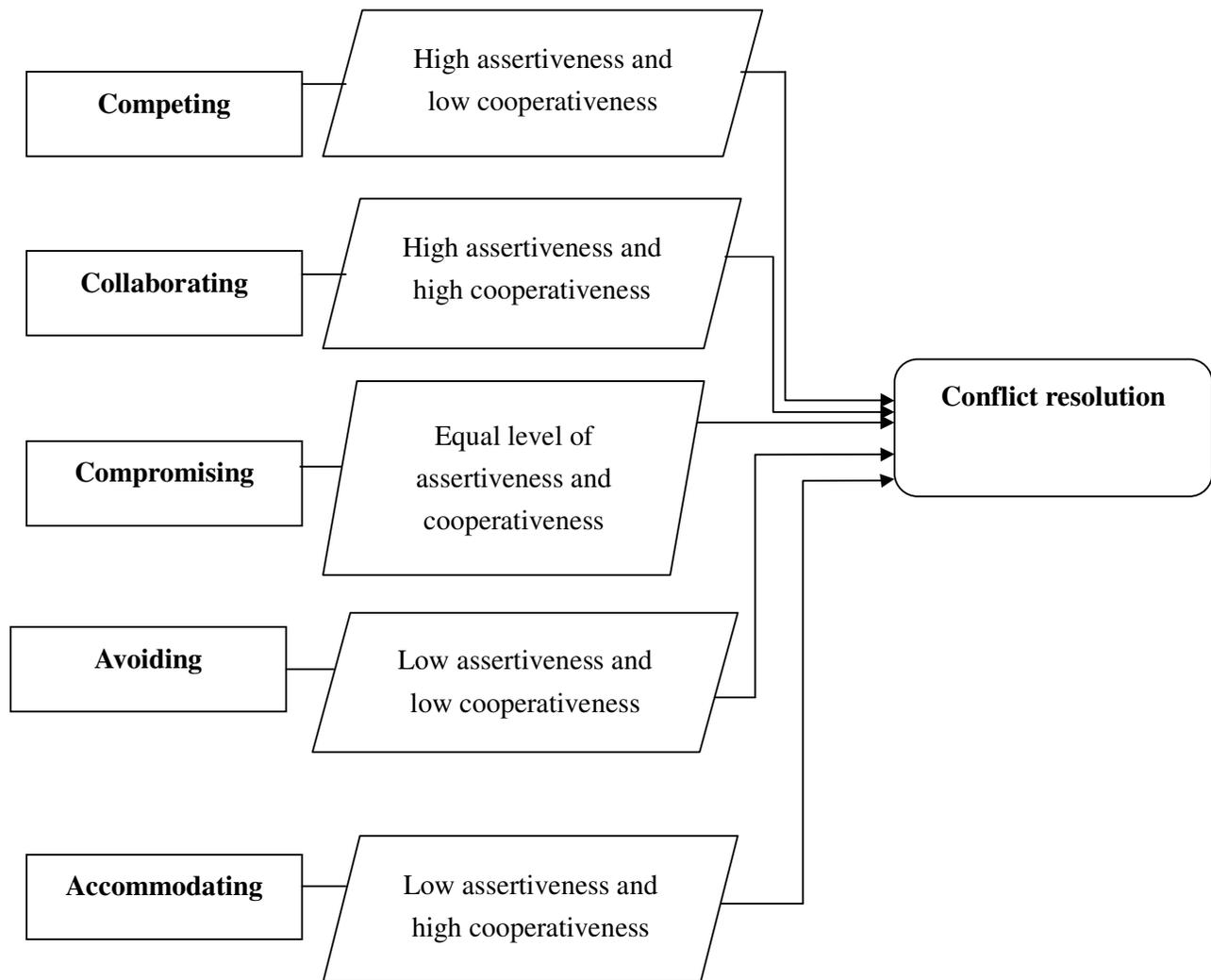


Figure 1: Research Framework

Source: Adapted from Thomas and Kilmann (2002) and idea conceived from different literatures.

2.3 Hypothesis:

The study hypothesizes the following five conflict resolution strategies in organizational setting, i.e.,

H1: The more the manager is assertive and less cooperative, the more will be the chances of using competing method for conflict resolution.

H2: The more the manager is assertive and cooperative, the more will be the chances of using collaborating method for conflict resolution.

H3: If there is a moderate level of both assertiveness and cooperativeness of the manager, the more will be the chances of using compromising method for conflict resolution.

H4: The less the manager is assertive and cooperative, the more will be the chances of using avoiding method for conflict resolution.

H5: The less the manager is assertive and cooperative, the more will be the chances of using accommodating method for conflict resolution.

3. Research Design

3.1 Type of study

The study is quantitative in nature, as the study is intended to measure the attitude of the manager towards conflict resolution. The data is collected and analyzed by Thomas-Kilmann questionnaire.

3.2 Population

The top and middle managers of private and public insurance companies of Federal Capital City -Islamabad, Pakistan is considered as a universe of the study. The reason of selecting the insurance companies is that there is a high resonance of conflict among sales personnel and managers, which ultimately affect the companies' payoffs. The other number of conflicts situations may arises like conflict among the managers, between managers and subordinates, between the customers and the company, etc. This questionnaire floated just one time, so it's a cross sectional study.

3.3 Sample

The top and middle managers of some of the private and public insurance companies is selected as a sample of the study, while the size of sample is about 90 managers and obtained 79 questionnaires dully filled were returned with the response rate of 87.7%.

3.4 Sampling

The study used non-probability sampling technique, i.e., convenient sampling, for receiving ample responses from the respondents on a shorter time.

3.5 Instrument

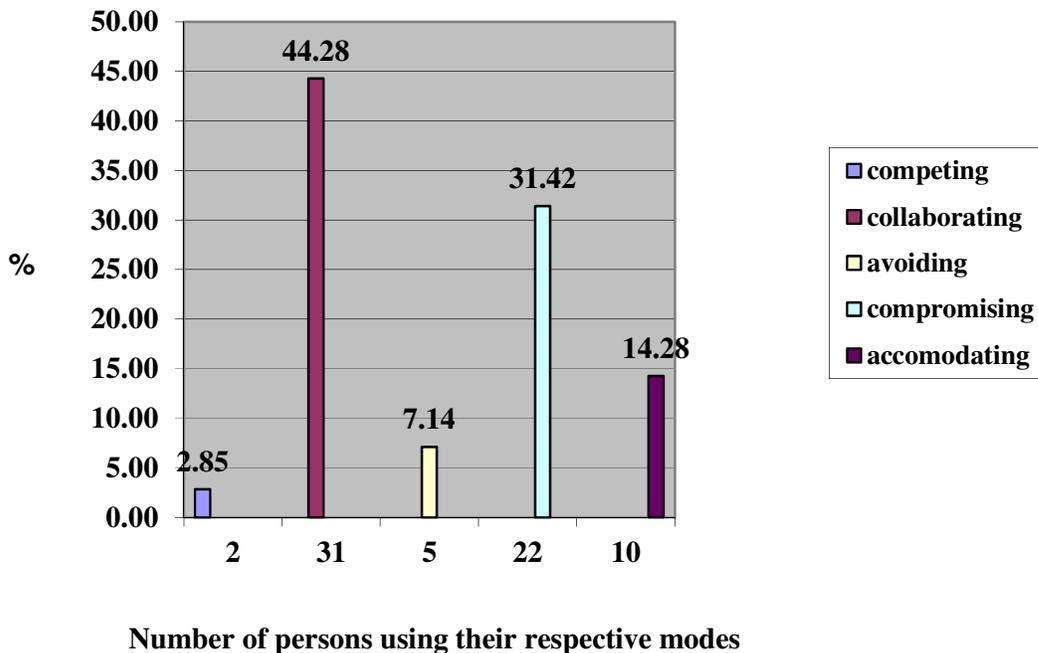
Thomas and Kilmann instrument (1974) has been adopted in this study, which is a widely accepted and applied instrument in conflict resolution.

4. Data Analysis

The data has been analyzed by Thomas and Kilmann instrument. The person's profile score indicates the range of skills which a person's uses in different conflict situations to handle or resolve the conflict. The five modes or methods of conflict resolution is reported, which is labeled by i) competing, ii) collaborating, iii) compromising, iv) avoiding, and v) accommodating. Under each mode, there is a range of possible scores on that mode, from 0 (for every low use) to 12 (for very high use). The person's score has been encircled on each of the five modes.

Figure 2 shows that we have percentage of total sample size on the y-axis and on x-axis. We have a number of persons using their respective modes of conflict resolution. It shows that 44.28% of the total sample size which is 70 uses the 'collaborating' mode of conflict resolution, 2.85% uses 'competing', 7.14% uses 'avoiding' techniques, 31.42% uses 'compromising' mode and 14.28% uses 'accommodating' mode of conflict resolution.

Figure 2: Percentile Score



About 44.28% of the total sample size (i.e. the 44.28% top and middle level managers of insurance companies) is using the ‘collaborating mode’ of conflict resolution and has scored some number above the 75% line of collaborating; which means that they have scored more than 75% of the people who have already taken the Thomas and Kilmann instrument. The 31.42% of the sample has scored some number above the 75% line on ‘compromising mode’, 14.28% of the sample has scored some number above the 75% line on ‘accommodating mode’, 7.14% of the sample has scored some number above the 75% line on ‘avoiding mode’ and 2.85% of the sample has scored some number above the 75% line on ‘competing mode’. This means that these people have scored higher than 75% of the people who have taken the Thomas and Kilmann instrument that is they are in the top 25% in collaborating, compromising, accommodating, avoiding and competing mode. Some of scores falls in the middle 50% on a given mode, so this means that they are close to the average use of that mode. Some of the scores also falls in the lower 25% on a given mode, then this means that the use of this mode is somewhat lower than most of the people who have already taken the Thomas and Kilmann instrument. The point to be noted in this instrument is that it is not necessary that the extreme scores are not desirable, as it is related with the comfort and discomfort zone of the conflict area, which may be linked with high or low scores. The scores achieved from the questionnaires in Figure 1 extracted by using the Thomas Kilmann mode instrument.

5. Future recommendations, conclusions, and research limitations

After analysis, it is concluded that most of the conflicts in Pakistan's insurance companies resolved through using the 'collaborating mode' of conflict resolution. This means that the conflicting parties and the conciliator strive for solving the conflicts through a collaborative and sincere effort and try to satisfy the concerns of both. The other researchers whom upon interested to find the impact of different conflict resolution strategies on conflict resolution should take some other pronounced factors that affect conflict resolution in organizational settings. The results may and may not be generalized, as the sample is somehow smaller in number, however, during survey we analyzed that the managers mostly busy in their strategic tasks and they are very difficult to agree to respond the questionnaire items, so this problem may persist even in the collection of larger sample. The study provides different conflict resolution methods for the managers as well as the reasons and causes of arising conflicts in insurance companies.

References

- Blake, R.R., Shepard, H.A., & Mouton, J. S., 1964. *Managing intergroup conflict in industry*. Houston, Texas: Gulf.
- Booher, D., 1999. *Resolving Conflict. Executive Excellence*. 16, 5-5.
- Covey, S. R., 1999a. Rebuilding Relationships: Reconciliation often starts at the top and cascades down. *Executive Excellence*, 16, 9-9.
- Covey, S., 1999b. *Resolving Differences. Incentive*. 173(7), 10-10.
- Cropanzano, R., Aguinis, H., Schminke, M & Denham, D., 1999. Disputant Reactions to Managerial Conflict Resolution Tactics: A Comparison among Argentina, the Dominican Republic, Mexico, and the United States. *Group & Organizational Management*, 24(2), 124-154.
- DeVoe, D. 1999. Don't Let Conflict Get You Off Course. *InfoWorld*. 21, 32-69.
- Elangovan, A., 1998. Managerial Intervention in Organizational Disputes: Testing a Prescriptive Model of Strategy Selection. *International Journal of Conflict Management*. 9(4), 301-335.
- Fisher, R. J. (2016). Third party consultation: A method for the study and resolution of conflict. In *Ronald J. Fisher: A North American Pioneer in Interactive Conflict Resolution* (pp. 37-71). Springer International Publishing.
- Goldsmith, M., 1999. Conflict Resolution: Learn to engage in conflict constructively. *Executive Excellence*, 16, 17-17.
- Guttman, H. 1999. *Conflict at the Top. Management Review*. 88(10), 49.
- Halperin, E. (2014). Emotion, emotion regulation, and conflict resolution. *Emotion Review*, 6(1), 68-76.
- Hirschman, C., 2001. Order in the Hearing. *HR Magazine*, 46(7), 58-63.

- Jordan, P. J., & Troth, A. C. (2004). Managing emotions during team problem solving: Emotional intelligence and conflict resolution. *Human performance*, 17(2), 195-218.
- Koester, O., 1998. Cultural Variation in Conflict Resolution: Alternatives to Violence. *International Journal of Conflict Management*. 9(4), 380-384.
- McKenzie, C., 2002. *Developing a CCO (Conflict Competent Organisation)*. Management, 49(2), 34-36.
- Lloyd, R. B., 2001. Conflict resolution or transformation? An analysis of the South African and Mozambican political settlements. *International Negotiation*, 6(3), 303-329.
- Omisore, B. O., and Abiodun, A. R. (2014). Organizational Conflicts: Causes, Effects and Remedies. *International Journal of Academic Research in Economics and Management Sciences*, 3(6), 118-137.
- Roloff M.E., 1987. Communication and conflict. In C. R. Berger and S. H. Chaffee (Eds.), *Handbook of Communication Science*; (pp. 484- 534), Newbury Park, CA: Sage
- Thomas, K.W. and Kilmann, R.H., 1974. *Thomas-Kilmann Conflict Mode Instrument*. Consulting Psychologists Press, Inc., Palo Alto, CA, pp.1-16. Online available at: <https://rampages.us/ginnystevens5/wp-content/uploads/sites/11855/2015/09/Conflict-Survey.pdf> (accessed on 28th March, 2017).
- Thomas, K.W. and Kilmann, R.H., 2002. *Thomas-Kilmann Conflict Mode Instrument*, rev. ed., CPP, Mountain View, CA.
- VanDer Wall, S., 2000. Resolving conflicts at work: A complete guide for everyone on the job. *HRMagazine*, 45(3), 172-173.
- Webb, C. E., Coleman, P. T., Rossignac-Milon, M., Tomasulo, S. J., & Higgins, E. T. (2017). Moving on or digging deeper: Regulatory mode and interpersonal conflict resolution. *Journal of personality and social psychology*, 112(4), 621.
- Wood, V. F., & Bell, P. A. (2008). Predicting interpersonal conflict resolution styles from personality characteristics. *Personality and Individual Differences*, 45(2), 126-131.

FACTORS AFFECTING MAINTENANCE OF HOSPITAL BUILDINGS: A LITERATURE REVIEW

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Abstract: Maintenance has become a main part in the life cycle of any building to ensure its optimal performance. The purpose of this paper is to identify the factors affecting maintenance management of hospital buildings. In achieving this objective, a database of 32 peer-reviewed publications, published between 1997 and 2015, was utilized for the aim of this research. As a result of this literature review, 71 factors were identified. Next, the factors were grouped into seven groups based on one of the reviewed literature. Finally, a framework was proposed to help in assessing the factors affecting maintenance in hospital buildings. Despite the many previous studies dealing with the issue of the factors affecting maintenance management, there is a gap in the literature in terms of researching the factors affecting maintenance management in hospital buildings. In this paper, we seek to close such gap.

Keywords: maintenance, factors, maintenance management, hospital buildings, literature review.

1. Introduction

The healthcare sector is usually considered among the important sectors in any country (Sweis, et al 2013; Sweis, 2015). A hospital building is a place where patients heal, so keeping the hospital in a good condition is a very important issue to ensure a healthy and safe environment. The main reason of poor hospital buildings state is the lack of maintenance (Mirdeeliana, 2012). It is said that the qualitative aspect of the building is the matter of maintenance (Adenuga,2012). Many intangible factors were studied in order to figure out the services quality and applied on health sector, and how the outcomes can be affected the outcomes like (Emotional Intelligence, Knowledge sharing, Managerial factors, TQM practices, Risk management Plans), (Abu-Hussein et al, 2016; Alawneh and Swies, 2016; Sweis et al, 2016; Dammaj et al, 2016) but few studies focused on the building of the hospitals. This paper aims at focusing on this rarely studied side.

According to the British Standard (BS 3811) (as cited in Ogunmakinde et al. and Olayinka and Owolabi, 2015), maintenance is defined as any work carried out to maintain or return every facility of the building. In a deeper view, it is defined as the combination of all technical and administrative procedures planned to restore an item to, it should be taken into consideration in any risk management plan (Mubaidin and Alawneh, 2017), retain it to, its acceptable condition, so it can perform its required

function well. It has been stated that building maintenance with the required standards extends the life span of the building and achieves better sustainability. Besides, it provides a safety environment for all users (Tan et al., 2014).

In order to execute maintenance activities efficiently, a suitable maintenance plan should be set (Ali et al., 2010). Maintenance management is responsible for using tools and methods to improve the efficiency and to reduce the effects of unplanned stoppages and to reduce costs (Oliveira et al., 2014). The maintenance of hospital buildings is a major issue. It is the last controllable task and sometimes as unnecessary task, which leads to a low level of reliability and operating capacity. Not giving maintenance management in hospital buildings a high priority has led to the deterioration of these hospitals and to the reduction of the health care services. It has an important role among other activities in buildings' operations. It should be taken into consideration to improve the performance of these hospitals, their facilities, and the quality of delivered services. In addition, to avoid expending the scarce resources which could be better utilized. For the purpose of this literature review, published articles and studies were reviewed. In the process, literature on issues related to the concept of factors affecting maintenance management, its practices, and its measurements were recognized and analyzed. Finally, this paper seeks to identify factors affecting maintenance and propose a framework to aid in the identification of such factors.

2. Maintenance Management Practices

The Chartered Institute of Building has listed some steps to help in improving maintenance management practices (as cited in Fakhruddin et al., 2011) as follows: a) Having a well trained and experienced maintenance staff, b) Using maintenance programs which include the standards and response time, c) Keeping all records from sites, renewal dates, service agreements, buildings, redecoration, engineering service, and costs, and d) Using the best methods to spread information to help in reducing cost and failures that caused them. Meeting the requirements of the building users and satisfying them and maintaining all building facilities are the result of effective maintenance practices. One study assessed the practices of maintenance management in government office buildings and concluded that maintenance practices is one of the most important issues that should be taken into consideration (Husaini and Tabassi, 2014). Besides, they recommended some important issues that would result in improving these practices, maintenance should be carried out efficiently. Maintenance department should be responsible for carrying out all maintenance works and taking all complaints from all users seriously. The maintenance program should be reviewed to check what maintenance problems have been solved and how to solve all remaining problems.

The practices of maintenance management in banking industry were studied by Faremi and Adenuga (2012) through evaluating the operational state of the buildings, and the factors affecting maintenance management. Their results showed that the buildings were in a good condition according to the users and maintenance staff perception. Nevertheless, the old generation buildings were in a poor condition in comparison with the new generation buildings. Besides, attitude of users and misuse of facilities and lack of discernable maintenance culture in the country were the most significant factors affecting maintenance

management. They recommended that all factors affecting maintenance management should be checked to avoid any problems. Enshassi et al. (2015) evaluated the practices of maintenance management in public hospitals in the Gaza Strip. They found that the application of corrective maintenance was done in most hospitals, while preventive maintenance is applied in few hospitals. They also found that there were variances in responding to maintenance requests because of the unqualified maintenance staff and the lack of spare parts. Furthermore, most of the hospitals did not have a maintenance program. They stated that it is the responsibility of the maintenance department to preserve all the facilities and elements of the building, and to make sure that the supporting systems are operating effectively. Finally, they recommended that the maintenance staff should have the required experience and they should be well trained to do their jobs effectively. Besides, all hospitals should have an inventory for all spare parts to respond immediately to any maintenance request.

Any healthcare organization needs a maintenance program in order to manage all facilities according to Alzaben (2015), it also needs to carry out maintenance at regular intervals to ensure the safety of users and patients and to make sure that the building is operating within specifications. Adenuga (2012) studied the practices of maintenance management in public hospital buildings, and identified the necessary skills for an effective maintenance manager in a hospital. The researcher found that there was a weakness in the maintenance department and the staff is inexperienced, the users of these hospitals were not trained on effective use of hospital facilities. Finally, he established the cause of low motivation in executing the desired maintenance programs.

2.2.Maintenance Performance Measurements

The relationship between maintenance performance and continuous improvement was examined by Maletic et al. (2012). They measured maintenance performance using four items: Overall Equipment Effectiveness (OEE), availability of assets, Mean Times between Failures (MTBF), and level of reliability and confidence in relation to customers. They assured that maintenance systems had an effective impact in any building's success. They conducted another study in 2014, and examined the relationship between quality management orientation dimensions and maintenance performance. They measured maintenance performance by using the following items: availability of assets, OEE, MTBF, and repair times (MTTR) to measure maintenance performance. Their results showed a positive correlation between quality management orientation dimensions and maintenance performance. Key performance indicators (KPI) were used to ensure that maintenance activities met their expected results. In this study KPIs were categorized as lagging and leading indicators (Muchiri et al., 2010). Maintenance performance methods were studied and categorized into three groups, based on holistic, machine, and value factors by Abdul Samat et al. (2011). They concluded that the most common methods used were the holistic approach, overall equipment effectiveness, and balance score-card. One other study defined and assessed the four KPIs for the maintenance of public hospital buildings in the Gaza Strip, which were building performance indicators, maintenance efficiency indicators, annual maintenance expenditure, and urgent repair request indicator (Enshassi and El Shorafa, 2015). The key aspects of performance measurement for maintenance management of office buildings were identified by Myeda et al. (2011) to improve maintenance service

delivery. They stated three maintenance indicators: functional-management service, technical-building maintenance, and building image. Maintenance managers and end-users were asked to evaluate each dimension of the indicators.

2.3.Factors Affecting Maintenance Management

Previous studies revealed several factors affecting building maintenance management. Factors affecting building maintenance of public buildings in Penang, Malaysia were assessed. The unit of analysis targeted the people involved in the building maintenance sectors. The study revealed that lack of preventive maintenance, insufficient funds to maintain the building, lack of building maintenance standard, non-availability of replacement part and components, and not responded to maintenance request are the major factors affecting maintenance. Based on these results there should be an increased demand for the effectiveness and efficiency from the maintenance department staff (Talib et al., 2014). Others assessed the factors affecting residential building maintenance in Nigeria based on the insight of users. They concluded that lack of preventive maintenance, faulty workmanship, design resolution factor, and the use of substandard materials were the most significant factors affecting building maintenance. These factors are a real threat to the structural and functional state of the building and consequently, this would lead to rapid deterioration. The least significant factors were lack of communication between maintenance contractors and clients, lack of understanding the benefits of maintenance, non availability of replacement parts and components, and technological change (Baba and Buba, 2013).

Factors affecting maintenance management in the banking industry in Lagos state, Nigeria were studied by Faremi and Adenuga (2012). Besides, they assessed the operational state of bank buildings and the practices of maintenance management. Their unit of analysis targeted maintenance officers and random users. Their results showed that attitude of users and misuse of facilities were the most significant factors affecting bank building maintenance ranked by maintenance officers. Lack of discernable maintenance culture in the country was ranked as the most significant factor responsible for poor maintenance management by users. Their study showed that the bank buildings were in a good condition. These results proved that maintenance management has not got the chance to use the narrow span of control, which could lead to better performance and coordination of the maintenance department. Other researchers assessed the factors affecting the housing maintenance in public and private housing facilities in Nigeria. The factors which they considered in their study were: design and proper workmanship, material specifications, detailing of working drawings, construction supervision, cash flow analysis, environmental factors, users activities, shifting values and modernizations, inadequate waste management plan, accidents, solar radiation, gradual depreciation, ageing, wear and tear, preservation of historical background, value of buildings, alterations and modifications, inadequate housing stock, low quality of original construction, and social factors. Their results showed that design and proper workmanship, material specifications, construction supervision, and detailing of working drawings were the most significant factors affecting housing maintenance. Therefore, a relationship between construction supervision and material specifications is needed (Olayinka and Owolabi, 2015).

Factors affecting building maintenance in government residential estates in Akure, Nigeria were studied by Ogunmakinde et al. (2013). Their unit of analysis targeted the residents of three different government owned states. The factors which they considered in their study were: lack of funds, lack of maintenance culture, indiscipline/ignorance, bad economy, death of owner of building, quality of building materials, lack of skilled maintenance personnel, remoteness of the building, and absence of the owner family quarrel. Their results showed that lack of funds was the most significant factor affecting building maintenance, since finance is a major factor that affects maintenance work because it dictates the amount of repairs that could be conducted. The challenges of some public and private buildings maintenance in Nigeria were explored by Olanrewaju and Anifowose (2015). They recognized the defects, their causes and suggested some solutions. Their unit of analysis targeted the building industry professionals. Their results showed that the use of untested or inferior materials such as cement, aggregate and water was the most significant factor causing defects, as these materials are being used in the construction and absolutely they will result in a poor building condition which will lead to more maintenance work. Thus, the involvement of construction professionals in the design phase could help avoiding such problems. They suggested that availability of qualified and competent construction industry professionals is one way to decrease the defects occurring and to achieve quality of maintenance processes.

Factors affecting housing maintenance cost in Scotland were recognized by El-Haram and Horner (2002). Their unit of analysis targeted local authority and housing associations. They categorized the factors into five groups: building characteristics, tenant factors, maintenance factors, political factors, and other factors. Their results showed that improper use of the property and high expectations of tenants were the most significant factors affecting housing maintenance. Others studied the factors affecting housing maintenance cost in Malaysia. Their unit of analysis targeted building managers or supervisors, maintenance management staff. They categorized the factors based on the previous study of El-Haram and Horner. Their results showed that expectation of tenants, building materials, building services, building age and failure to execute maintenance at the right time were the most significant factors affecting housing maintenance (Ali et al., 2010). Another study focused on the issue of design defects and its impact on maintenance for school buildings in Malaysia. Their study showed that building facade and missing slot underneath the floor slab were the most significant defects that led to difficulty in carrying out maintenance works. Their solution was to benefit from the maintenance inputs during the design phase for the ease of maintenance to decrease design defects (Ali et al., 2013).

Some researchers focused on financial factor affecting maintenance management in safety and health practice in some of the government offices in Malaysia. Their unit of analysis targeted the government office employees and the maintenance management employees. Their results showed that the maintenance management had recognized their responsibility to offer the budget for every maintenance plan in safety and health practices (Hafizi et al., 2012). One important study discovered the common problems facing the operation and maintenance departments in Saudi Arabia. The unit of analysis targeted the professionals who were working in operation and maintenance departments. Based on the results, the problems were categorized into three groups; management problems, human resource problems, and

technical problems. The conclusion was that lack of financial support, lack of skilled personnel to carry out maintenance works in a quick manner, and maintenance contract regulation were key areas for improvement (Alshehri et al., 2015).

2.4.Factors Affecting Maintenance Management in Hospital Buildings

Factors affecting maintenance management of public hospital buildings in Nigeria were studied by Adenuga et al. (2007). They evaluated the operational state of public hospital buildings. Their unit of analysis targeted maintenance officers and some randomly users. Their results showed that the most significant factors affecting maintenance management were attitude of users and misuse of facilities, lack of discernible maintenance culture, inadequate training, and reluctance of some establishment to support innovations. Maintenance officers and users of the buildings both ranked lack of fund for maintenance program as the second factor affecting maintenance management. The users ranked the rise of cost of maintenance by the operatives, use of poor quality components and materials by the maintenance department and without long-term preparations for the supply of critical parts for replacement, as the most significant factors affecting maintenance management. Furthermore, they reported that the operational state of public hospital buildings has been average.

Others studied the factors affecting the decision to carry out building maintenance practices in Ghana. Their unit of analysis targeted the residents of the private house owners. Their results showed that misuse of building after completion, faulty designs, and unavailability of skilled labor to undertake maintenance operations and poor financial support for maintenance work were the most significant factors influencing the decision to carry out maintenance work. Based on that, maintenance should be taken into consideration within the design phase, high quality materials should be used during the construction phase, and governments should take actions towards the awareness of the importance of maintenance (Ofori et al., 2015). One researcher implemented total productive maintenance for the maintenance department in the Riyadh Military Hospital in the Kingdom of Saudi Arabia and evaluated the factors contributing to maintenance improvement in healthcare facility management. He recommended that the hospital maintenance department has to guarantee that all users should be operating without affecting patients' lives. Besides, it's their duty to reduce any failures that could affect the hospital systems and to mitigate the factors affecting the maintenance of the hospital. Finally, they should have the best maintenance program that helps in meeting their targets (Alzaben, 2015).

Abdul Razak and Jaafar (2012) focused on the issue of faulty hospital design and its direct impact on the maintenance of hospital. They concluded that inadequate knowledge of the designers during the design phase arises during maintenance due to their inability to consider the factors affecting maintenance. They proposed some solutions to this problem such as: using experts with the required knowledge in the design phase, selecting the appropriate materials and finishes, and using the best construction method in order to improve the life cycle of the hospital.

Factors affecting maintenance cost of public and private hospitals' facilities in Saudi Arabia were identified and assessed by Hassanain et al. (2013). Their unit of analysis targeted the project managers and facilities managers. They categorized the factors into seven groups; factors pertaining: to the statutory

requirements, to the design phase, to the construction phase, to the management of the maintenance department, to the budgetary estimates for maintenance activities, to the operations conducted by the maintenance group, and to the community perception about the maintenance industry. Their results showed that transfer of problems from the construction phase to the maintenance phase for resolution, lack of coordination between the construction and maintenance group, and lack of quality control measures during the installation of systems were the most significant factors affecting maintenance cost in public hospitals. Besides, duration of the maintenance contract, the method of classifying maintenance contractors, errors conducted during the design of the project, and lack of feedback from the maintenance group to the design team were the most significant factors affecting maintenance cost in private hospitals.

3. Theoretical Framework

The main purpose of this study is to identify the factors affecting maintenance management of hospital buildings. Thus, this section reviews some issues related to maintenance and presents the proposed framework.

3.1.Purpose of Maintenance

According to Mydin (2015) and Al-Zubaidi (1997) the main purpose of building maintenance is to keep the building in its original condition as long as possible, so as to serve its desired purpose effectively, to minimize production cost, to reduce maintenance time and cost, and to enhance the building's condition. Owolabi and Amusan (2014) stated that the aim of maintenance is to keep all facilities and machines in a condition that makes them operate effectively and at their maximum profit making capacity. According to Enshassi et al. (2015), the main aim of maintenance is to protect the building in its original state, so it can serve its purpose efficiently. Oliveira et al. (2014) reported that the purpose of maintenance is to keep all equipments in a good working situation and to accomplish products in a high quality. According to Alner and Fellows (as cited in El-Haram and Horner, 2002 and Tan et al., 2014), the purpose and aim of building maintenance is to ensure that buildings' services are in a safe condition, to ensure that buildings are fit to use, to preserve the quality of the building, and to maintain the value of physical assets.

3.2.Types of Maintenance

Maintenance types have been presented by different researchers in different perceptions. Maintenance types refer to the way in which the maintenance tasks are planned and scheduled. According to BS 3811 (as cited in Ogunmakinde et al., 2013), maintenance is divided into planned and unplanned maintenance. **Planned maintenance** is a type of maintenance that is organized and has a predetermined schedule. It is divided into four types: 1) Preventive Maintenance: This type is executed at predetermined intervals, and intended to decrease the likelihood of failure. 2) Corrective Maintenance: This type arises after failure has occurred and makes effort to return an item to its normal condition so it can perform its function again. 3) Predictable Maintenance: This type is a normal periodic work that intends to maintain

the performance characteristics of a product and to fix the product after it has completed a functional life span. 4) **Schedule Maintenance**: This is also a type of preventive maintenance that occurs at predetermined intervals of time, number of operation, etc. **Unplanned Maintenance** is a type of maintenance that has no predetermined schedule (Semi-emergency maintenance). It is divided into three types: 1) **Unpredictable Maintenance**: This type takes place when unexpected damage or breakdowns occurs due to external causes. 2) **Avoidable Maintenance**: This type is required to correct failures caused by incorrect installation, incorrect design or the use of improper materials. 3) **Emergency Maintenance**: This type is executed in order to avoid severe problems. Otherwise, it is referred to day-to-day maintenance.

3.3. Nature of Maintenance Work

According to Stierlin (as cited in Mydin, 2015) and British Standards Institution, 1993 (as cited in Ogunmakinde et al., 2013), nature of maintenance work is classified as follows: a) **Servicing**: it is cleaning process carried out at regular intervals and it is sometimes called day-to-day maintenance. Such as: washing windows monthly, sweeping floor swept daily and polishing weekly, and painting for protection and decoration every 5 years. B) **Rectification**: it usually arises early in the life of the building and occurs from natural mistakes or unsuitability of elements, damage of supplies in installation or shipment, and incorrect assembly. Thus, the performance of the building is affected. It helps guaranteeing that materials and elements fit for their use. Besides, it helps reducing the cost of maintenance, since it is avoidable. C) **Replacement**: If the building is not operating as it is supposed to, the construction material should be replaced. Nearly all of replacement work is executed not so much from the failure of the elements as from deterioration of appearance. It is very difficult to decide the length of life of materials. Replacement can be reduced by using materials of high quality. D) **Renovations or Modernization**: It means restoring a structure, equipment, or a service by a major overhaul to its initial specification and design, to enhance the initial design, or to make it possible to the facility to carry out some new functions.

4. Methodology

The objective of this paper is to identify the factors affecting maintenance management of hospital buildings. The following steps represent the methodology for achieving this objective:

1. Reviewing 32 published articles for the purpose of identifying the factors affecting maintenance management.
2. Grouping the identified factors into seven groups.
3. Proposing a framework to aid in assessing the identified factors.

Based on the literature reviewed, this study adopted the factors affecting maintenance management from Hassanain et al. (2013); Adenuga et al. (2007); Talib et al. (2014); Baba and Buba (2013); Ofori et al. (2015). A framework as shown in (Fig 1) was developed to accomplish the purpose of this study by examining the effect of the selected factors on maintenance management performance in hospitals buildings, which were valid in Saudi Arabia, Nigeria, Malaysia, and Ghana. The same categorization used in Hassanain et al. (2013) was adapted to aid in achieving the objectives of the study. As shown in the framework below, the independent variables are factors affecting maintenance and the dependent variable

is maintenance management performance. Each factor is represented by several items as shown in Appendix A. The items for measuring maintenance management performance were adopted from the work of Maletic et al. (2012) and Maletic et al. (2014).

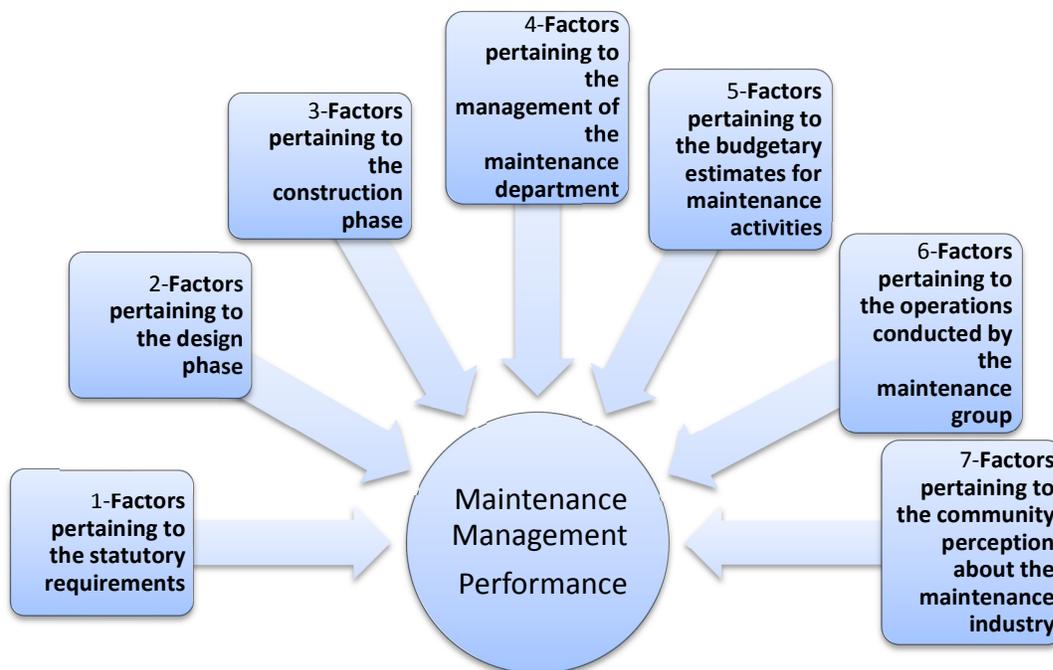


Fig 1. The Framework

5. Conclusion and Recommendations

Maintenance of hospital buildings is a real problem and a major issue to spot the light on, since hospitals are operating for twenty-four hours. The mission of hospital maintenance is to efficiently manage and maintain the hospital’s physical plant, by providing exceptional services to customers at reasonable costs. This literature review examined several articles with issues related to maintenance management practices, measurements, factors affecting maintenance, purpose of maintenance, types of maintenance, and nature of maintenance. In practice, it is very complicated to recognize the factors affecting maintenance management as they may differ from one building to another. Hence, identifying the most critical factors and grouping them is a very important issue.

This study will not only contribute to theory and knowledge, but rather, based on this literature review, 71 factors affecting maintenance in hospital buildings were identified and brought to the forefront. A framework was proposed to be a base for assessing these factors. Thus, developing strategies in order to improve maintenance activities and performance. The result of this paper will provide a good direction to maintenance department staff who aim to improve maintenance performance. Besides, this paper makes a significant contribution to the engineering management field.

From this study the following recommendation was made for future considerations:

This paper has proposed a model to help in assessing factors affecting maintenance in hospital buildings. The application of this model can be used in quantitative research. But its reliability and

validity can be assured only as the model passes more and more tests. Researchers may find this model reasonably useful to be applied in their future research.

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References

1. Abdul Razak, M. and Jaafar M. (2012) 'An assessment on faulty public hospital design in Malaysia', *Journal Design + Built*, Vol. 5, pp.1-14.
2. Abdul Samat, H., Kamaruddin, S., and Abdul Azid, I. (2011) 'Maintenance Performance Measurement: A Review', *Pertanika Journal of Science and Technology*, Vol. 19 No. 2, pp.199-211.
3. Abu Hussein, R., Sweis, R., Hiyassat, M., Al-Debei, M., Alawneh, A., (2016) 'Project management factors affecting the enterprise resource planning projects' performance in Jordan', *Journal of Systems and Information Technology*, Vol. 18 No.3, Pp:230-254.
4. Adenuga, O.A, Odusami, K.T., and Faremi, J.O. (2007) 'Assessment of Factors Affecting Maintenance Management of Public Hospital Buildings in Lagos State, Nigeria', *RICS, Georgia Tech and the Contributors*, pp.1-10.
5. Adenuga, A. (2012) 'Maintenance Management Practices in Public Hospital Built Environment: Nigeria Case', *Journal of Sustainable Development in Africa*, Vol. 14 No. 1, pp.1520-5509.
6. Alawneh, A. and Sweis, R. (2016) 'The Relationship Between The Emotional Intelligence Level And The Effectiveness Of A Project Manager: The Case Of Jordan', *International Journal of Information, Business and Management*. Vol.8 No 3. 2016.
7. Ali, A.S., Kamaruzzaman, S.N., Sulaiman, R., and Peng, Y. (2010) 'Factors affecting housing maintenance cost in Malaysia', *Journal of Facilities Management*, Vol. 8 No. 4, pp.285-298.
8. Ali, A.S., Keong, K.C., Zakaria, N., Zolkafli, U., and Akashah, F. (2013) 'The effect of design on maintenance for school buildings in Penang, Malaysia', *Structural Survey*, Vol. 31 No. 3, pp.194 – 201.
9. Alshehri, A., Motawa, I., and Ogunlana, S. (2015) 'The Common Problems Facing the Building Maintenance Departments', *International Journal of Innovation, Management and Technology*, Vol. 6 No. 3, pp.234-237.
10. Alzaben, H. (2015) 'Recommendation for Improving Maintenance Procedures in a Hospital by Implementing Total Productive Maintenance (TPM)', *Proceedings of the 2015 International Conference on Industrial Engineering and Operations Management Dubai, UAE*.
11. Al-Zubaidi, H. (1997) 'Assessing the demand for building maintenance in a major hospital complex', *Property Management*, Vol. 15 No. 3, pp.173 - 183.

12. Baba, W. and Buba, V. (2013) 'Evaluation of Factors Affecting Residential Building Maintenance in Nigeria: Users' Perspective', *Civil and Environmental Research*, Vol. 3 No. 8, pp.2224-5790.
13. Dammaj, A., Alawneh, A., Sweis, R. Hamad, A. (2016) 'Investigating the relationship between knowledge sharing and service quality in private hospitals in Jordan'. *International Journal of Productivity and Quality Management* Vol.17, No.(4) PP:437. DOI: 10.1504/IJPQM.2016.075248
14. El-Haram, M. and Horner, M. (2002) 'Factors affecting housing maintenance cost', *Journal of Quality in Maintenance Engineering*, Vol. 8 No. 2, pp.115 - 123.
15. Enshassi, A., El Shorafa, F., and Alkilani, S. (2015) 'Assessment of Operational Maintenance in Public Hospitals Buildings in the Gaza Strip', *International Journal of Sustainable Construction Engineering & Technology*, Vol. 6 No. 1, pp.29-43.
16. Enshassi, A. and El Shorafa, F. (2015) 'Key performance indicators for the maintenance of public hospitals buildings in the Gaza Strip', *Facilities*, Vol. 33 No. 3/4, pp.206 – 228.
17. Fakhrudin, I., Suleiman, M., and Talib, R. (2011) 'The need to implement Malaysia's Building and Common Property Act 2007 (Act 663) in building maintenance management', *Journal of Facilities Management*, Vol. 9 No. 3, pp.170 – 180.
18. Faremi, O. and Adenuga, A. (2012) 'Evaluation of maintenance management practices in banking industry in Lagos state, Nigeria', *International Journal of Sustainable Construction Engineering & Technology*, Vol. 3 No. 1, pp.45-53.
19. Hafizi, Z., Kadir, A., Shaharuddin, A., and Kadaruddin, A. (2012) 'Financial Factor Affecting Maintenance Management In Safety And Health Practices', *International Journal of Modern Engineering Research*, Vol. 2 No. 5, pp.3061-3067.
20. Hassanain, M., Assaf, S., Al-Ofi, K., and Al-Abdullah, A. (2013) 'Factors affecting maintenance cost of hospital facilities in Saudi Arabia', *Property Management*, Vol. 31 No. 4, pp.297 – 310.
21. Husaini, A. and Tabassi, A. (2014) 'Performance Assessment of Maintenance Practices in Government Office Buildings: Case Study of Parcel E, Putrajaya', *MATEC Web of Conferences*, pp.10: 1-7.
22. Maletic, D., Maletic, M., and Gomiscek, B. (2012) 'The relationship between continuous improvement and maintenance performance', *Journal of Quality in Maintenance Engineering*, Vol. 18 No. 1, pp.30 – 41.
23. Maletic, D., Maletic, M., and Gomiscek, B. (2014) 'The impact of quality management orientation on maintenance performance', *International Journal of Production Research*, Vol. 52 No. 6, pp.1744 – 1754.
24. Mirdeeliana, A. (2012) 'Customers Satisfaction Towards Maintenance Management in a Government Hospital Building in Malaysia. 1st International Conference on Innovation and Technology for Sustainable Built Environment 2012'. 16-17 April 2012, Perak, Malaysia, pp. 403-411.

25. Mubaidin, M., Alawneh. A. (2017) 'Assessing The Risk Of Corporate Strategic Change: The Development Of A Framework To Assist The Risk Management Process Adapted By A Contracting Company', *International Journal of Information, Business and Management*, Vol.9, No.1, 2017.
26. Muchiri, P., Pintelon, L., Martin, H., and Meyer, A. (2010) 'Empirical analysis of maintenance performance measurement in Belgian industries', *International Journal of Production Research*, Vol. 48 No. 20, pp.5905–5924.
27. Mydin, M.A. (2015) 'Implementation of Effective Maintenance Management in Building Works', *Journal of Industrial Engineering Research*, Vol. 1 No. 4, pp.17-22.
28. Myeda, N., Kamaruzzaman, S., and Pitt, M. (2011) 'Measuring the performance of office buildings maintenance management in Malaysia', *Journal of Facilities Management*, Vol. 9 No. 3, pp.181 – 199.
29. Ofori, I., Duodu, P., and Bonney, S. (2015) 'Establishing Factors Influencing Building Maintenance Practices: Ghanaian Perspective', *Journal of Economics and Sustainable Development*, Vol. 6 No. 24, pp.184-193.
30. Ogunmakinde, O.E., Akinola, A.A., and Siyanbola, A.B. (2013) 'Analysis of the factors affecting building maintenance in government residential estates in Akure, Ondo State, Nigeria', *Journal of Environmental Sciences and Resources Management*, Vol. 5 No. 2, pp.89-103.
31. Olanrewaju, S. and Anifowose, O. (2015) 'The challenges of building maintenance in nigeria: (A case study of Ekiti State)', *European Journal of Educational and Development Psychology*, Vol. 3 No. 2, pp.30-39.
32. Olayinka, A. and Owolabi, O. (2015) 'Evaluation of the factors affecting housing maintenance and its probable solutions', *International Journal of Latest Research in Engineering and Technology*, Vol. 1 No.4, pp.59-64.
33. Oliveira, M., Lopes, I., Iaeng, M., and Figueiredo, D. (2014) 'Maintenance Management Practices of Companies of the Industrial Pole of Manaus' *Proceedings of the World Congress on Engineering and Computer Science, Lecture Notes in Engineering and Computer Science*, Vol. 2214 No. 1, pp.1016-1022.
34. Owolabi, D. and Amusan, M. (2014) 'Paradigm for Total Quality Management in Building Maintenance Operation', *Industrial Engineering Letters*, Vol. 4 No. 2, pp.13-21.
35. Sweis, R (2015) 'An Investigation of Failure in Information Systems Projects: The Case of Jordan' *Journal of Management Research*. Vol 7, No. 1.
36. Sweis, R., Al-Ahmad, K., Dweik, G., Alawneh, A., Hamad, A. (2016). 'The relationship between total quality management practices and organizational performance at Jordanian hospitals'. *International Journal of Business Innovation and Research*. Vol. 10, No.4, <https://doi.org/10.1504/IJBIR.2016.076765>.
37. Sweis, J Ghaleb, Sweis J Rateb , Malek Abu Rumman, Ruba Abu Hussein, Samer E. Dahiyat. Cost Overruns in Public Construction Projects: The Case of Jordan. *J Am Sci* 2013;9(7s):134-141

38. Talib, R., Ahmad, A., Zakaria, N., and Sulieman, M. (2014) ‘Assessment of Factors Affecting Building Maintenance and Defects of Public Buildings in Penang, Malaysia’, *Architecture Research*, Vol. 4 No. 2, pp.48-53.
39. Tan, Y., Shen, L., Langston, C., Lu, W., and Yam, M. (2014) ‘Critical success factors for building maintenance business: a Hong Kong case study’, *Facilities*, Vol. 32 No. 5/6, pp.208 – 225.

Appendix A

Table 1. Factors affecting maintenance management

<i>Factors pertaining to the statutory requirements</i>	
1	The method of classifying maintenance contractors
2	Absences of uniform maintenance standards, procedures and policy
3	Duration of the maintenance contract
4	The method of awarding maintenance contracts
5	Payment delay
6	Localization of the workforce
7	materials selection does not comply with client’s activities
8	basic physical and chemical properties of materials
9	lack of local productivity standard and specification
10	unfamiliarity with local conditions and site conditions
11	unqualified maintenance contractors
<i>Factors pertaining to the design phase</i>	
12	Absence of maintainability analysis
13	Failure to consider life cycle costing analysis
14	Selection and specification of inferior quality materials
15	Errors conducted during the design of the project
16	Lack of feedback from the maintenance group to the design team
17	Complexity of design and non involvement of maintenance experts during design stage
18	design deficiency affecting building resolution
19	faulty design
<i>Factors pertaining to the construction phase</i>	
20	Lack of quality control measures during the installation of systems
21	Lack of coordination between the construction and maintenance groups
22	Transfer of some problems from the construction phase to the maintenance phase for resolution
23	Inaccuracy of as-built drawings
24	Faulty construction
25	Faulty workmanship during construction/maintenance.
<i>Factors pertaining to the management of the maintenance department</i>	
26	Poor administration of the maintenance management group
27	Lack of documentation of maintenance work
28	Shortage of properly trained maintenance personnel
29	Inefficient inventory system
30	Inadequate training and development of personnel
31	Lack of skilled manpower to maintain works in hospitals designed and constructed by expatriates
32	Frequent shortage of materials and spare parts due to absence of efficient

	inventory system
33	No long-term arrangements made for the supply of essential parts for replacements
34	Lack of successful maintenance programs by the maintenance department
35	Absence of a form of planned maintenance programs
36	No adoption of appropriate maintenance cycle for hospital maintenance
37	lack of preventive maintenance method
38	lack of communication between maintenance contractor, clients and users
<i>Factors pertaining to the budgetary estimates for maintenance activities</i>	
39	Insufficient budget allocated for maintenance activities
40	Lack of mechanisms to control the budget allocated for maintenance
41	Failure to forecast the accurate maintenance expenditures
42	Inflation of maintenance cost
43	Difficulty in procurement of spare parts due to unavailable funds
<i>Factors pertaining to the operations conducted by the maintenance group</i>	
44	Unfamiliarity with the use of technology
45	Use of poor quality spare parts, component and materials
46	Poor performance of the maintenance group
47	Poor communication between the maintenance groups and the users
48	Unavailability of operation and maintenance manuals
49	Failure to identify the true causes of defects
50	No effective maintenance due to de-emphasize training, retraining and continuing education
51	Inadequate/inappropriate maintenance of facility plant and equipment for maintenance operations
52	Reluctance of some establishment to innovation support
53	The scale of efforts, extent of facilities and resources for maintenance operations on the quality of management in an organization
54	ignorance about the basic properties of building materials and components
55	use of new material and components in buildings
56	incorrect selection of building material component and system/ material specifications
57	non response to maintenance request
58	poor work rectification done on buildings
<i>Factors pertaining to the community perception about the maintenance industry</i>	
59	Lack of community awareness about the importance of maintenance
60	Vandalism of facilities by patients and visitors
61	Unwillingness of the local population to work in the maintenance industry
62	Individual modifications carried out by the hospital staff
63	Our level of technology, cultural background and environment not been considered
64	Client attitude to maintenance
65	low concern to future maintenance
66	delay in occupancy after completion/ not using building after completion
67	technological change and fashion
68	Lack of discernable maintenance culture in the country
69	Attitude of users and misuse of facilities
70	Persistent breakdown through indiscipline and ignorance factors of building users
71	Natural deterioration due to age and environment

Table 2. Items for measuring maintenance management performance

	<i>Maintenance performance</i>
1	Availability of assets has increased during the last 3 years
2	Effectiveness of maintenance processes has increased during the last 3 years
3	Maintenance efficiency indicator (MEI) has improved during the last 3 years
4	The building performance indicator (BPI) has increased during the last 3 years
5	Annual Maintenance Expenditure (AME) is consistent with the plan during the last 3 years
6	Building Risk Indicator (BRI) has increased during the last 3 years

List of Abbreviations or symbols

Abbreviation	Meaning
BS	British Standard
OEE	Overall Equipment Effectiveness
MTBF	Mean Times Between Failures
MTTR	Repair Times
KPI	Key Performance Indicator
BPI	Building Performance Indicator
MEI	Maintenance Efficiency Indicator
BRI	Building Risk Indicator
AME	Annual Maintenance Expenditure

PROFIT AND PRACTICE: ONLINE SHOPPING CENTERS

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Abstract

This research work sought to answer the question “What factors make online shopping centers profitable in practice?”, particularly in Nigeria, with two primary objectives - to determine if an increase in sales leads to an increase in profits and to determine if online ease has impact on profits. A deductive approach, using quantitative method was used to test the null hypotheses. Questionnaire technique was used to elicit data by simple random sampling while WPS spreadsheet was used to analyse the data. The result of the statistical T test and Chi-squared test revealed that both null hypotheses “An increase in sales does not lead to an increase in profits” and “Online ease does not have impact on profits” were incorrect and thus rejected in favour of their alternative hypotheses, at 95% confidence level.

Key words:

Online shopping, Profit.

1 INTRODUCTION

The advent of the Internet has revolutionized the way we all do things, including education and business. Now, it’s hard to imagine a world without online interactions. Its advantages far outweigh its disadvantages and has thus gained fast and widespread adoption around the world. Internet is described by Forouzan (2013) as network “composed of thousands of interconnected networks” (p. 17) of devices that communicate. Its increasing transformation of business is particularly important. It has made the notion of 24-hour business more entrenched in our cultures. Shopping centers that traditionally have daily opening and closing hours of business have to adjust to the reality of round-the-clock shopping when they go online by hosting their businesses on the Internet with option of online purchase. Indeed, some businesses that have no traditional physical stores simply host their shopping centers online, thereby eliminating or reducing some of the costs associated with traditional stores. There are many success stories of online businesses besides the ones we may know to have failed. Hence, it is important to study some of the factors that make online shopping centers successful. The scope of this research is on sale of physical goods online, in Nigeria.

This research work seeks to answer this main question - “What factors make online shopping centers profitable in practice?”. The primary objectives of the research are to determine if an increase in sales leads to an increase in profits and if online ease has impact on profits. Therefore, the research hypotheses are given below, with H_0 and H_1 representing null and alternative hypotheses respectively.

Set 1

H₁: An increase in sales leads to an increase in profits.

H₀: An increase in sales does not lead to an increase in profits.

Set 2

H₁: Online ease has impact on profits

H₀: Online ease does not have impact on profits

Positivism (Cameron and Price, 2009) being my philosophical viewpoint, a quantitative method, based on deductive approach, is applied to this research. This is because of the opinion that realities largely exist independently of the observer and can be measured (Cameron and Price, 2009). In this case, certain independent factors, like sales and online ease are responsible for driving dependent factor, like profit, which keeps a business viable. Simple random sampling (Cameron and Price, 2009) was adopted for the questionnaire method used to elicit data. This approach is to ensure the results of the research can be generalised on the population from which the sample was taken. The population in this research is defined by individuals in the geographical entity called Nigeria and sample was taken from two states (Lagos and Ogun) within the country to make up the total number of sample size required, as determined from the pilot sample size of ten carried out earlier. Ethical considerations (Cameron and Price, 2009) were taken into account in dealing with all stakeholders at every stage of the research and in gathering data through the questionnaire, treating all with fairness, integrity and respect. Anonymity was guaranteed for all questionnaire participants through a study consent form each signed.

I acknowledge a better approach to the simple random sampling would have been to visit all of the thirty-six (36) states and the capital city to sample, but this was not possible due to time-constraint. However, the fairly large sample size (one hundred and eighty-four at ninety-five percent confidence level and maximum permissible difference of 0.58) used made up, somewhat, for this limitation.

2 LITERATURE REVIEW

Every business is involved in the buying and selling of goods and/or services. Online shopping centers sell goods to customers who request such goods over the internet and deliver the goods through available means. Menger (1976) in his book titled “Principles of Economics” argued that goods are things directed “to the satisfaction of our needs” (p. 52), and wants, I might add. In order to obtain goods, money, which is a measure of exchange value, according to Menger (1976), is exchanged for such goods at agreed prices. The concept of bargaining described by Menger (1976) usually does not apply with online shopping centers as goods are valued at given prices, based on combination of some factors like the cost of manufacturing the good, labour cost and desired profit. Menger (1976) recognised the various values prices can take depending on the nature of the market, for example, an isolated exchange, monopoly or bilateral competition.

Stone and Desmond (2007) pointed out in their book titled “Fundamentals of Marketing” that

“pricing...affects profit” (p. 266). This is because for any good sold, selling price, which is the value of the good to the seller, is the sum of the cost price (fixed and variable) and profit. A sale is made when there is an exchange of good or goods at given price. They further mentioned, “Its significance is further emphasized by price being the only element among the four marketing mix components that generates revenue” (Stone and Desmond, 2007, p. 266).

Ahlersten (2008), writing on microeconomics, explained that “demand curve shows what quantities of a good buyers are willing to buy at different prices” (p. 12), and this is when all other factors are kept constant (that is, *ceteris paribus*). This is because there are many other relevant factors which could affect demand. Similarly, there is a supply curve which shows quantities those who produce will be willing to sell (Ahlersten, 2008). Both the demand and supply curves can see movement along their curves when price changes, or shifts of the curves if other factors, besides price of the good, change (Ahlersten, 2008). There is a point in the market, where consumers are willing to pay a particular price for a quantity of goods, which is the price the producer is willing to sell those quantities, and this point is called equilibrium, as stated by (Ahlersten, 2008).

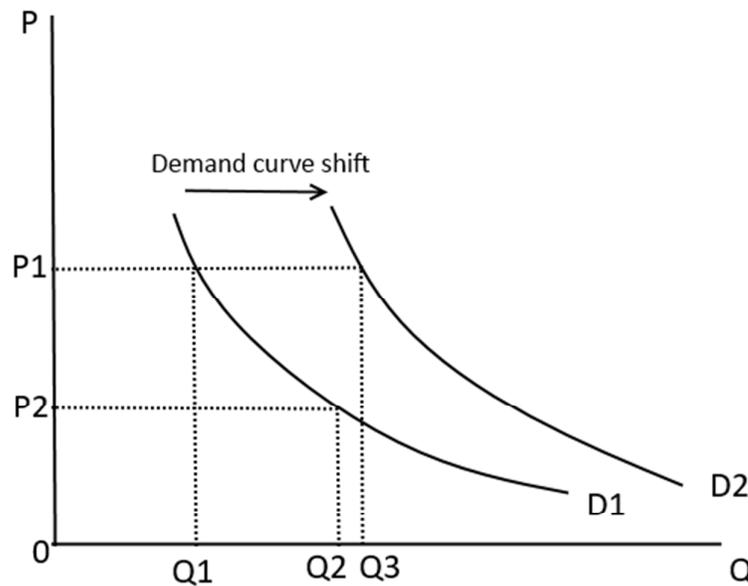


Fig 1: Demand Curve

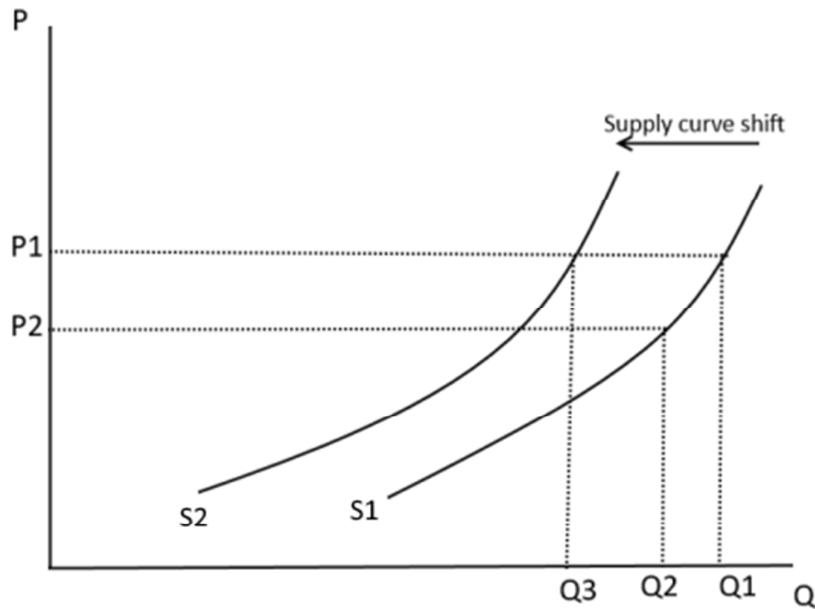


Fig 2: Supply Curve

Consumer theory helps to explain the demand curve. Ahlersten (2008) explained that consumers' restrictions, like taste and budget, make them make choices that tend to maximize their utility (level of satisfaction) of consuming a product (p. 21). The obvious scarcity of resources (whether money or raw materials) for both consumers and producers is a central theme in the study of economics.

Marketing is usually seen as part of a social system according to Stone and Desmond (2007). They corrected the notion some may have that marketing is all about advertising or selling. This is an over-simplified view. It is more than these and has evolved various perspectives like "social marketing, green marketing and relationship marketing" (Stone and Desmond, 2007, p. 2). Competing definitions for marketing between that by the British Chartered Institute of Marketing and the more complete one by Kotler were given. Kotler's definition puts marketing in proper perspective, by recognising and emphasizing the long-term factor of marketing. They quoted Kotler's definition as:

"The marketing concept calls for a customer orientation backed by integrated marketing aimed at generating long-run customer satisfaction as the key to attaining long-run profitable volume" (p. 5).

In using Alibaba, the world's largest online commerce company based in China, as an example, Yazdanifard and Li (2014) highlighted successful marketing strategies in addition to few other factors for successful online commerce. These factors may not be the only ones required for success and may need adaptation to whatever business environment they're deployed. Some of the factors identified include "competition pricing in setting the price of a product in comparison with its competitors", deliberate branding and constant improvement of online security (Yazdanifard and Li, pp. 4-5). Lee Y. *et al* (2009)

modelled the influence of online bookstore consumers' perception on their purchase intention as an example of influence of online consumers' perception and their results showed that "product perception, shopping experience and service quality have positive and significant influence on consumers' purchase intention" (p. 1).

Indeed, Rigby (2011) noted the awful experience of business startups of the dot-com era that imploded in the United States of America, a few decades ago. He noted the sluggish attitude to digital technology by traditional physical stores and though this attitude by these stores can be due to other factors, it is clear the burst of the dot-com bubble would have played a part anyway. Rigby (2011), however, observed also the lessons learnt from that era and the many positive factors that assure the growth of online shopping, including: vast selection to search from, comparable and affordable prices, convenience, free delivery in some cases, free returns, and product reviews and recommendations. Even with online stores based in Nigeria, there's deferred payment or payment on delivery. Additional impeding factors identified by Rigby (2011) to traditional retailers included: computer illiteracy, threat to existing store economics and incentives and "focus on the wrong financial metric" (p. 3).

Chukwu and Uzoma (2014) highlighted in their paper that Nigeria has online shopping centers that enjoy patronage despite some associated risks of internet shopping. They found that there exist different perceptions among online consumers but patronage is likely to steadily rise. This rise in patronage, in my view, can only be sustained if the issue of security is always given utmost attention. Nigeria has a large population to serve as a market for many businesses. The population has been rising steadily since the last census conducted in 2006 (NPC, 2009). The country's National Population Commission carried out the exercise for several reasons, including the provision of information for good governance and data for researchers. NPC (2009) put the combined population of both sexes for the thirty-six states of the country plus the capital city at one hundred and forty million, four hundred and thirty-one thousand, seven hundred and ninety people (140,431,790). Lagos was listed as the second largest state by population size with a figure of nine million, one hundred and thirteen thousand, six hundred and five (9,113,605).

3 RESEARCH METHODOLOGY

This research project is viewed from a positivist philosophy out of the many philosophical positions available (Cameron and Price, 2009). This stems from the nature of knowledge and knowing (epistemology). In line with the ontological view that realities largely exist independently of the observer and can be measured, as explained by Cameron and Price (2009), this research work was undertaken. A deductive approach using quantitative method was adopted. Primary data was gathered through questionnaire for the purpose of this research.

Simple random sampling was used to gather data from two states - Lagos and Ogun. Simple random sampling has many benefits in quantitative approach, including equal likelihood of each individual being selected for data-gathering and qualification of results for generalisation on the wider population. In order

to ensure the sample was representative, for Lagos, sampling was carried out in and around the University of Lagos, where people from different background and different parts of the country can be found. Sampling was carried out at a market for Ogun state. Both were combined to form the total sample size determined by the pilot scheme. Participants were briefed and questions answered for those who wanted to know more about the project during sampling.

A questionnaire, with mostly closed questions, was used to elicit data. Some of the advantages of using the questionnaire with closed questions is the ease of analysis and ease of answers from participants. A total of eight questions were contained in the questionnaire, with the option of answering fewer questions, depending on the conditional question at number four (4). Different types of questions were included in the design to capture different types of data, including ordinal and ratio data. Likert scales were used in one of the questions to determine the order of specific qualities.

A pilot scheme was used to gather data by using ten questionnaires initially. The analysis carried out on the ten returned questionnaires made it possible to determine the actual sample size (of 184) required for the research work (at a confidence level of 95% and maximum permissible difference D of 0.58). The tool for analysis of the data was WPS Spreadsheets, an application similar to Microsoft Excel. The online statistical calculator QuickCalcs by GraphPad (2017) was used to calculate p-values. Tables and diagrams were used to present and analyse results in order to present information more clearly and easily. These include pie charts and bar charts. T test and Chi-squared test were used to test the hypotheses to be able to decide whether to reject the null hypotheses and therefore accept the alternatives.

Possible problems that could have occurred during the research project, which were however avoided through best practices, included very low return rate of questionnaires, heavily skewed sampling exercise compared to the population and unrepresentative sampling size. It was ensured the questionnaire was simple to understand, quick to complete and without ambiguity. The right areas in the states, where proper representation can be found, were used to carry out the sampling and mathematical function was applied on the pilot scheme earlier carried out to give the number of the sample size to use, at the chosen confidence level of 95% and maximum permissible mean difference of 0.58.

4 DATA ANALYSIS AND RESULTS

One hundred and eighty-four (184) questionnaires successfully completed and returned were selected for analysis from the total of about one hundred and ninety-five (195) handed out. Four (4) questionnaires were invalid due to unanswered questions while seven (7) were unreturned. From the research hypotheses stated earlier in the introduction, two independent variables are identified - sales and online ease, while the dependent variable is profit. The first null hypothesis (in set 1) is a directional hypothesis, being a one-tailed hypothesis, that will allow one-tailed hypothesis testing (Cameron and Price, 2009). Meanwhile, the second null hypothesis is a two-tailed hypothesis.

The distribution of the number of times people bought online is assumed to follow a normal distribution, which many situations or distributions follow (Cameron and Price, 2009) and the following measures of central tendency were obtained, as given in Table 1 below. It was observed that the age group of most participants in the sampling is 21-40 years of age, equal number of participants (50%) had bought online as those who had not, most participants who had not bought online did not because they preferred physical shops, most participants who have bought online have done so six times, at least. Furthermore, most participants who have bought online found online ease to be good, most participants who have bought online found on-time delivery to be good and most participants who have bought online found product integrity to be very good. Additionally, the gender of most participants is female and most participants were students, though noteworthy that some identified themselves as being in multiple sectors.

Table 1: Measures of central tendency of online shopping survey

	Age Group (1-20U 2-21-40 3-41-60 4-61A)	No. Why? (1-No Internet 2-Prefer physical shops 3-No PC 4-Others)	Bought How Many Times? (1-Once 2-Twice 3-Thrice 4-4 Times 5-5 Times 6-Above 5x)	Ease (1-Very bad 2-Bad 3-Neutral 4-Good 5-Very good)	On Time Delivery (1-Very bad 2-Bad 3-Neutral 4-Good 5-Very good)	Product Integrity (1-Very bad 2-Bad 3-Neutral 4-Good 5-Very good)
Mean			3.565			
Mode	2	2	6	4	4	5
Median			3	4	4	4
Maximum			6			
Minimum			1			
Range			5			
Variance			4.446			
Standard Deviation			2.109			

The result of frequency distribution of “How Many Times” participants have bought online is given in Table 2 below and the pie chart depicting the distribution is given in Figure 3.

Table 2: Frequency distribution of how many times people bought online

How Many Times	Frequency
Once	19
Twice	24
Thrice	9
Four Times	2
Five Times	2
Six Times at least	36
Total	92

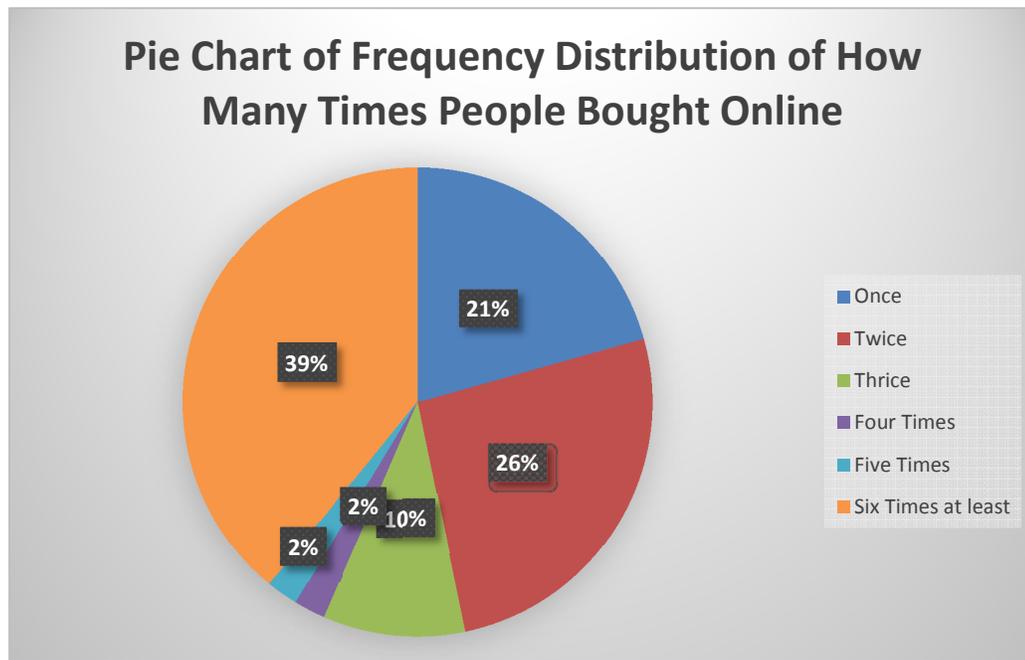


Fig 3: Pie Chart of Frequency Distribution of How Many Times People Bought Online

In a similar manner, the result of frequency distribution of online “ease” for participants is given in Table 3 below and depicted in Figure 4 as a pie chart.

Table 3: Frequency distribution of ease for online buyers

Online Ease	Frequency
Very Bad	0
Bad	0
Neutral	15
Good	44
Very Good	33

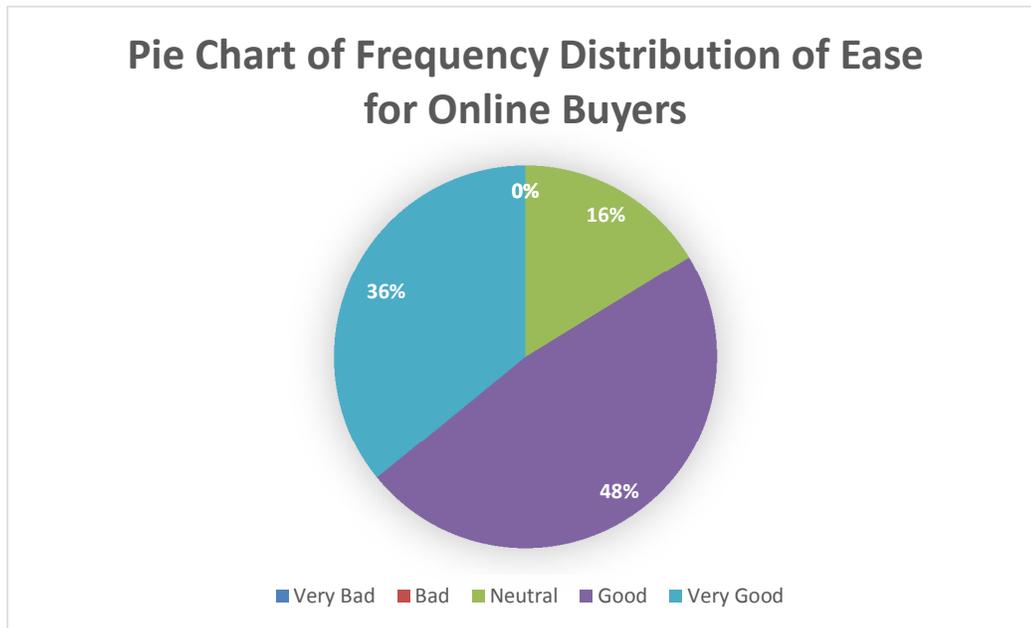


Fig 4: Pie Chart of Frequency Distribution of Ease for Online Buyers.

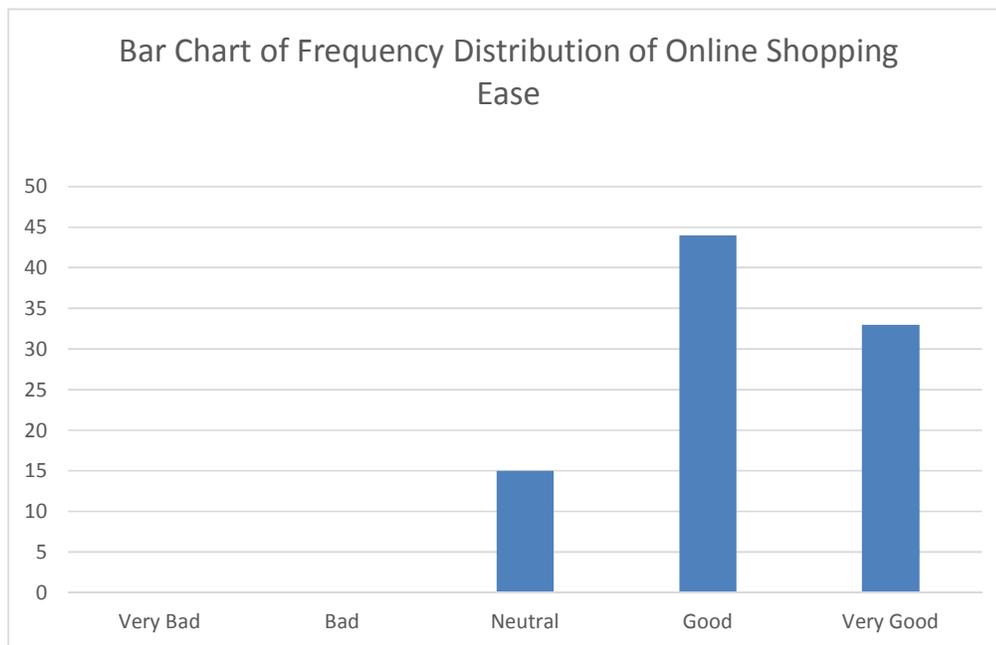


Fig 5: Bar Chart of Frequency Distribution of Ease for Online Buyers.

The data about how many times participants have shopped online are parametric and therefore suitable for T test (Cameron and Price, 2009). According to Statistics Solutions (2017), in calculating the T test, some of the assumptions necessary to be made include: the dependent variable should be of interval or ratio data-type, observations are independent of one another, the distribution follows a normal distribution, as stated earlier, and the dependent variable should have no outliers. The independence of the observations are reasonably assumed for this survey since probability random sampling was used without replacement

of participants. We can determine the one sample T test statistic using functions in WPS spreadsheets, given the following:

Sample Arithmetic Mean = 3.565

Sample Standard Deviation = 2.109

Mean of the population = 0.305 (to 3 decimal places)

T test statistic = 20.975

Degree of freedom = 183 (sample size - 1)

The mean of the population is derived from division of the product of 1.96 with sample standard deviation by the square root of the sample size (Cameron and Price, 2009, p.519). Therefore, using the online statistical calculator QuickCalcs by GraphPad (2017) with degrees of freedom of 183 and alpha (α) of 0.05 (for two-tailed test), the p-value is less than 0.0001, signifying extreme statistical significance. This means there is less than 0.01% chance of the result occurring by chance. Since the null hypothesis being tested is one-tailed, alpha in this case will be half: 0.025. Deciding if we should reject the null hypothesis requires we compare the p-value with alpha, that is, if p-value is less than or equal to 0.025 then we should reject the null hypothesis and since p-value equals less than half of 0.0001 (from two-tailed test), which is much lesser than 0.025, we reject the null hypothesis that says “An increase in sales does not lead to an increase in profits” and accept the alternative hypothesis that says “An increase in sales leads to an increase in profits.”, given the confidence level of 95%.

Online ease being ordinal data and non-parametric (Cameron and Price, 2009), Chi-squared test is conducted for the data. Table 4 below is used to calculate our Chi-squared test. The expected values in the table were obtained by dividing the total number of participants who have bought online (92) by the number of categories (5). The degree of freedom is thus four (4) since it is derived by number of categories minus one or the formula put forward by Cameron and Price (2009, p. 527). Again, alpha (α) is 0.05.

Table 4: Chi-squared derivation table for online ease of buyers

Ease Rating	Observed(O)	Expected (E)	(O-E) ² /E
Very Bad	0	18.4	18.4
Bad	0	18.4	18.4
Neutral	15	18.4	0.628
Good	44	18.4	35.617
Very Good	33	18.4	11.585
Total			84.630

Based on the online statistical calculator QuickCalcs by GraphPad (2017), Chi-square p-value obtained for Chi-square statistic of 84.630 is less than 0.0001, which is extremely statistically significant. This means there is less than 0.01% chance of the result occurring by chance. In deciding whether to reject the

null hypothesis, the same line of thought follows as with the Student T test. We compare the p-value with alpha, that is, if p-value is less than or equal to 0.05 then we should reject the null hypothesis (Cameron and Price, 2009) and since p-value equals less than 0.0001, we reject the null hypothesis that says “Online ease does not have impact on profits” and accept the alternative hypothesis that says “Online ease has impact on profits”, given the confidence level of 95%.

There is, therefore, correlation between increased sales and increased profit and online ease and profit, though we cannot claim causation. Indeed, the more people buy online, the more profit online shopping centers will make, *ceteris paribus*. This is so since profit is always included in price at which products are sold. And the easier it is for shoppers to buy online, the more they will return to buy, as seen from the information in table 3.

5 CONCLUSION

Before starting an online shopping center, or any business for that matter, it's beneficial to know factors capable of increasing the bottom line or profit, so that the business is viable. This research work had set out to answer the following question: “What factors make online shopping centers profitable in practice?”, particularly in Nigeria. And had the following primary objectives: to determine if an increase in sales leads to an increase in profits and if online ease has impact on profits. The objectives gave rise to the following set of hypotheses, with H_0 and H_1 representing null and alternative hypotheses respectively.

Set 1

H_1 : An increase in sales leads to an increase in profits.

H_0 : An increase in sales does not lead to an increase in profits.

Set 2

H_1 : Online ease has impact on profits

H_0 : Online ease does not have impact on profits

Various literature had established some of the foundational principles with regards to demand and supply in any given market and factors that aid marketing. A deductive approach, using quantitative method was used to test the hypotheses by employing questionnaire technique with statistical tools to analyse the data. The results of the data analysed showed that 50% had bought online while another 50% had not, most participants who have bought online have done so six times, at least, most participants who have bought online found online ease to be good, most participants who have bought online found on-time delivery to be good and most participants who have bought online found product integrity to be very good.

Additionally, with regards to the hypotheses we had set out to test, it was discovered that: the null hypothesis (H_0) that says “An increase in sales does not lead to an increase in profits” was incorrect and thus rejected while accepting the alternative hypothesis (H_1) that says “An increase in sales leads to an increase in profits.”, at confidence level of 95%, based on the highly statistically significant Student T test p-value of less than 0.0001, at an alpha of 0.05. Secondly, the null hypothesis (H_0) that says “Online ease

does not have impact on profits” was also incorrect and thereby rejected while accepting the alternative hypothesis (H_1) that says “Online ease has impact on profits”, at the confidence level of 95%, based on the highly statistically significant Chi-squared p-value of less than 0.0001, at an alpha of 0.05

REFERENCES

Ahlersten, K. (2008) *Essentials of Microeconomics*, [Online] Available at:

<http://zums.ac.ir/files/research/site/ebooks/economics/microeconomics-uk.pdf> (Accessed March 29, 2017).

Cameron, S. and Price, D., (2009) *Business Research Methods - A Practical Approach*, London: Chartered Institute of Personnel and Development, [Online]. Available at: <https://bookshelf.vitalsource.com/#/books/9781308885841/cfi/0!4/4@0.00:0.00> (Accessed: March 18, 2017).

Chukwu, B. I. and Uzoma, I. C. (2014) ‘Impact of Social Media Networks on Consumer Patronage in Nigeria: A Study of Jumia and Konga Nigeria Limited’, *European Journal of Business and Management*, 6(30) [Online] Available at: <http://iiste.org/Journals/index.php/EJBM/article/download/15614/15980> (Accessed: March 25, 2017).

Forouzan, B. A. (2013) *Data Communications and Networking*, New York: McGraw-Hill, 5th edn., [Online] Available at: www.mhhe.com/engcs/compsci/forouzan/frontmatter.pdf (Accessed: March 14, 2017).

GraphPad Software (2017) *QuickCalcs*, Available at: <https://graphpad.com/quickcalcs/PValue1.cfm> (Accessed: April 4, 2017).

Lee, Y., Huang, C., Chang, L. and Chen, C. (2009) ‘Exploring the Influence of Online Consumers’ Perception on Purchase Intention as Exemplified with an Online Bookstore’, *JGBM*, 5(2) [Online] Available at: www.jgbm.org/page/previous_V5-2.htm (Accessed: February 20, 2017).

Menger, C. (1976) *Principles of Economics*, [Online] Available at:

http://mises.org/sites/default/files/Principles%20of%20Economics_5.pdf (Accessed March 29, 2017).

National Population Commission (2009) *2006 Population and Housing Census of the Federal Republic of Nigeria*, [Online] Available at: <http://www.population.gov.ng/index.php/censuses> (Accessed: March 22, 2017).

Rigby, D. (2011) ‘The Future of Shopping’, *Harvard Business Review*, [Online] Available at:

<http://hbr.org/2011/12/the-future-of-shopping/ar/pr> (Accessed: March 22, 2017).

Sarah A. (2011) *Qualitative vs Quantitative Research*, Available at: <https://www.youtube.com/watch?v=ddx9PshVWXI>

(Accessed: February 25, 2017).

Statistics How To (2017) *T Test (Student’s T-Test): Definition and Examples*, Available at:

<http://www.statisticshowto.com/t-test/> (April 3, 2017).

Statistics How To (2017) *Chi-Square Statistic: How to Calculate It/ Distribution*, Available at:
<http://www.statisticshowto.com/what-is-a-chi-square-statistic/> (Accessed: April 4, 2017).

Statistics How To (2017) *P-Value in Statistical Hypothesis Test: What is it?*, Available at:
<http://www.statisticshowto.com/p-value/> (Accessed: April 4, 2017).

Statistics Solution (2017) *One Sample T-Test*, Available at:
<http://www.statisticssolutions.com/manova-analysis-one-sample-t-test/> (April 3, 2017).

Stone, M. A. and Desmond, J. (2007) *Fundamentals of Marketing*, London:Routledge, [Online] Available at:
http://197.14.51.10:81/pmb/GESTION2/MARKETING/Fundamentals_of_Marketing.pdf (Accessed March 29, 2017).

University of South Wales (2017) *Philosophy of Research: A Useful*, Available at:
<http://vle.southwales-online.com/mod/resource/view.php?id=22266> (Accessed: February 25, 2017).

University of South Wales, (2017) *Sampling*, [Online] Available at:
<http://vle.southwales-online.com/mod/resource/view.php?id=25511> (Accessed: March 12, 2017).

Yazdanifard, R. and Li, M. T. N. (2014) 'The Review of Alibaba's Online Business Marketing Strategies Which Navigate them to Present Success', *Global Journal of Management and Business Research: E-Marketing*, 14(7), [Online] Available at:
https://globaljournals.org/GJMBR_Volume14/4-The-Review-of-Alibabas-Online-Business-Marketing.pdf (Accessed March 14, 2017).

FINANCIAL CRISIS AND BALKAN PERSPECTIVES ON THE EU

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Abstract

In this paper we put emphasis on the financial crisis and prospects of the euro and the Western Balkans. Here are highlight the problems with the size of the status quo related to the euro-zone financial and political crisis, which will make a frame and describe the current crisis and its management in order to assess its consequences. They will be reviewed and the consequences for the Balkans, which includes problems with the Balkan EU perspective. It will also sketched what should be done in institutional terms in order to prevent future crises.

Part of the paper is devoted to assessing proposals for a European Monetary Fund, which would define a plan in the context of labor. It will eventually make a different perspective on issues that are still open and critical and which are important for crisis management in the euro zone, and will refer to the resolution of sovereign debt.

Keywords:

EU, Balkan crisis, finance, economics, politics

1. Introduction

The reasons for the financial crisis, which has grown into a global and economic crisis, have been rooted since the period of expansive growth in the period 2003-2007. During that period, developing countries recorded surpluses on the current balance of payments accounts, generating higher investment saving rates, which created the possibility of placing surplus domestic savings in developed countries. The crisis arose from the combination of unsustainable global macroeconomic imbalances and structural weaknesses of the financial system in the context of the overly loose monetary policy, liquidity, asset price growth and the growth of financial innovation and globalization, with a weak regulatory framework and weak financial sector control and non-financial institutions. All of this has affected the

underestimation of risk by market participants and regulators.

The financial crisis still remains a cause of concern in the Western Balkan countries and Europe as a whole. In moments when the economies of these countries recover from the recession of the global financial crisis, a new crisis threatens the region. Among other things, a large part of the financial sector in the Western Balkans is from Greek capital, and the economic interdependence between them is relatively high. The scale of the current debt problem is high. Most importantly, those countries that can act as guarantors for other countries is if they have a rating, that is, the highest credit rating such as: Germany, France, the Netherlands, Austria, Finland and Luxembourg. If the needs of Ireland and Portugal are considered to be the same size as Greece, it directly implies that the package may not be able to deal with Spain. If after Ireland and Portugal it turns to the EFSF, then, ultimately, this crisis can only prevent the ECB from preventing collapse in the financial market.

The first and foremost problem is related to the fact that the Euro zone is a monetary union, but not a fiscal or even a political union. When markets are close to collapse, creditors have little choice. Making a decision on how to rescue the private sector is one of the basic problems. On October 29, 2010, the European Council faced pioneering questions as to whether durable solutions to the crisis demanded by markets and indebted countries should be agreed in exchange for a guarantee mechanism sought by Germany. The existence of the crisis and the search for a realistic solution began with a huge crisis in the markets. Thus, the requirement to redesign the repayments without changing the present value or delay is sufficient to reach sustainable public finances (reconstruction). So on October 29, 2010, the European Council tensions between "North" and "South" put them back on stage. The aim of the policy is thus to prevent mistakes, and to make preparations for it. EMF can be permanently based on EFSF. From the available clauses for collective action, there was a need to clean the law.

It should be noted that there are several differences between the debt crisis and private defaults. Thus, dealing with the debt crisis is becoming more complicated because the instruments are much more limited than in the case of private debts. In the latter case, the problem can be resolved by abolishing the debtor's funds, which refers to corporations, the cancellation of the organization (Ginaviti et al., 2010, p.19).

2. Overview of Western Balkan countries

Western Balkan countries have undergone a major economic transformation over the last 15 years and many of them cannot be recognized if they look at where they were at the turn of the last century. After the 1990s, these countries opened up for global trade and turned increasingly towards exports, the role of the private sector was increasing, and the regulations that suppressed the development of the operation were abolished, and the institutions necessary to support the market system began to be built. Thus, banking systems were built-in some cases literally from scratch-with the help of foreign capital and knowledge. The results of these efforts are strong economic growth, a significant increase in income and living standards and the promotion of macroeconomic stability. However, with the process of structural transformation, it was lagging behind in the mid-2000s, facing personal interests and a process of fatigue on reform, and that reform process has remained unfinished. Until the global financial crisis, the driving force behind the growth in the Western Balkans was the huge global liquidity and unsustainable capital inflows, rather than the real progress in economic reforms. Clear evidence of weaknesses in the economic model of the region can be found in the extremely high unemployment rate, which has remained above 20% in many countries.

The growth in the post-crisis period in the Western Balkan countries was not impressive. Economic activity in the external environment has slowed down, but what stirs up the approximation of income levels in the rich economies of the European Union is the unfinished reform process. Even the rapid growth, by itself, may not be enough. It is also necessary for the Western Balkan countries to create new jobs to drive down the negative labor market trends that many people leave in disadvantage.

So it is of great importance to preserve the macroeconomic stability for continuous growth. It is necessary to preserve what has been achieved in the previous period in terms of low inflation. Countries facing high fiscal deficits and high levels of public debt should urgently address these issues; others need

to gradually and re-accumulate fiscal reserves. Everywhere in the region, it is necessary to invest in the sector of the exchangeable goods in order to encourage the export and reduction of the large foreign trade deficit and deficit of the accounts of the current transactions in the balance of payments. In addition, it is necessary to resolve the issue of the high level of problem loans, to re-grow the credit activity and to facilitate the recovery. The development of non-bank financial markets would help diversify the sources of funding.

Re-moving thorough structural reforms is a key priority for the economic policy for the region. Many inefficient state or societal companies need to be privatized; Competition problems, including too much bureaucracy and mismanagement, must be addressed so that the private sector can make progress.

3. EU Economic Policy Crisis Measures

Due to the strong financial integration of the Eurozone, like the possibility of easily transferring the crisis from one country to the rest, it was necessary to build a system for securing financial stability in the Eurozone and to respond with adequate policy. That policy included measures of crisis management and systemic measures that would ensure fiscal sustainability, long-term growth, monetary balance, revitalization and strengthening of the financial system, as well as providing assistance to the most vulnerable members.

So, the measures of crisis management are (European Commission):

- a) Financial aid
- b) Hit-and-run interception
- c) Macroeconomic stabilization
- d) European Economic Plan for Recovery
- e) Fiscal consolidation
- f) Big deficiency procedure
- g) Aid to endangered countries.

EU economic policy crisis measures - systemic measures are (European Commission):

- a) Strengthening surveillance
- b) Six correct balances for balance, SGP reforms, national fiscal frameworks, sanctions
- c) European Semester
- d) Integrated annual surveillance cycle
- e) Lasting Crisis Mechanism
- f) European Stabilization Mechanism
- g) Europe 2020
- h) A comprehensive strategy for growth, employment and social cohesion, a pact for the euro plus
- i) Strengthening financial regulation
- j) Regulation of hedge funds and rating agencies
- k) European System of Financial Supervisors
- l) European Systemic Risk Board
- m) Institution of European supervisors

4. Financial crisis in Balkan countries

The biggest challenge for the Balkans is that if an economic catastrophe occurs, they can to a small extent prevent economic shocks, social unrest, political unrest, extremist or populist political projects, or the promotion of interethnic tensions. Economic shocks in the Balkans also mean an increase in the shadow economy or an increase in some types of crime. In a wider European context, the crisis had at least three negative effects in the Balkans. First, preoccupied with economic problems, the EU has put the agenda for enlargement backwards. The fight against the crisis is the exhaustion of the resources of the Balkan governments and attention is far from the necessary membership reforms and advocacy activities. It was quite evident from the very beginning of the crisis that had a trend of re-nationalization of EU

policies. Since the EU is devising a new economic governance regime, it will undoubtedly put more emphasis on the economic and financial policies of the candidates. The EU is likely to try to prevent, directly or indirectly, the accession of countries generally considered economically weak and unable to comply with its newly created stricter rules.

The financial crisis is crucial for EU enlargement policies. The EU often at its highest level confirms its commitment to the European perspective of the Western Balkans provided that the criteria for accession are met. Thus, in order to deal with the crisis in the Western Balkan countries, a number of EU institutions and individuals made a number of talks on this topic. Thus, this fact also shows the firm determination of the EU and the Western Balkans to continue with the efforts for accession. A number of studies have shown almost all countries in the region were seriously affected by the financial crisis that began in 2009. Some of them, such as Macedonia, Kosovo and Albania, were initially less affected, as they are less integrated into the global economy. However, the widespread impact of the crisis on economic growth in the region was high, which reduced the flow of foreign direct investment sharply. So with the analysis of some cases, this also becomes a political problem at the EU level.

The social consequences of the crisis are seen in terms of unemployment, poverty rates, inequality of income and ethnic tensions, and so on. Thus, the analysis of the crisis is extremely important for further coordination within the context of European efforts and international policies. Thus, domestic political responses to the crisis are extremely important in terms of focusing on strategies for exiting the crisis, which requires the development of a long-term competitive capacity and sustainable economic and social development of the region towards European integration.

5. Balkan perspectives on the path for EU

The euro crisis is far from over-or perhaps because an emergency fund has been set up to protect European countries from bankruptcy. The economic prospects in the periphery are grim: profound political consequences pertaining to EU enlargement. The Balkan countries that are currently trying to join the EU and the eurozone as full members should also be considered. But here the question arises as to how many Balkan countries can expect from Europe in terms of money and political support. Some analysts believe that "European solvency is under attack in Europe" (Grgic, 2010). Today, besides Greece that is struggling with the crisis, the number of troubled economies is increasing, and there are a lot of skeptics about enlargement. So here comes the question of whether this is the end of the eurozone enlargement after the entry of Estonia (Belke 2010c). But with the end of the European enlargement, it may bring new instability to the Balkans, and the process of political and economic transformation for the EU is likely to be stopped (Grgic, 2010).

The Balkans also has economic losses from the recent financial and economic crisis. Unemployment rises, social assistance is reduced, and governments are trying to meet their debt obligations (Darvas, 2010). So if the prospect of a European future becomes unrealistic, Balkan politics has the potential to restore nationalism and radicalism in the minds of voters.

5.1. Recommended activities?

A stronger framework for budgetary and macroeconomic stability to prevent an increase in unsustainable private debt will certainly reduce the likelihood of future crises, but even the strongest framework will occasionally collapse and is likely to drag on for quite some time. The EU will then need a crisis-management framework for a member state that could jeopardize the stability of the euro and take over the remainder of the eurozone as a hostage. The key to crisis management is a strong financial system that is able to withstand systemic shocks (Amato et al., 2010). Various types of measures should also be used in strengthening the market discipline. Intermediaries and institutional investors should be sought by supervisors who will have to pay attention to warnings by the commission on the sustainability of state liabilities to members of the Eurozone. The rules for limiting excessive credit expansion and risk taking by financial intermediaries will also affect their willingness to fund risky sovereign debtors. Credible are credible promises, in case one member state becomes insolvent, that is, do not interfere with

the mitigation of its creditors. This promise must be based on two pillars (Amato et al., 2010).

The first pillar consists of the new banking rules for each bank, including large cross-border banks, in case of default and compensation in full to their creditors and shareholders - with the only exception of insured deposits. A strong incentive for bank managers and equity holders is to limit the risks and create a much stricter market share, also extending to independent borrowers. A good start would be to make it clear that banks will have to bear the losses that are hidden in their balance sheets and government deficits, to rescue their creditors. The second pillar should be provided by the European Monetary Fund (EMF) - a permanent extension of the current EFSF, which is now approved by the EC - approved with sufficient capital and access to market financing and the protection of the euro and the financial system of the Union from the collapse and the debtor crisis. His mandate should not include covering losses of public and private insolvency. The main task should be to mitigate the financial shocks of deposit financial institutions, and thus to preserve confidence. It could be given by a loan from member states that will establish strict conditionality, and will never save their credit banks as was the case with the Greek interventions. And this could help manage the outcome of large cross-border banks, which would provide capital to bridge the banks arising from liquidation, and abandoning shareholders and creditors to bear the full residue of losses.

5.2. Perspectives for Macedonia

Despite the great importance of the candidate country for domestic financing, external risks are also not negligible, since the liabilities of the banking sector countries range from 13% to 20% of total liabilities. These external financing risks only partially occurred during the recent financial crisis, and none of the countries has so far experienced such a sharp turn in external financing.

Macedonia's foreign financing is mainly channeled through foreign banks, which in the majority of cases in the EU have over 90% of the total assets. The presence of EU banks is generally considered a factor of stability for the banking system of the Western Balkan economies, with the credit that their lending is less limited by local shocks. However, the crisis underlined the possibility of two-way overflow, that is, the shocks originating from the home country of the parent banks could also adversely affect the subsidiaries.

However, experience has so far confirmed the strategic and long-term interest rates of the parent banks in the region. One indicator is that the share of external liabilities in the total liabilities has steadily increased in Macedonia during the crisis. This suggests that subsidiaries have not faced severe types of fines. Overall, the banking system in Macedonia has weathered the pressures in domestic and international sources of funding during the crisis, and this is quite good. For the donation with high level of capital contributed elasticity.

Liquid risks were also contained through the abundance of liquidity provision by central bank, in the same way as in the further deterioration of international liquidity and the conditions for possible restructuring further into the balance sheet of some Western European parent banks in the face of the current debt a crisis in the EU, which could lead to a sudden deterioration of the liquidity requirements for the banking systems in candidate countries. If the reduced availability or higher cost of external financing prevails and domestic savings remain stable, increased competition for retail deposits can raise cost financing and reduce net interest margins in the future, which could exacerbate the pressures caused by the extremely robust but recently deteriorated profitability. Observed as a whole, thus, the future economic and non-economic well-being in the Balkans will be largely dependent on the correct and sustainable institutional solutions of the EU debt crisis.

6. Conclusion

What is important for the countries of the Western Balkans is the fulfillment of the criteria for EU membership and the precisely defined sets of economic and political conditions. This includes the stable democratic institutions, the national market economy and the capacity for adopting and implementing

EU legislation. These criteria stem from the basic EU law, as well as from the fundamental values of the EU and the preconditions for the formation of post-national European identity. The ability to fulfill the obligations of membership with the implementation of the EU legal order is related to the technical conditionality.

The impact of the financial crisis on the European perspective of the Western Balkan countries is of crucial importance for the economic progress of these countries and a basic precondition for public support for EU integration. Hence, the reduction of the negative impact of the crisis on economies and the improvement of the economic situation of the population in those countries is vital for the support and their European perspective. At the same time, despite the difficult economic impact of the crisis on these countries, their economies and the living standard of their population can be said that these countries and the countries of the Western Balkans are provocatively oriented.

The impact of the crisis on the Western Balkan countries is followed by European and global trends but with a certain delay of one year behind the development of the crisis in the EU. In almost all countries, the real or projected GDP growth is still at stake. One constant problem is a very low level. Unsettled, all countries in the region need greater, and sustainable growth. The export is the one that stimulates further stimulation. In terms of their European integration and the global and financial crisis, almost all countries in the region are eager to invest more in securing macroeconomic stability, continuing to consolidate their fiscal policy and balancing their national budgets in order to improve negative trends arising from the problematic budget deficits in recent years; they need to maintain a prudent fiscal discipline, responsible banking and public finances. Also, these countries have to deal with the high unemployment rate and continue with structural reforms in the education, social sphere, and health systems, and to improve the level and skills of the workforce. The expansion of the private sector and the more effective protection of property rights can increase the competitiveness and ability of markets. Despite the fragile recovery, there is still a need for greater efforts and deeper reforms, which is confirmed by the analysis of country projections. However, the question remains whether these countries could be affected for the second time since the crisis, in view of the predictions that Europe might fall back into recession, or to repeat a second recession that will have a very negative impact on the economic situation of the Western countries Balkan.

Reference

1. AmatoH, G., HBaldwinH, R., Gros, D., Micossi, D. and Padoan, P.C., (2010), A new political deal for Eurozone sustainable growth: An open letter to the President of the European Council, VoxEU, 17 December 2010,
2. Annunziata, M., (2010), Moral hazard in the eurozone: a proposed solution, UniCredit, Munich, Economics & FI/FX Research, Economic Special, May 17.
3. Belke A., (2012), Financial Crisis, Euro perspectives and the Balkans, Journal of Economics and Business, Vol 15. No 1 &2 (17-35)
4. Bini Smaghi, L., 2010, Interview, "Die Zeit", No. 46, November 11.
5. Bradley, M., Cox, J.D. and Gulati, M., 2010, The market reaction to legal shocks and their antidotes: lessons from the sovereign debt market, *Journal of Legal Studies*, Vol. 39, No. 1: 289-324
6. Darvas, Z., 2010, Beyond the crisis – prospects for emerging Europe, Bruegel Working Paper 2010/06, Brussels, December
7. ECB, 2009, Strengthening macro- and micro-prudential supervision in EU candidates and potential candidates, Frankfurt/Main.

8. ECB, 2010, Financial stability challenges in EU candidate countries – Financial systems in the aftermath of the global crisis, Occasional Paper 115, Frankfurt/Main.
9. European Commission(2010), „Europe 2020“, A European strategy for smart, sustainable and inclusive growth“,
10. Fahrholz, C. and Wójcik, C., 2010, The European Council summit and the political economics of the EMU crisis, CEPS Policy Brief 217, Centre for European Policy Studies, Brussels, November.
11. Gianviti, F., Krueger, A. O., Pisany-Ferry, J., Sapir, A. and von Hagen, J., 2010, *A European mechanism for sovereign debt crisis resolution: A proposal*, Bruegel, Brussels, November 9.
12. Gros, D. and Mayer, T., 2010, How to deal with sovereign default in Europe: create the European Monetary Fund now!, CEPS Policy Brief, Centre for European Policy Studies, Brussels, May 17.
13. Haede, U., 2010, Legal evaluation of a European Monetary Fund, *Intereconomics*, 45(2): 69-72.
14. Krueger, A. O., 2002, A new approach to sovereign debt restructuring, Washington DC.
15. Lessenski M., (2010), The Western Balkans: Between the Economic Crisis and the European perspective, Balkan Trust for democracy, Sofia
16. Sadiku M., et al., (2014), The financial crisis in Greece and its impact on Western Balkan Countries, Springer International Publishing Switzerland.

Leader-Member Exchange and Job Performance: The Mediating Role of Delegation in Health Services Sector

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Abstract

Organizations are now improving the interaction between leaders and their subordinates in order to develop a relationship between both. This empirical paper analyzes the impact of Leader-Member exchange on the employee performance with the mediating role of deletion in the healthcare sector of Pakistan. This study hypnotized that Leader-Member Exchange have positive impact on job performance and delegation mediates this impact. Data was collected from 20 respondents including nurses, supervisors, consultants and Head of departments from one hospital. This study concludes that Leader-Member Exchange has positive and significant impact on job performance and delegation impacts the relationship between Leader-Member exchange and delegation. This study also provides Limitations and future directions.

Key words: Leader-Member Exchange, Job Performance, Delegation

1. Introduction

The Leader–Member Exchange (LMX) is a dyadic relationship-grounded tactic to leadership which has given attention on the two-way relationship amongst leaders and followers. It proposes that leaders mature an exchange with their subordinates working in their domain, and the quality of these leader-follower exchange relationships effects subordinates, decisions, job responsibility, job performance, delegation and access to resources. These relationships are founded on respect and trust and are repeatedly emotional relationships that encompass further than the latitude of occupation. LMX may boost positive occupational experiences and provides supplement to different managerial effectiveness.

In best occupational and business organizational situations, personnel do not give performance in separation but work together with coworkers, managers, supervisors, or clients to accomplish their job performance and assigned duties. Employees conflicting in their job performance are probable to vary in the approach they cultivate and sustain their relationships with different performers in their work place. According to LMX leader-member exchange theory (Gerstner, 1997), every employee set up a unique societal exchange relationship through his or her manager or supervisor, and the excellence quality of this leader-member exchange is commonly originate to be positively associated with job performance.

Delegation may be operative in some organizations but not in others. Research has up till now to study delegation in most organizational context. Research on relationships among delegation and job performance is further to some degree of limited that why leaders do or do not delegate powers (Bass, 1990). Conversely, in two research studies, Leana (1986, 1987) observed the significances of delegation in different organizations. Conclusion was that "delegation is subject to juniors' performance, both directly and as a function of subordinate competence and goal congruence" (Leana, 1986: 770). Nevertheless, there were no substantial relationships between delegation and subordinates' job satisfaction or satisfaction with supervision.

The purpose of this study is to examine the impact of leader member exchange on job performance and to evaluate delegation of power as a mediator between leader-member exchange and job performance in a Pakistani hospital.

2. Literature Review

In the organizations, Leadership has been used to achieve the goals of individuals, groups and organizations (Enders, 2007). Leadership is the ability to manipulate or influence others (Yukl, 1998). Many theories have been develop which focuses on the leader behavior or traits but only the one theory that focuses on the leader and subordinates relationship are the leader-member exchange theory (Dansereau, 1975). Leader-member exchange forms differential quality relationships that results in the interactions between leader and members. According to Leader-Member exchange, leaders develop high or low quality relationships with their subordinates. High quality relations with some subordinate have respect, trust and liking while low quality relations are limited to the jobs or employment contracts (Enders, 2007).

Leaders provide different benefits to their subordinates who have high quality relations with leaders; these benefits can be tangible or intangible that leads towards the higher job satisfaction of the subordinates (Gerstner, 1997) and in return subordinates give benefits of higher job performance and other behaviors that are in benefits of the leaders such as organizational citizenship behavior (Masterson, 2000). Intangible benefits of LMX include trust-based relationship (Bauer, 1996) and communication with

leader(Hofmann, 1999). Tangible benefits include empowerment (Liden, 2000), decision influence(Scandura, 1986)and salary progress(Wayne, 1999)and career advancement(Wakabayashi, 1988). These benefits create positive and encouraging environment in the organization that leads towards higher job satisfaction.

Job performance is defined as the acts and the behaviors by the individuals that help in achieving jobs and organizational goals(Rotundo, 2002). Job performance consists on both task performance and contextual performance (Borman, 1993). Task performance is specifically job oriented acts and behavior for the purpose of achieving job related goals (Ferris, 2001), (Rotundo, 2002)while contextual performance is non job-specific that is not formally demanded by the job but is inbuilt with all the jobs (Ferris, 2001), (Rotundo, 2002). Employee job performance can also described as an engagements stipulated and obligatory by the member of staff s work explanation and authorized, evaluated, andcompensated by the employer company. These types of arrangements of directions and practices made work performance expectable so that fundamental organizational responsibilities can be harmonized and measured instability toaccomplish organizational targets.

In LMX, leaders provide more trust and support to the subordinates with higher LMX. Employees with higher LMX are more committed with their work and organization and they invest more time and energy to their work than the employees with lower LMX (Dansereau F. G., 1975). According to the expectancy theory, employees with higher LMX should be more motivated because they are highly encouraged and appreciated by their supervisors and receive more rewards (HOWARD J. KLEIN, 1998).In LMX, leaders can impact the achievement of the goals through providing assistance, encouragement and advice and remove the obstacles in the way to achieve goals, employees who have higher quality of exchange with their superiors; they will perform effectively than the employee with lower quality of exchange with their supervisors(Vecchio, 1984).

Employees with higher LMX and higher commitment, they are expected to perform well than the employees with high LMX but lower commitment (HOWARD J. KLEIN, 1998). High quality LMX develops trust, loyalty and obligation traits in employees that enhance the task performance of the employees (Liden R. C., 1998). In LMX, Leader differentiate among subordinates, differentiation among subordinates is different in groups. In some groups, there is high level of differentiation that leader have high quality relationships with some subordinate but no with all and in other group leader form less common(Liden R. C., 1980), similar level of relationship with all his subordinates. Employees with higher LMX enjoys more support, training opportunities, resources and challenging task assignments than those with lower exchange with their leader Graen, & Novak, 1986.

Individuals respond negatively to LMX differentiation because of the unfairness in support and resources that leader provide differently across groups (Uhl-Bien, 2000). LMX differentiation results in decreasing employee efforts and lower performance. In another view, LMX differentiation develops higher

performance of the members. For example leader who assign easy task to the members who are not capable to handling the difficult tasks, and leader who assign challenging tasks to more capable subordinates will be appreciated by the members because he recognizes the abilities of the members and assign them task according to their abilities. In this way, LMX differentiation enhances the employee performance (ROBERT C. LIDEN^{1*}, 2006). The characteristic of relationships amongst manager and subordinates, frequently reviewed via (LMX) leader member exchange theory, and found substantial research consideration (Graen, 1995). The consequences of this academic research has revealed LMX is positively associated to anticipate consequences with augmented job performance (Gerstner, 1997). The circumstantial performance (Ilies 2007) Central and frequent issues in managerial sciences are that why staffs implement good in their assigned jobs. Accomplishment goalmouth theory and research propose that working employees' job performance be determined by their goal directions (Farr, 1993).

The ability with which employees transmit out their employment activities and job responsibilities seems to be a significant individual cause of disparity in the job performance (Borman, 1993). Supporter performance has been fascinating to researchers as it is paradoxically connected to leader member exchange, inrelations of evolving as positive (Kacmar, 2003) Numerous probable adversative special results may rise for (LMX) relations categorized by dissimilar or homogeneously below calculations of leader member exchange eminence.

Firstly, juniors who understand the rapport more satisfactorily than their manager may incorrectly accept as true that the superintendent will perform on their behalf when interrelating with others. Consequently, they may be overoptimistic about their standing in the organization establishment, and underrate their susceptibility to adverse magnitudes (e.g., being evaded for a promotion, layoffs, unfair compensation allocations, and political outbreaks by opponents). They might also be unsuccessful to take benefit of existing training, progressive, or transfer opportunities, depending on a wrong assumption that their manager is contented with the relationship (Atwater 1997). Second, dependents who appraise the association with their supervising manager as being less satisfactory than it really is may practice unsupported emotional state of anxiety that reduce from their job performance (Gerstner, 1997).

Such different negative sentimental responses may in turn consequence [in](#) eminent stages [of](#) staff renewal rate, nonattendance, and other extraction behaviors (Pelled, 1999). Lastly, individuals who precisely evaluate their affiliations with their managers as adverse may see their performance determinations as being separated from organizational compensations. Subsequently, they may encounter small stages of self-efficacy and smooth educated helplessness (Martinko, 1982) Leader member exchange theory (Dienesch, 1986) postulates that evaluated subordinates performance is positively linked to LMX theory. Explicitly, LMX theory proclaims that extraordinary superiority exchange relationships are categorized by high quantities of commitment, trust, and loyalty ascend from and provide the higher levels of participants' job performance.

When a relationship between leader and subordinate has been established, leader provides role-making

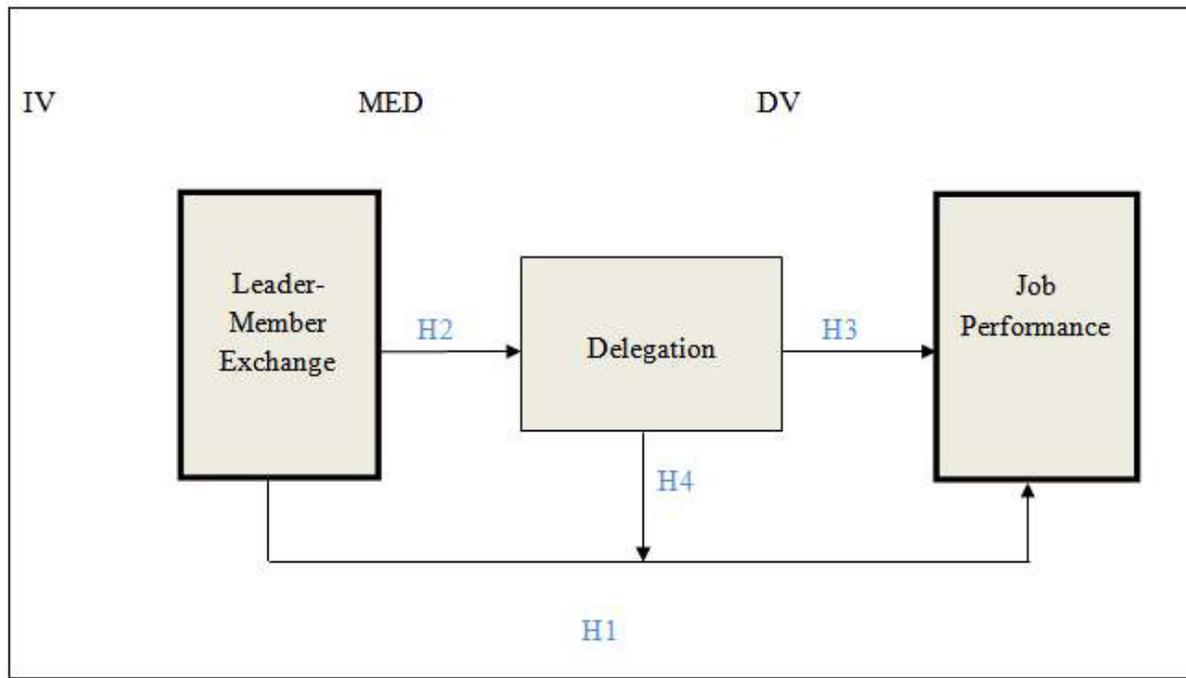
assignment to the subordinate with delegation to develop high quality LMX relationship (Liden et al., 1997). LMX provides the member functional interdependence in his works through delegation after the LMX relationship that maintain mutual beneficial LMX relationship (Graen and Scandura, 1987). In the literature, delegation is positively correlated with high quality LMX (Liden et al., 1997), (Scandura et al., 1986). Several studies have examined the relationship between job performance and delegation. Empirical research suggested that there is positive relationship between delegation and job performance, when an employee has given autonomy to make decisions and he/she is accountable for his/her decisions then that person will be more motivated to achieve higher performance (Leana, 1987). Delegation is an effective managerial element that is positively related with organizational outcomes such as decision making, increasing subordinate's motivation, reducing supervisor's workload and providing opportunities to subordinate of training and development for advancement (Yukl and Fu, 1999).

3. Hypotheses

This study is to test the relationship between Leader-Member exchange and job performance with the mediating effect of delegation. Leader-Member exchange is developed through the high quality relationship between leader and member. This interactive relationship gives authority and provides them delegation to members to make decisions that ultimately improves the job performance of the employees in the organization.

After studying literature, this study hypothesized that:

- H1:** There is a positive relationship between high quality Leader-member exchange and job performance.
- H2:** There is a positive relationship between high quality Leader-member exchange and delegation
- H3:** There is a positive relationship between delegation and job performance.
- H4:** Delegation mediates the relationship between high quality Leader-member exchange and job performance.



4. Methodology (Choice of Analysis)

It is a quantitative study and data is collected through questionnaire. Cross-sectional survey is used to collect quantitative data as data LMX, delegation and job performance is collected together at the same time. This study used simple random sampling to collect data. Target population of this study is the hospitals of Pakistan. Sample size of the study is 20 respondents. Participants of this study are the doctors, nurses and head of departments in Mansoor Hospital Lahore. Employee performance data was collected from the head of department, doctors and supervisor.

Of the 20 respondents, 54% were female and 46% were male. 2 (10%) of the respondents were 20-30 years of age, 8 (40%) were 30-40 years, 7 (35%) were 40-50 years and 3 (15%) were above 50. 15 (75%) were doing technical jobs in hospital, 3 (15%) were doing office work, 1 (5%) from staff and 1 (5%) from managerial position. 1 (5%) of the respondent job tenure was less than 1 year, 7 (35%) were 1-5 years, 3 (15%) were 5-10 years, 7 (35%) were 10-15 years and 2 (10%) were doing job in hospital for above 15 years.

This methodology is chosen due to contacts in the selected organization that made it easy for us to collect data and get the concerned answers to our questions.

5. Measures (Application of Analysis)

Leader-Member Exchange: Leader-member exchange was measured with **12-item Likert Scale** adopted from (Liden and Maslyn, 1998). Items of the LMX scale includes “I like my supervisor very

much as a person”, “My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question”, “I do work for my supervisor that goes beyond what is specified in my job description”, “I am impressed with my supervisor’s knowledge of his job”, “My supervisor is the kind of person one would like to have as a friend”, “My supervisor would come to my defense if I were ‘attacked’ by others”, “I am willing to apply extra efforts, beyond those normally required, to meet my supervisor’s goals for our organization”, “I respect my supervisor’s knowledge of and competence on the job”, “My supervisor is a lot of fun to work with”, “My supervisor would defend me to others in the organization if I made an honest mistake”, “I admire my supervisor’s professional skills”, “I do not mind working my hardest for my supervisor”.

Delegation: Delegation was measured by using **7-item Likert scale** developed by (Yuklet al., 1990). Items of delegation includes “My boss encourages me to determine for myself the best way to carry out an assignment or accomplish a task”, “My boss encourages me to take the initiative to resolve work problems on my own”, “My boss delegates to me the authority to make important decisions and implement them without his/her prior approval”, “My boss asks me to take primary responsibility for planning a major activity or project for the work unit”, “My boss delegates to me the responsibility for an administrative task previously handled by him or herself”, “My boss allows me to decide when to do the different work activities in my job”, “My boss lets me monitor the quality of my work and correct any errors or defects by myself”.

Job performance: Job performance was measure with **6-item Likert scale** adopted from (Hochwarteret al., 2006). Items of job performance includes “Finds creative and effective solutions to problems”, “Adapts readily to changing rules or requirements”, “Assumes a sense of ownership in the quality of personal performance”, “Strives to meet deadlines”, “Encourages coworkers to do more than what is expected”, “Creates effective working relationships with others”.

Responses of each variable were measured on **5-point Likert scale** including, strongly disagree, disagree, neutral, agree and strongly agree.

6. Results

SPSS has been used to interpret the results of this research to analyze the impact of Leader-member exchange on job performance with the mediation of delegation. Data was analyzed by using Simple linear regression technique to analyze the significance of the relationship between high quality LMX and job performance (H1). Mediation is used to analyze the effect of mediating variable delegation (H2). A correlation is used for measuring the significance of relationships of the variables, LMX and job performance (H1).

Reliability Statistics

Cronbach's Alpha	N of Items
.836	25

Table 1

Correlation

		Mean	Std. Deviation	N	1	2	3
Job performance	Pearson correlation	3.0583	.47841	20	1		
Delegation	Sig (2-tailed)	3.4714	.56973	20	.629**		
LMX	Pearson correlation	3.0542	.38167	20	.698**	.862**	
	Sig (2-tailed)				.003	.000	1
	Pearson correlation				.001	.000	
	Sig (2-tailed)						1

** . Correlation is significant at the 0.01 level (2-tailed).

b. List wise N=20

Table 2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.698 ^a	.488	.459	.35178
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a. Predictors: (Constant), LMX

Table 3

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.121	1	2.121	17.140	.001 ^b
	Residual	2.228	18	.124		
	Total	4.349	19			

a. Dependent Variable: Jobperformance;

b. Predictors: (Constant), LMX

Table 4

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	99.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
1	(Constant)	.385	.651		.591	.562	-1.488	2.257
	LMX	.875	.211	.698	4.140	.001	.267	1.484

a. Dependent Variable: Jobperformance

Table 5

Mediation

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	2.995	.878		3.413	.004
	Age	.079	.170	.154	.465	.648
	Gender	.154	.244	.165	.633	.536
	Tenure	.008	.112	.023	.070	.945
	Jobnature	-.128	.275	-.120	-.466	.648
2	(Constant)	.948	.812		1.168	.262
	Age	-.041	.125	-.081	-.332	.745

	Gender	.416	.186	.443	2.238	.042
	Tenure	-.035	.080	-.104	-.437	.669
	Jobnature	-.206	.197	-.193	-1.049	.312
	Delegation	.668	.169	.795	3.948	.001
	(Constant)	-.071	.871		-.082	.936
	Age	-.052	.112	-.102	-.468	.647
3	Gender	.442	.167	.471	2.650	.020
	Tenure	-.047	.072	-.138	-.651	.527
	Jobnature	-.175	.177	-.164	-.992	.339
	Delegation	.202	.267	.240	.757	.463
	LMX	.842	.397	.672	2.119	.345

a. Dependent Variable: Jobperformance

Table 6

7. Results in Terms of Hypotheses

After the correlation and regression analysis, we conclude that the first three hypothesis of this hypothesis are accepted that are:

H1; *There is a positive relationship between high quality Leader-member exchange and job performance.*

H2; *There is a positive relationship between high quality Leader-member exchange and delegation*

H3; *There is a positive relationship between delegation and job performance*

This study is also having control variables including age, gender, tenure, and job nature. Table 7 represents the mediation. In Table 7, the Sig value of LMX is .345 that is insignificant. This insignificance of the value indicates that there is mediation of delegation between LMX and job performance. So this study accepts mediated hypothesis i.e.

H4; *Delegation mediates the relationship between high quality Leader-member exchange and job performance.*

8. Discussion

The objective of this study was to analyze that high quality leader-member exchange can influence the job performance of the employees by delegating them to make their decisions. Results of the study provides strong support that leader-member exchange positively influence the job performance of the employees. Reliability refers to the circumstance in which the questionnaire can produce the exact result while

conducted under identical conditions. Cronbach's α is an index that measures internal consistency. The value of Cronbach's α varies from 0 to 1. The questionnaire is generally regarded as reliable when the coefficient is 0.70. The value of Cronbach's α in this study is .836 it indicates that questionnaire used to measure the impact of high quality LMX on job performance with the mediation of delegation is reliable. Table 2 provides the mean, standard deviation and correlation of all three variables. Mean value of LMX is 3.0542 and the value of standard deviation of LMX is.38167. Mean value of delegation is 3.4714 and the value of standard deviation of delegation is.56973. Mean value of job performance is 3.0583 and the value of standard deviation of job performance is.47841. N=20 that indicates the total observations of this study.

Table 2 Correlation that is used to analyze the strength of relationship between variables and direction of the relationship between variables. The Pearson correlation coefficient measures the strength of the linear association between two variables. The value of Pearson Correlation of LMX with the relationship of job performance (H1) is .698^{**}. The value.698^{**} indicates that LMX have positive and strongly significant relationship with job performance. Sig. (2-tailed) value of LMX with the relationship of job performance is .001<.01 that is the significant value for the relationship between LMX and job performance.

The value of Pearson Correlation of LMX with the relationship of delegation is .862^{**}.The value .862^{**} indicates that LMX have positive and strongly significant relationship with delegation. Sig. (2-tailed) value of LMX with the relationship of delegation is .000<.01that is the strongly significant value for the relationship between LMX and delegation.

The value of Pearson Correlation of delegation with the relationship of job performance is .629^{**}.The value.629^{**} indicates that delegation have positive and strongly significant impact on job performance. Sig. (2-tailed) value of delegation with the relationship of job performance is .003<.01that is the significant value for the relationship between delegation and job performance.

Table4, 5 and 6 are used to provide regression analysis of our data. Regression analysis measures the relationship between two variables. This regression table4, 5, 6 are used to interpret the relationship between LMX and job performance. In Table 4, Model Summary, the value of R is .698^a;indicates that job performance is .698dependent on LMX. R^2 indicates the percentage of dependency. R^2 is .488; it means that job performance is 48.8% depending on LMX. Remaining percentage might be some other variables that are not included in this study. In Table 6, Beta (β) value in un standardized coefficient, which is .875that indicates the dependency of job performance on LMX. Sig. value is .001 that is less than 0.05 and it indicates the dependency of job performance on LMX.

Leaders built different relationships with their subordinates, these relationships can bring some people closer to the leaders in such a way that leaders trust and support them. When leaders support and trust their members and give them enough authority to make their work decisions, this develops ownership in the members which increases motivation in the employees and they put more energy and time to make

their work output better and effective. Leader-Member Exchange found positively correlated with job performance according to first hypothesis of this study and delegation mediates the relationship between LMX and job performance. These finding indicates that leaders can enhance job performance of the employees by giving them authority and delegation so that they can make their work decision in order to improve the organizational performance.

9. Limitations and Future Recommendations

Limitations of this study are; shortage of time period, this is cross-sectional study and sample size is too low that is 20 participants. Response of the participants is reluctant because they did not agree to participate in this study due to shortage of the time they had. Another limitation of this study is this study is conducted in only one city of Pakistan and data was collected only from one hospital.

Goal directions are supposed to generate various perceptual-cognitive outlines for how different persons use tactic, understand, and retort to accomplishment circumstances. The excellence in (LMX) supports subordinate to be active on job in relations of in-role job functioning and inventive performance. We united the accomplishment of goal theory and leader-member exchange theory to recommend that interactive appliance of (LMX) has a positive impact on employees' performance in the job. Future study is needed and also encouraged to check the impact of LMX by using different constructs in different contexts by using larger sample.

10. Conclusion

This study concludes that Leader-member exchange enhances the job performance in the organizations. Managers can use delegation in the organizations to improve the job performance of the employees and LMX to improve the relationship with their subordinates. Organizations should develop such environment in which coordination among the leader and subordinate would be higher so that subordinates can easily discuss with their leaders.

(LMX) Leader-member exchange theory suggests that the eminence of relations that progress among work force and their leaders turn to be extrapolative of performance-linked and attitude of job consequences, particularly for employees. Leader-member exchange is irreplaceable amongst the theories of leadership in its emphasis on the dyadic interchange relations among manager and their juniors. Extraordinary - characteristic altercation interactions are categorized as in terms of respect, commitment and mutual trust that yield stimulus amongst an subordinate employee and supervisor little - slung - quality altercation relationship, are regarded as official, role-defined exchanges and principally prescribed exchanges that consequence in hierarchy-based downward.

Delegation is subordinate involvement in decision making and its completely individual phenomena and it assigns the responsibility of decision making to subordinate. By assigning decision making

responsibilities to the subordinates, a manager involves him into more important tasks and jobs. Delegation provides individual the independency to select specific course of actions to perform his job according to his will and it emphasizes on individual autonomy, achievement and development. According to social-exchange theory, members provide benefits to the organization in the form of higher job performance when they receive support, tangible and intangible benefits. Employees with higher LMX show higher performance to pay benefits to their leader.

Literature Cited

1. Atwater, L.E., & Yammarino, F.J. (1997). Self-other rating agreement: A review and model. *Research in Personnel and Human Resource Management*, vol. 15 (pp. 121–174).
2. Bauer, t. n. (1996). development of leader–member exchange: a longitudinal test. *academy of management journal* , 39,1538–1567.
3. Borman, w. a. (1993). expanding the criterion domain to include elements of contextual performance", in schmitt, n. and borman w.c. (eds),. *personnel selection in organizations*, jossey-bass, san francisco, , pp. 71-98.
4. Barron, k. e., &harackiewicz, j. m. 2000. Achievement goals and optimal motivation: a multiple goals approach. in c. sansone& j. m. harackiewicz (eds.), *intrinsic and extrinsic motivation: the search foroptimal motivation and performance*:229–254. san diego, ca: academic press.
5. Dansereau, f. g. (1975). a vertical dyad linkage approach to leadership within formal organizations a longitudinal investigation of the role making process. *organizational behavior and human performance*, , 13,46-78.
6. Dienesch, r. m., &liden, r. c. (1986). Leader–member exchange model of leadership: a critique and further development. *Academy of management review*, 11, 618–634.
7. Ferris, g. w. (2001). interaction of social skill and general mental ability on job performance and salary. *journal of applied psychology* , vol. 86,no. 6, pp. 1075-1082.
8. Farr, j. l., hofmann, d. a., &ringenbach, k. l. 1993. goal orientation and action control theory: implications for industrial and organizational psychology. in c. l. cooper & i. t. robertson (eds.), *international review of industrial and organizational psychology*: 193– 232. wiley.
9. Gerstner, c. r. (1997). meta-analytic review of leader–member exchange theory: correlates and construct issues. *journal of applied psychology* , 82, 827–844.
10. Gouldner, a. w. (1960). the norm of reciprocity: a preliminary statement. *american sociological review*, , 25, 161–177.
11. Hochwarter, w.a., witt, l.a., tread way, d.c. and ferris, g.r. (2006). "the interaction of social skill and organizational support on job performance", *journal of appliedpsychology*, vol 91, no. 2, pp. 482-489

12. Hofmann, d. &. (1999). safety-related behavior as a social exchange: the role of perceived organizational support and leader–member exchange. *journal of applied psychology*, , 84, 286–296.
13. Ilies, r., nahrgang, j., &morgeson, f. (2007). leader–member exchange and citizenship behaviors: a meta-analysis. *journal of applied psychology*, 92, 269–277
14. Howard j. klein, j. s. (1998). a field study of the influence of situational constraints leader-member exchange, and goal commitment on performance. *academy of management journal* , vol. 41, no. 1, 88-95.
15. Kacmar, k. m., witt, l. a., zivnuska, s., & gully, s. m. (2003). the interactive effect of leader–member exchange and communication frequency on performance ratings.*journal of applied psychology*, 88, 764.
16. Liden, r. c. (2000). an examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *journal of applied psychology* , 85, 407–416.
17. Liden, r. c. (1980). generalizability of the vertical dyad linkage model of leadership. *academy of management journal* , 23, 451–465.
18. Schweiger, d.m. and leana, c.r. (1986). "Participation in decision making", in locke, e.a.(ed), *generalizing from laboratory to field settings: research findings from industrialorganizationalpsychology, organizational behavior, and human resource management* heath & co, lexington, d.c., pp. 147-166.
19. Liden, r.c., sparowe, r.t. and wayne, s.j. (1997). "leader-member exchange theory: the past and potential for future", in ferris g.r. (ed), *research in personnel and humanresources management*, vol. 15, jai press inc, greenwich, ct, pp. 47-119).
20. Leana, c.r. (1987). "power relinquishment versus power sharing: theoretical clarification and empirical comparison of delegation and participation", *academy of management journal*, vol. 72, no. 2, pp. 228-233.
21. Liden, r. c. (1998). multi-dimensionality of leader-member exchange: an empirical assessment through scale development. *journal of management* , 24: 43–72.
22. Masterson, s. s. (2000). integrating justice and social exchange: the differing effects of fair procedures and treatment on work relationships. *academy of management journal*, , 43, 738–748.
23. Martinko, m. j., &Gardner, w. l. (1987).the leader/member attribution process.*academy of management review*, 12, 235–249.
24. Pelled, l. h., &xin, k. r. (1999). Down and out: an investigation of the relationship between mood and employee withdrawal behavior. *Journal of management*, 25, 875–895.
25. Robert c. liden^{1*}, b. e. (2006). leader-member exchange, differentiation, and task interdependence: implications for individual and group performance. *journal of organizational behavior* , 27, 723–746.

26. Rotundo, m. a. (2002). the relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: a policy capturing approach", .. journal of applied psychology , vol. 87, no. 1, pp. 66-80.
27. Scandura, t. a. (1986). when managers decide not to decide autocratically: an investigation of leader–member exchange and decision influence. journal of applied psychology , 71,579–584.
28. Uhl-bien, m. g. (2000). implications of leader-member exchange (lmx) for strategic human resource management systems: relationships as social capital for competitive advantage. research in personnel and human resources management , 18, 137–185.
29. Vecchio, r. p. (1984). the vertical dyadic linkage model of leadership: problems and prospects. organizational behavior and human performance, , 34: 5-20.
30. Wakabayashi, m. g. (1988). japanese management progress: mobility into middle management. journal of applied psychology , 73, 217–227.
31. Wayne, s. j. (1999). the role of human capital, motivation, and supervisor sponsorship in predicting career success. journal of organizational behavior, , 20, 577–595.
32. Yukl, g. (1998). leadership in organizations. englewood cliffs, nj:prentice hall.
33. Yukl, g. and fu, p.p. (1999). "Determinants of delegation and consultation by managers", journal of organizational behavior, vol. 20, no. 2, pp. 219-232.
34. Bass, B. M. 1990. Bass and Stogdill's, Handbook of Leadership (3rd Ed.). New York: Free Press.
35. Leana, C. R. 1986. Predictors and consequences of delegation. Academy of Management Journal, 29: 754- 774.
36. Leana, C. R. 1987. Power relinquishment versus power sharing: Theoretical clarification and empirical comparison of delegation and participation. Journal of Applied Psychology 72(2):228-233 · May 1987. DOI: 10.1037/0021-9010.72.2.228
37. Chester A. Schriesheim, Linda L. Neider and Terri A. Scandura Delegation and Leader-Member Exchange: Main Effects, Moderators, and Measurement Issues The Academy of Management Journal, Vol. 41, No. 3 (Jun., 1998), pp. 298-318.

OWNERSHIP AND MANAGEMENT STRUCTURE: COMPANY VALUE IN INDONESIA

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Abstract

The purpose of this study is to explain the effect of managerial ownership structure, Institutional Ownership, and Board of Directors, Independent Board of Commissioners, Audit Committee to the value of company in the LQ 45 index group for the period of 2014-2016. The sample of this research uses purposive sampling method of judgment sampling type. Inferential statistical analysis using Partial Least Square (PLS) causality analysis. The results showed that the ownership structure has a significant influence on the value of the company, but the management structure has no significant effect on the value of the company.

Keywords: Ownership Structure, Management Structure, Company Value

1. Introduction

Barde and Hamidu (2015) explain that corporate value is one of the fundamental factors considered by most investors, as it is important for companies to survive. In line with that observation, Kasmir (2010) also stated that with the increase in value the company will give the advantage of trust from financial institutions to get loans with soft requirements and also suppliers trust.

Husnan (2006) stated that in measuring company value can use Price to Book Value. The higher the value of Price to Book Value, the higher the investor's assessment of the company. Furthermore, Puteri and Rohman (2012) added that the value of the company can also be proxied by Tobin's Q. The result of measurement values using Tobin Q is a description of the welfare of shareholders, because the higher the value of the company, the more prosperous the owner.

In this research use LQ-45 index value. The LQ-45 index is the most liquid group of 45 stocks on the Indonesia Stock Exchange. The following table average company value LQ 45 period 2014-2016 is as follows:

Table 1
The Average of Company Values on LQ 45 in Indonesia Stock Exchange 2014-2016

No.	Variables	Year		
		2014	2015	2016
1	Stock Price	10.968,11	9.666,65	11.876,33
2	<i>Price to Book Value</i>	4,84	4,38	4,61
3	Tobin's Q	2,57	2,69	2,36

Source: Data processed

D'Souza, Megginson, & Nash (2007) argue that changing ownership leads to changes in corporate governance. According to Siebens (2002), corporate governance is the knowledge and art of balancing the distribution of interests of all stakeholders and making choices among various options with the support of all kinds of information to become responsible companies. Solomon and Solomon (2004) argue that corporate ownership structures have been perceived as having a strong influence on corporate governance systems, although many other factors influence corporate governance, including legal systems, cultural and religious traditions, political environment and economic events.

The results of Sukirni (2012) and Puteri and Rohman (2012) studies show that managerial ownership and institutional ownership have an effect on firm value, while Adnantara (2013) and Sadasiha & Hadiprajitno (2014) show that managerial ownership and institutional ownership have no effect on firm value Wahla, Shah, and Hussain, (2012) and Antari and Dana (2013) also show that managerial ownership affects company value.

Puteri and Rohman (2012) and Sadasiha and Hadiprajitno (2014) and Hariati and Rihatiningtyas (2015) show that the proportion of independent board of commissioners influences the value of the company. Barde and Hamidu (2015) show that the composition of the board of directors influences the value of the company. Sadasiha and Hadiprajitno (2014), and Hariati and Rihatiningtyas (2015) indicate that the number of audit committees does not affect the value of the company.

Research on the influence of ownership structure and management structure of the value of the company has done, including those that have been described. However, there is little research that examines the effect of ownership structure and management structure on the value of companies incorporated in the liquid group of companies in the stock exchange. It is therefore important and interesting to examine the effect of ownership structure and management structure on company value on the group of companies incorporated in LQ 45 group in Indonesia Stock Exchange.

2. Literature And Hypoteses

Theory of the firm by Jensen and Meckling (1976) have substance regarding managerial behavior, agency cost and ownership structure. These three substances will be created in a public company. Jensen and Meckling (1976) found that the company is "*legal fictions which serve as a nexus for a set of contracting relationships among individuals.*" The Company is the center of contractual agreements

between various parties namely shareholders, managers, suppliers and other parties including employees and workers. The parties try to accommodate their respective interests, causing conflict between them.

According to agency theory, the agent is the management in charge of managing the company and the principal is a shareholder. The agent (manager) has duties and responsibilities regarding the source policy of funds, the policy of the use of funds, dividend policy. While the shareholders (owners of the company) to supervise the behavior of the manager. Managers appointed by shareholders should act in the interests of shareholders. Managers tend to prioritize personal interests or act not for the benefit of shareholders (Jansen and Meckling, 1976).

Shareholders have a goal to maximize their wealth by looking at the present value of the cash flows generated by the company's investment. While the manager of the company has a goal to increase the growth and size of the company. Increased growth will provide an opportunity for lower and middle level managers to promote. In addition, managers can prove themselves as productive employees to gain more recognition and authority to determine costs. Increasing company size provides job security or reduces *lay-off* and increasing compensation (Jensen and Meckling, 1976). The principal (owner) can reduce the deviation of agent behavior (manager) by providing incentives by issuing monitoring fees. In general, the costs incurred by the principal to ensure the agent is willing to do shareholder wishes are called agency costs.

According to Lubis (2010) there are several alternatives to reduce agency cost. First, through increased ownership of the company's shares by management. Ownership of shares by management is an incentive for managers to be able to improve the performance of companies such as through the use of optimal debt, so it will minimize the cost of the agent. Second, increase the dividend payout ratio. This resulted in the unavailability of sufficient free cash flow and management was forced to seek outside funding to finance its investment. Third, increase funding by debt. Increased debt will decrease the amount of conflict between shareholders and management. Funding using debt will lower the existing excess cash flow within the company so as to decrease the likelihood of waste being made by management, disciplining and reducing opportunistic behavior of managers. Funding using debt also resulted in free cash flow generated by the company must be used to pay interest and debt installments, so that no idle cash funds that can be misused or used for various investments that are not productive. Fourth, institutional investors as monitoring agents.

Antari and Dana (2013) stated that the increasing of shares owned by managers through managerial ownership will motivate the performance of management because they feel they have a share in the company both in decision making and responsible for the decision taken because participate as a shareholder of the company so that management performance is better and have an effect on increasing company value. Sukirni (2012) argues that institutional ownership is important in monitoring management because with institutional ownership it will encourage more optimal oversight. Such monitoring will certainly ensure prosperity for shareholders, the influence of institutional ownership as regulatory agents is suppressed through their considerable investment in capital markets.

Sukirni (2012) and Puteri and Rohman (2012) conclude that managerial ownership and

institutional ownership have an effect on firm value, while Adnantara (2013), Sadasiha and Hadiprajitno (2014) conclude that managerial ownership and institutional ownership have no effect on corporate value. Wahla et. al. (2012) and Antari and Dana (2013) also concluded that managerial ownership affects the firm's value. Hence, the hypothesis:

H1: Institutional Ownership Structure (KI), Managerial Ownership (KM) has a significant influence on Firm Value.

Sadasiha and Hadiprajitno (2014) state that the greater the composition of independent board of commissioners, the better the oversight function. This is in line with the agency theory which states that the existence of independent commissioners is able to create a more objective climate in the interest of shareholders and other stakeholders. They also concluded that based on the agency theory, that the existence of the audit committee, the control of corporate activities will be more organized and systematized so that it can reduce the risk of agency conflict as a result of management's wishes.

Research on the influence of management structure on company value has been done by some researchers, among them Puteri and Rohman (2012), Sadasiha and Hadiprajitno (2014), Hariati and Rihatiningtyas (2015) show that the proportion of independent board of commissioners influences the value of the company. Barde and Hamidu (2015) show that the composition of the board of directors influences the value of the company. Sadasiha and Hadiprajitno (2014), Hariati and Rihatiningtyas (2015) indicate that the number of audit committees does not affect the value of the company. This research proposes hypothesis

H2: Management Structure Proxied with Board of Directors (DD), Board of Independent Commissioner (DKI), Audit Committee (KA) have significant influence to Company Value.

3. Method

The population in this study is a group of companies on LQ-45 listed on the Indonesia Stock Exchange. Sample selection using purposive sampling technique. The considerations in this study are as follows:

- a. The company must have been listed at the beginning of the 2014 observation period and keep the listing until the end of the 2016 observation period;
- b. The Company is incorporated in the LQ-45 index for three consecutive years from 2014-2016;
- c. The company selected as sample publishes the complete financial report during the period 2014-2016;
- d. The period of the financial statements used is the annual financial statements as of December 31.

Based on these criteria, we get the sample of this research as much as 28. This research uses the observation period 2014-2016, so that the sample for three consecutive years as many as 28 companies multiplied by 3 years of observation, which is 84 companies.

The research variables consist of three variables, namely managerial ownership (KM), Institutional

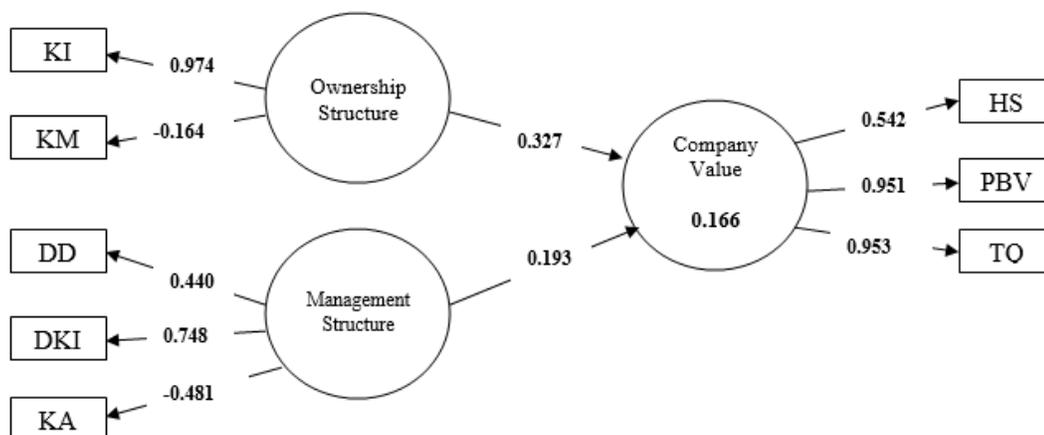
Ownership (KI), Board of Directors (DD), Board of Commissioner Independent (DKI), Audit Committee (KA) of company value. In the variable of ownership structure of 2 (two) reflective indicator that is managerial ownership and institutional ownership. In the variable of the management structure consists of 3 (three) reflective indicators namely, the proportion of independent board of commissioners, the number of boards of directors, and the number of audit committees. Furthermore, the firm's value variable consists of 3 (three) reflective indicators ie stock price, book price value, and tobins Q.

4. Discussion/Conclusion

The results of PLS testing on the relationship of indicators to variables and variables to the variables produce the following results:

In the PLS testing, the loading value of the indicator below 0.6 will be issued in the test. Therefore the test results in the next stage after performing the expenditure of the indicator with the loading value below 0.6 is as follows:

Figure 1: Loading Factor



Source: Data processed

The results of hypothesis testing as follows:

Table 2: Path Coefficients

Description	Original Sample	Sample Mean	Standard Deviation	T Statistic	P Values
Ownsrip Structur → Company Value	0.327	0.310	0.088	3.694	0.000
Management → Company Value	0.209	0.177	0.132	1.589	0.113

Source: Data processed

Based on the results of this PLS running it can be concluded that the ownership structure reflected by institutional ownership has a significant effect on the value of the company reflected by the value of book price (PBV) and tobins Q. This means any increase in institutional ownership in the ownership

structure in LQ 45 companies in the year 2014-2016 will influence the increase in the value of book prices and Tobin's Q at the value of the company. The results of this study are in line with the results of Sukirni (2012), Puteri and Rohman (2012). The results contradict the research of Adnantara (2013), Sadasiha and Hadiprajitno (2014) which conclude that institutional ownership has no effect on firm value.

The results of this study also concluded that the management structure reflected by the independent board of commissioners does not affect the value of the company reflected by the value of book prices and Tobin's Q. This means that the addition of independent board of commissioners does not affect the value of book prices and Tobin's Q. The results of this study are not in line with Puteri and Rohman (2012), Sadasiha and Hadiprajitno (2014), and Hariati and Rihatiningtyas (2015) which show that the proportion of independent board of commissioners influences the value of the company.

REFERENCES

- Adnantara, K. F. (2013). The Influence of Share Ownership Structure and Corporate Social Responsibility At Corporate Value. *Bulletin of Economic Studies*, 18(2), 107-112.
- Antari, D. A., & Dana, I. M. (2013). The Influence of Capital Structure, Managerial Ownership, and Financial Performance to Company Value. *E-Journal of Management Udayana University*, 2(3), 274-288.
- Barde, I. M., & Hamidu, I. (2015). Corporate Governance and Market Value of Firms in the Nigerian Chemical and Paints Industry. *Proceedings of 11th International Business and Social Science Research Conference*, (hal. 1-10). Dubai.
- D'Souza, J., Megginson, W., & Nash, R. (2007). The effects of changes in corporate governance and restructurings on operating performance: Evidence from privatizations. *Global Finance Journal*, 18(2), 157-184.
- Hariati, I., & Rihatiningtyas, Y. W. (2015). The Influence of Corporate Governance and Environmental Performance to Company Value. *National Symposium on Accounting XVIII* (hal. 1-16). Medan: IAI Global.
- Husnan, S. (2006). *Fundamentals of Financial Management* (5th ed.). Yogyakarta: STIM-YKPN Publishing and Printing Unit.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kasmir. (2010). *Introduction to Financial Management*. Jakarta: Kencana.
- Lubis, T. A. (2010). *The Influence of Ownership Structure on Financial and Operational Performance, Competitive Advantage Advantage Based on Accounting Size Size, and Market Performance (Study on BUMN Tbk Indonesia)*. Doctoral Program of Management Science Faculty of Economics and Business. Malang: Brawijaya University.
- Puteri, P. A., & Rohman, A. (2012). *Analysis of the influence of investment opportunity set (IOS) and corporate governance mechanism on the quality of profit and corporate value*. Faculty of Economics and Business. Semarang: Diponegoro University.

Sadasiha, Y. G., & Hadiprajitno, P. B. (2014). *The effect of corporate governance mechanism on company performance (Empirical Study on Company Property, Real Estate and Building Construction Listed on Indonesia Stock Exchange Year 2010-2012)*. Faculty of Economics and Business. Diponogoro University.

Siebens, H. (2002). Concepts and working instruments for corporate governance. *Journal of Business Ethics*, 39(1), 109-116.

Solomon, J., & Solomon, A. (2004). *Corporate Governance and Accountability*. Southern Gate, Chichester: John Wiley & Sons Ltd.

Sukirni, D. (2012). Managerial ownership, institutional ownership, dividend policy and debt analysis policy on corporate value. *Accounting Analysis Journal*, 1(2).

Wahla, K.-U.-R., Shah, S. Z., & Hussain, Z. (2012). Impact of ownership structure on firm performance evidence from non-financial listed companies at Karachi Stock Exchange. *International Research Journal of Finance and Economics*, 6-13.

EFFECT OF TRANSPORTATION INFRASTRUCTURE ON PAKISTAN'S ECONOMIC GROWTH: THE GMM APPROACH

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Abstract

The objective of the study is to examine the dynamic linkages between roads and railways transportation, gross capital fixed formation and their resulting impacts on Pakistan's economic growth by using an annual time series data from 1991-2015. The study employed some conventional cointegration tests, including time series unit root test and Johansen cointegration test for analyzing the variable's stationary series and long-run relationship between the variables respectively. Besides that, the study used robust least square regression technique that handles possible outliers in the endogenous and exogenous variables. The results confirm the first difference stationary series and having a long-run relationship between the variables. The results show that roads transportation has a positive effect while railways have a negative effect on country's economic growth. The results conclude that railways transportation required more policy oriented action plans to contribute in a given country by introducing fast railway trains, electrified trains, maintained safety and quality standards, better railway tracks, and comfortable seats, hence it may promote railways infrastructure for sustained economic growth.

Keywords:

Transport infrastructure, Economic growth, GMM estimator, Pakistan

Introduction

Infrastructure participate an important role in the development of Pakistan as in each country. According to the Tanveer, A., Manan, N. (2016), the development of physical infrastructure attempt a positive role in the development of economic growth of Pakistan. The Gross Domestic Product, Gross Fixed Capital Formation, Per Capita Health Expenditures, Hydral, Thermal and Nuclear energy, length of roads, Total Telephone Lines present in whole country and consumer price index, all these variables perform a significant contribution on the country growth, in the developing countries, the economic policies is necessary for economic growth that's why it is necessary to design these policies.

A proficient transport framework adds to monetary development by bringing down the household generation cost through convey crude material auspicious, coordinating markets, making business and correspondence joins among individuals. It likewise improves the generation of products and advances. This segment contributes government incomes throughout taxes and responsibility on creation and imports the parts of vehicles and vehicles itself, oil based goods.

Economic development patterns of the economy of Pakistan truly recommend that a managed way of development alongside a sound Economic development is a vital condition for setting exact monetary arrangements and focused on objectives for development which is very upheld by proficient usage of approaches, foundation enhancements and social division standards. Where adequate condition for above depends on inward lawfulness, administration and outer stun to the economy (Mahmood et al., 2008).

The connection among infrastructure and growth is one of the main problem for her studying to researcher and also for policy makers due to which number of researcher are addicted on the study of this relationship and It is on the grounds that the part of framework is essential for supported development over the long haul. The linkage of framework and development has been all around dissected by numerous specialists (Prud'homme, 2005; Fourie, 2006). Globally transport is one of the aspects of shifting each characteristic of human life, from trade to manufacturing, education, research, entertainment, culture and security. Pakistan has developing efficient and well integrated transport. This will develop as a focused economy, upgrading exchange execution and subsequently accomplishing economical development.

Transportation networks are frequently observed as one the primary factor affecting development at different levels. Domestic and cross border transport infrastructure can reduce the trade cost and leads cost directed to increase trade and investment. This lead to increase the foreign direct investment across borders which increases the comparative advantage of both locations and also increases the regional trade. Increase in trade and growth are therefore increase the resources available to government to invest in different ways like education, health, social protection system or in different social activities.

The World Bank (1994) while giving imperative understanding into framework progression from an accessibility, proficiency and financing perspective, just barely characterized foundation as open administrations which included power, energy, water; and open works which included basically roads and different methods of transportation, for example, rail, port and avionics.

Transport infrastructure includes different variables like road network includes roads and national high way authority and railway civil aviation authority like airports and shipping and ports like Gawadar port, Qasim poet, Karachi port. These infrastructure indicators to transport are spread over the world but most commonly are roads and railways. Because it creates multiple effects and allows investors of other countries to invest. Pakistan has comparatively

Better roads compare to an average Economic cooperation organization. Air transport is expensive and water transport is not available in every region so it is not used in transport infrastructure. The CPEC project is one step towards greater connectivity for both countries (china, Pakistan) with greater focus on connectivity via roads, railways, energy pipelines and social linkages for more trade and investment.

This paper carry different sections, the first section describe the introduction of this study, second section consist of some of the previous study called as literature review, third section includes the list of variables which is used in this paper to find out the impact of infrastructure growth on economic development and the last and fourth section consist of results which show that how much infrastructure effects the gross

domestic product of country.

Objectives of the Study

The objective of the working paper is given as follows

- 1: check that how the infrastructure effect the economic growth in developing country such as Pakistan
- 2: To verify the optimistic and significant impact of infrastructure on economic growth

Literature Review

It can be gauged from worldwide practice taking after key territories might be documented counting: Trade assistance, better accessibility and reduction in cost by way of transport and association, likewise advancing conjecture occasion through formation of Special Economic Zones (SEZ). Expansively, transport and association is shifting each part of human life, from switch over to assembling, training, and question about, encouragement, culture and confrontation.

Rudra P.Pradhan et al studied the effect of transportation (road and railway) infrastructure on economic growth in India (2013) from the time period 1970-2010. They found on variables GDP, TINF, GDCF. They found a strong and statistically significant impact of TINF, GDCF on GDP on India. They analyze the model by applying ADF unit root test Vector error correction model.

Brian at el examined that how projects regard to transportation can have superior or lesser effects on production concentration and output, by effecting different feature of market admittance in regions with unlike business blend (2012). They used variables population and total employment. And the results shows the significant on population and total employment on country's output. OLS and 2 stage least square methods were analyzed.

Strikingly, paying little respect to the previously mentioned arrangement center, an accord stays slippery concerning the impacts of transportation framework on financial development at the total intensity (Pereira and Andraz 2012). The prospective involvement between monetary perfection and transport skeleton interest in the United States has been at the front line of scholastic altitude beginning discussed over decades. Various observational examinations propose that supervision uses on open structure, as well as transportation, can probably build profitability or decrease cost of generation and, henceforth, percentage increases financial enlargement (e.g., Aschauer 1989, Munnell 1990, Fernald 1999, Glass 2008, Pereira and Andraz 2012). Then again, others locate no huge impact or even unenthusiastic effect on nationwide profitability (e.g., Holtz-Eakin 1994, Garcia-Mila et al. 1996, Ewing 2008). Despite the differing points of view in regards to transport framework venture, the current worldwide monetary subsidence has urged some approach creators to use this financial strategy apparatus to advance monetary recuperation, strengthening the civil argument about the monetary effect of foundation speculation.

Niloy Bose and Emranul Haque (2005) explained the consistent relationship between public investment in transport and communication and economic growth. And they used the variables GDP, transport and communication (T&C) investment for developing countries from the time period 1970-89. It had strong

and significant impact of T&C investment on GDP. They used formal and informal causality tests. To date different examinations highlights the significance of transport framework in business, neediness decrease, and expanded efficiency and so on. There is some writing accessible that gives evaluations to the framework need of South Asia. For example, Zhai, (2010) anticipated the assessed interest for financing foundation interest in 29 Asian nations in view of their improvement prospects. As indicated by Zhai (2010), if that request is meeting, the total load of foundation in these nations will increment by 93.3 percent by 2020, with most elevated increment in control part framework taken after by transport and correspondence foundation. So also, the aggregated decrease in exchange costs by 2020 because of the interest in framework amid 2010-2020 period is 14 percent and 12.9 percent of aggregate exchange an incentive for China and Pakistan, separately.

Michael Iacono et al investigated the relationship between growths of road networks and regional development (2014) from the time period 1988-2007. Variables which are used by them are roads employment and population. Granger causality test was used and results were significant.

Weiguo Lu (1996) estimated an economic growth equation cross sectional from the time period 1990-94. Variables were used real aggregate output, labor input, inputs of capital, exports and public infrastructure. The Geometric growth approach was used. Result shows that transportation had positive impact on regional economic growth.

Abhijit Banerjee et al (2012) determined the effect excess to transportation networks on regional economic output in China. Wage rate, GDP, labor endowment and capital were used as variable. Empirical strategy was used and results shows that transportation had moderate effect on per capita GDP level and no effect on per capita GDP growth.

David Levinson et al (2009) determined that improvement to transportation network especially in growing areas; tend to have impacts on local land markets its mean that improvement to a link the network grants economic growth.

Manabu et al (2006) researched the effect of cross-fringe transport infrastructure on the economies of the Greater Mekong Sub district (GMS) Cross-outskirt and household transport framework together can lessen exchange expenses and lead straightforwardly to expanded trade and investment. Decreased trade expenses can likewise in a roundabout way incite expanded foreign direct investment (FDI) chiefly through intra-firm vertical joining crosswise over outskirts that endeavor the similar points of interest of every area, and thusly, such increments in FDI can additionally increment local trade, adding to the immediate impact of trade development. Trade, FDI, GDP was the factors. Results reason that accessible information the improvement of cross-outskirt framework in the GMS has assumed an imperative part in cultivating expanded trade inside the GMS economies.

Aihu Wang et al (2014), infrastructure improvement conveys along trade and investment chances to the

beforehand detached areas. It additionally gives access to products, administrations, and work openings in these areas through the multiplier impact. In this paper, a panel data is utilized utilizing the unit root, co integration, and Granger Causality (GC) model to test whether causal linkages between financial development and transportation infrastructure exist at national and provincial level. The discoveries recommend that in the short run, there is no causality among the two factors at the national level, nonetheless, a unidirectional causality from financial improvement to infrastructure investment exists over the long run and transport infrastructure had significant positive effect on economic development.

Natasha Manan (2016) examined the effect of infrastructure on financial development of Pakistan utilizing Jarque-Berra, White test and Breusch-Godfrey technique for the period (1974-2011). Generally speaking the outcome uncovers that GDP, GDGF, Total Road Lengths, and CPI assume a critical part in economic development in Pakistan. Results demonstrated that infrastructure improvement in Pakistan has noteworthy positive commitment to development. The experience from Pakistan proposes that it is important to outline a economic policy that enhances the infrastructure and gross fixed capital formation for reasonable financial development in developing nations

Data and econometric modeling

. In this paper following functions are used:

$EG = f(TINF, GDGF)$

EG= Economic Growth

TINF= Total transport infrastructure.

GDGF=Gross domestic capital formation

GDP is used is as a proxy of EG and Road, railway transport is for TINF and GDGF for infrastructure investment.

EG is dependent variable depending upon TINF and GDGF

In this term paper variables used for empirical analysis are as follows:

GDP

Gross domestic product is the financial estimation of all the completed merchandise and ventures delivered inside a nation's fringes in a particular day and age.

Roads

A wide path driving starting with one place then onto the next, particularly one with an extraordinarily arranged surface which vehicles can utilize.

Railways

A network of tracks with the trains, organization, and personnel required for its working.

GDGF

Capital formation is a term used to depict the net capital accumulation amid a accounting period for a specific nation, and the term alludes to increases of capital stock, for example, hardware, devices, transportation resources and power.

Data source of these variables is Economic Survey of Pakistan. Sample period includes 25 years from 1991 to 2015. Gdp is dependent variable depending upon independent variables such as road transport, railway transport and Gdof.

Results

Table 1: Descriptive Statistics

	GDP	RAILWAYS	ROADS	GFC
Mean	1.50E+11	8012.375	247095.7	2.53E+10
Median	1.55E+11	7791.00	258282.0	2.54E+10
Maximum	2.16E+11	8775.00	263942.0	3.20E+10
Minimum	8.39E+10	7791.00	170823.0	1.76E+10
Std. Dev.	3.85E+10	416.0887	24240.05	4.15E+09
Skewness	-0.030566	1.317106	-1.935398	0.057678
Kurtosis	1.809701	2.734769	5.531509	1.664594
Observation	40	40	40	40

Table 1 show the mean value of GDP is 1.50E+11 and the median is 1.55E+11. The maximum and minimum value of GDP is 2.16E+11 and 8.39E+10 with the standard deviation of 3.85E+10. The statistic shows the positive skewed values. The mean, median, maximum and the minimum value of railways is 8012.375, 7791.00, 8775.00, and 7791.00 with the standard deviation of 416.0887. The mean and median value of roads are 247095.7 and 258282.0. The maximum value of roads is 263942.0 and the minimum value of roads is 170823.0 having the standard deviation of 24240.05. Gross capital formation having the mean value of 2.53E+10 and the value of median is 2.54E+10. The gross capital formation's maximum and minimum values are 3.20E+10 and 1.76E+10 with the standard deviation of 4.15E+09.

Unit Root Test

GDP

Variable	ADF statics	Critical value at 5%	P value
GDP	-3.968068	-1.956406	0.0004

As it is clear from the ADF test criteria that the series is integrated of order one I (1).

ADF Test Statics is greater than critical value at 5% level of significance; also Probability value is less than 0.05 so series is stationary at first difference.

Roads Transport

Variable	ADF statics	Critical value at 5%	P value
Road Transport	-7.685097	-1.956406	0.0000

As it is clear from the ADF test criteria that the series is integrated of order one I (1).

ADF Test statics is greater than critical value at 5% level of significance; also Probability value is less than 0.05 so series is stationary at first difference.

Railways Transport

Variable	ADF statics	Critical value at 5%	P value
Railway Transport	-4.690416	-1.956406	0.0000

As it is clear from the ADF test criteria that the series is integrated of order one I (1).

ADF Test statics is greater than critical value at 5% level of significance; also Probability value is less than 0.05 so series is stationary at first difference

Capital Formation

Variable	ADF statics	Critical value at 5%	P value
GDCF	-2.552396	-1.956406	0.0132

As it is clear from the ADF test criteria that the series is integrated of order one I (1).

ADF Test statics is greater than critical value at 5% and level of significance; also Probability value is less than 0.05 so series is stationary at first difference.

Figure 1: Plots of Level Data

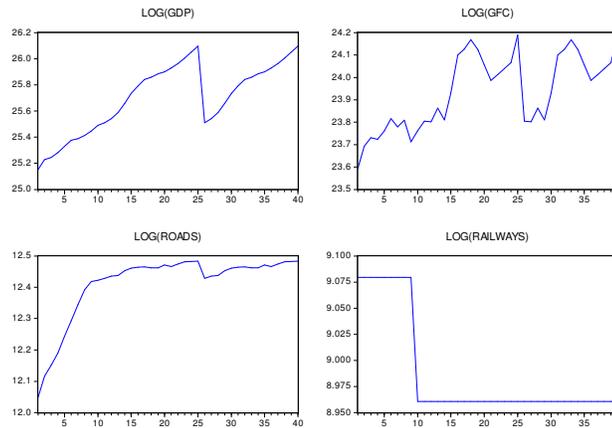


Figure 1 shows the plots of level data for ready reference.

The present empirical examination begins with checking stationarity of the series variables. The ADF unit root test has been connected to inspect the stationarity of the time series data. The evaluated consequences of unit root show that no time series data seem stationary at level frame. This implies factors are non-stationary in their level shape and recommends to be checked at higher request of incorporation. In this paper we examine that variables are stationary at first difference and characterizes as integrated of order one I (1).

Table 2: Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob. **
None *	0.757097	81.50649	47.85613	0.0000
At most 1	0.259533	27.73289	29.79707	0.0850
At most 2 *	0.226950	16.31486	15.49471	0.0376
At most 3 *	0.157959	6.533230	3.841466	0.0106

Table 2 shows the estimation of co-integration for dependent variable says GDP. Results show that there is a co-integration relationship present in those two variables which are used in this paper. Result of co-integration rank test shows that there are two variables which exhibit a co-integration function. Both eigenvalue and trace statistic prove that co-integration is present in both variables which means that these variable exhibit a long run relationship. These two co-integration equation are able to apply policy

inference on their self.

Table 3: GMM Estimates

Dependent Variable: LOG(GDP)

Method: Generalized Method of Moments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(GFC)	1.097869	0.138017	7.954606	0.0000
LOG(ROADS)	0.476867	0.187969	2.536946	0.0155
LOG(RAILWAYS)	-0.724649	0.174248	-4.158721	0.0002
R-squared	0.883218	Mean dependent var		25.70194
Adjusted R-squared	0.876905	S.D. dependent var		0.269837
S.E. of regression	0.094672	Sum squared resid		0.331623
Durbin-Watson stat	0.596253	J-statistic		7.717477
Instrument rank	5	Prob(J-statistic)		0.021095

Table 3 shows the descriptive result of our model. By that data which is collected from state bank of Pakistan, Generalized Method of Moments is used to examine the effect of GDP on GFC, ROADS and RAILWAYS. According to GMM technique, there is a positive relationship between GDP, GFC and ROADS which means that infrastructure development of roads plays a vital role in the economic growth of country. 1% increase in the infrastructure of road lead to increase in GDP by .47%.the previous study also shows the significance positive result of road development and GDP. According to Barro (1990), the positive and significant impact on GDP either that impact is direct or indirect. This impact is depending on which type of infrastructure is it. Straub (2011) studies the macro-level study which shows the positivity and negativity percentage decision of GDP affected by infrastructure. More than half of the studies reveal positive relationship of economic growth and infrastructure and negative results was only 6 percent.. The study shows contradictory result of railways. Insignificant results crop up while showing the impact of railways on economic growth of Pakistan. The network of Pakistan Railways comprises of 7,791 route kilometers, 455 Locomotives, 1,732 passengers coaches and 15,164 freight wagons. Pakistan Railways is persevering through the most exceedingly terrible emergency since its

arrangement chiefly because of train deficiencies. Traveler and cargo benefits generously declined amid the earlier years. This is obvious from the Table 4 underneath that gross earning of Pakistan Railways has declined amid the earlier years.

Table 4: Number of passengers and Earnings Received

Subject	2012-13	2013-14	2014-15	2015-16 (july-march)
Passenger's number(millio)	41.96	47.69	52.90	39.55
Earning (million Rs)	18070.00	22800.22	31924.00	26436.38

Due to over matured infrastructure and moving stock, heightening of dollar swapping scale and a sponsored railroad toll prompted an expansion in consumption for maintained prepare operations. With the topping of over draft by Government of Pakistan in 2007, the accounts required for expanded support cost couldn't be borne by the Railways. At long last, the sharp increment in the pay and annuity prompted preoccupation of all the income profit to this compulsory installment at the cost of operational and upkeep prerequisites. Government of Pakistan (GoP) has assigned 41.0 billion in PSPD for the FY 2016 for the improvement intercessions in Pakistan Railway.(Pakistan economic survey 2015-2016).

Conclusion

This study examines the presence of nexus between transport infrastructure and economic growth using the time period 1991 to 2015.this analysis is deemed to be vital in the effective design and implementation of transport policies in the rapidly growing economy. Using ADF unit root test and Generalized Method of Moments techniques the following results includes

Road transport and GDP has positive impact there are some reasons due to which road transport and GDP has positive relation. First, road transport is one of the basic inputs in production process; hence increase in road transport expands the economic growth. Secondly, higher disposable income has increased demand for better road infrastructure for household entertainment.

Railway transport and GDP has negative relation the reason behind this is that our railway transport are not used properly and it is time consuming and also have not the proper time of arrival. GDCF and GDP has positive relationship this implies that when income of the individuals increased and a part of increased income contributes to the gross domestic capital formation and when Gdcf increases it expands the socio-economic investment that raises the economic growth.

References

- Economic Survey of Pakistan 2014-2015.
- R.p Pradham, T.p Bagchi (2013) “Effect of Transportation Infrastructure on Economic Growth in India: The VECM Approach” *Research in Transportation Economics* 38(2013) 139-148
- N.bose, M.E Haque (2005) “Causality between Public Investment in Transport and Communication and Economic Growth” *Journal of Economic Development* vol30 no 1.
- M. Iacono et al (2014) “Mutual Causation in Highway Construction and Economic Development” University of Minnesota.
- W.L kumo (2012) “Infrastructure Investment and Economic Growth in South Africa: A Granger Causality Analysis” *African Development Bank Group* 160(Nov, 2012).
- W.Lu (Aug 1996) “Public Infrastructure and Regional Economic Development: Evidence from China” *Pacific Economic Papers* 258(Aug, 1996).
- M.G Boarnet (March 1996) “The Direct and Indirect Economic Effects of Transportation Infrastructure” *The University of California Transportation Center* 340(march1996).
- M.Faujimura et al (2006) “Impact of Cross Border Transport Infrastructure on Trade and Investment in the GMS” *ABD Institute* 48(March 2006).
- A. Banerjee et al (2012) “On The Road: Access to Transportation Infrastructure and Economic Growth in China”
- B.Alstadt (2011) “The Relationship of Transportation Access and Connectivity to Local Economic Outcomes: A statistical Analysis” *Alstadt and Weisbrod*.
- Pereira, A.M. and J.M. Andraz. , (2012) “On the Regional Incidence of Highway Investments in the USA.” *Annual of Regional Science* 48819-838.
- Aschauer, D.A. (1989) “Is Public Expenditure Productive?” *Journal of Monetary Economics* 23 (2),177-200.
- Munnell, A. and L.M. Cook. (1990) “How Does Public Infrastructure Affect Regional Economic Performance?” *New England Economic Review* Sep/Oct, 11-33.
- Fernald, J. (1999) “Assessing the Link between Public Capital and Productivity.” *American Economic Review* 89 (3),: 619-638.
- Glass, A. (2008) “Public Expenditure on Transport and Macroeconomic Performance: Empirical Evidence from the United States.” *International Journal of Transport Economics* XXXV (1), 121-143.
- Holtz-Eakin, D. (1994) “Public-sector Capital and the Productivity Puzzle.” *Review of Economics and Statistics* 76 (1), 12-21.
- Garcia-Mila, T., T.J. McGuire, and R.H. Porter. (1996) “The Effect of Public Capital in State-level Production Functions Reconsidered.” *Review of Economics and Statistics* 78 (1), 177-180.
- Ewing, R. (2008) “Highway-induced Development Research Results for Metropolitan Areas.” *Transportation Research Board* No. 2067,:101-109.
- Tanveer, A., Manan, N.(2016). Impact of Infrastructure on Economic Growth of Pakistan. *Journal of Economic Research*, 2(1),1-12
- Mahmood, T., Hafeez-ur-Rehman and S. A. Rauf, (2008). Evaluation of Macro Economic Policies of Pakistan (1950–2008). *Journal of Political Studies*, 14, 57-75
- Prud’homme, R. (2005). Infrastructure and Development; Lessons of Experience.*Proceedings of the 2004 Annual Bank conference on Development Economics*, 153-181.

- Fourie, J. (2006). Economic Infrastructure: A Review of Definitions, Theory and Empirics. *South African Journal of Economics*, (74), 530-556.
- World Bank (1994) World Development Report. Washington D.C.
- Straub, S. (2011). Infrastructure and Development: A Critical Appraisal of the Macro-level Literature. *The Journal of Development Studies, Taylor and Francis Journals*,47(5),683-708.
- Barro.,(1990).government spending in a simple model of exogenous growth, journal of political economy,Vol.98,No.5,part2

NON LINEAR ANALYSIS OF CASH CONVERSION CYCLE AND PROFITABILITY: AN EMPIRICAL EVIDENCE FROM PAKISTAN

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Abstract

This paper investigated the relationship between working capital management and firm's profitability for a sample of 17 listed cement sector companies of Pakistan by controlling for unobservable heterogeneity and possible endogeneity, for the period from 2007 to 2016. Empirical results show that there is a concave (nonlinear) relationship between working capital level and firm's profitability. Our results direct that firm's working capital in cement sector of Pakistan have an optimal level of 33 days that balances the risk and returns and, hence, maximizes firm's profitability. Therefore, we suggest based on our empirical findings that management should avoid adverse effects on firm's profitability owing to additional financing expenses, loss of sales and loss of discounts for early payments to suppliers.

1. Introduction

In modern developing economies construction sector is considered to be the most effective accelerator of economic growth and employment. Cement industries are one of the allied sectors boosted by construction activities. Rapid urbanization in Pakistan has created a backlog of 7.5 million housing units which is accumulated by 0.3 million per year (World Bank, 2009). The global financial crisis of 2008 had severely shattered the economic activities in Pakistan; the current revival of cement industries after 5 years has raised the industry hope of a long-awaited turnaround. Pakistan cement industry dispatched 27.99 million tons of cement in which 21.30 million tons of local market and 6.69 million tons of export (Economic Survey of Pakistan, 2013-14). Pakistan cement industry has a potential to export cement to neighboring countries like Afghanistan, India, UAE and Central Asian States.

To achieve the long run survival of firm, it is necessary for financial managers to manage not only the long-term operations, but also manage the firm's short-term operations efficiently and effectively. Well-organized use and management of resources in the short term is a key area of financial affairs.

Effective management of working capital, current assets to meet its ongoing obligations, produces good results.

Working Capital Management (WCM) is defined as the “management of a company’s current assets and current liabilities” (Schall and Haley, 1991). According to Smith (1980), working capital management is highly important because it affects both firm’s profitability and risk, and, consequently, its value. Low investment in working capital (aggressive working capital management policy) is related to higher return and higher risk, while higher investment in working capital (conservative working capital management policy) is supposed to have lower returns and lower risk. Working capital management consists of all the methods and procedures which eliminate the risk of loss of sales and lack of ability in paying short term liabilities and also prevent over investment without profitable use in these assets, through planning and controlling short term assets and ongoing liabilities (Lazaridis & Tryfonidis, 2006).

Previous studies on working capital management and firm profitability like Jose (1996), Shin & Soenen (1998), Deloof (2003), Rehman and Nasir (2007), Karaduman et al. (2010) and Ray (2012) suggests that low level of investment in operating working capital improves the firm profitability, however, ignore the high risk associated with the low level of investment in working capital. For example, the risk of loss of sales and disturbance occurs in the production process due to low investment in working capital. There might be a level of working capital at which a reduction in working capital affects a firm’s profitability negatively (Baños-Caballero et al., 2012; Nurein et al., 2015; Wang & Li, 2015). There might, be nonlinear (concave) relationship between the working capital and the profitability of the firm’s, rather than linear. This study empirically tests the nonlinear relationship between the working capital management and firm’s profitability in order to test the trade-off between risk and return.

Earlier work on working capital management and firm profitability demonstrate competing views, high investment in working capital allows the business firms to increase their volume of sales and obtain higher discounts for early payments made to suppliers and, hence, may improve the value of the firm (Deloof, 2003). However, high investment in working capital increase firm financing expenses. These additional financing expenses may lead towards bankruptcy. These positive and negative effects lead to the prophecy of concave (inverted U-shaped) relation between firm profitability and investment in working capital. According to the findings of Wang (2002) higher values firms in Japan and Taiwan hold lower investment in working capital than the lower values firms.

High investment in inventories and extending trade credits might improve the profitability of the firm by several reasons. Blinder and Maccini (1991) argued that high investment in inventories can prevent interruptions in the production process, supply costs, price fluctuations and loss of business resulting from scarcity of products. According to Schiff and Lieber (1974) it allows business firms to prevent themselves from high production costs resulting from high fluctuating in production. Extending trade credit might increase sales of the firm; it also strengthens the relationship between supplier and customer (Ng et al., 1999). According to Shipley & Davies (1991) and Deloof & Jegers (1996) it is an important criterion of

selection when it is difficult to differentiate products. However, high investment in working capital negatively affects the firm's profitability, keeping extra inventories supposes certain cost, for example cost of insurance, where house rent and security expenses. High investment in inventories needs to be financed, over investment in working capital increases financial and opportunity costs (Kim & Chung, 1990). High investment in working capital lead firm toward bankruptcy and financial distress. According to Deloof (2003) high investment in working capital means locked huge amount of funds, which results in hampering the firm ability to take up valuable projects.

It is expected that there is a trade-off exist. Subsequently, it is expected that there is an optimal level of working capital, which balances these benefits and cost and maximizes the value of the firm. Deviation from this optimal level from both sides negatively affects the firm profitability.

Cash conversion cycle is used as a comprehensive measure of working capital in the literature. For the manufacturing firms cash conversion cycle can be defined as, "a cycle in which company purchases raw material (inventory), sell finished goods on account and then collect receivable from customers." In other words cash conversion cycle is a model focuses on the time span between when the firm makes payments to creditors and when it receive cash from customers resulting from credit sales of goods (Brigham and Ehrhardt, 2005). Longer cash conversion cycle required larger investment in current assets.

$$\text{Cash Conversion Cycle} = \text{RCP} + \text{ICP} - \text{PDP}$$

Where, Cash Conversion Cycle = Measure of working capital

RCP = Receivable Collection Period

ICP = Inventory Conversion Period

PDP = Payable Deferral Period

The rest of this paper is organized as follows. Research objectives and hypothesis for the study are discussed in section 2. Section 3 describes research methodology. Results are discussed and analyzed in section 4. Section 5 concludes.

3.1 Hypothesis

Model design to test the nonlinear relationship between working capital management and the firm's profitability presents a breakpoint which can be obtained by taking the first derivative of the GOP (gross operating profit) with respect to CCC variable and putting the answer of first derivative equal to zero".

By solving we obtained the breakpoint is $CCC_{i,t} = [-\beta_2 / 2\beta_3]$. The main hypotheses will be verified

that there is an inverted U-shaped relationship between working capital management and the firm's profitability, and, hence, there is an optimal level, if this should be a maximum. This is maximum only if the answer of second partial of firm's profitability with respect to cash conversion cycle is $(2\beta_3)$ is negative. So, the co-efficient of β_3 should be negative.

4. Methodology and Data

The data consists of annual observations of all cement companies listed on Karachi Stock Exchange from

2007 to 2016. Annual reports will be collected from website of Karachi stock exchange and from websites of companies. Correlation analysis will be used to test the statistical significance of the association. Generalized method of moment (GMM) proposed by Arellano and Bond (1991) will be used to check the relationship between working capital management and firm's profitability. GMM is useful in the following circumstances:

- The presence of lag. Dependent variable in the model like $GOP_{i,t-1}$ which give rise to autocorrelation problem.
- Dynamic panel data where time dimension (T=7) is short and companies dimension (N=17) is larger.
- It also helpful in solving the endogeneity problems if causality runs in both directions.
- It provides better estimation when demographic and geographic characteristics (fixed effects) are correlated with independent variables.

4.1 Research Model

The following model will be used to examine the nonlinear relationship between dependent, independent and control variables:

$$GOP_{i,t} = \beta_0 + \beta_1 GOP_{i,t-1} + \beta_2 CCC_{i,t} + \beta_3 CCC^2_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 LEV_{i,t} + \epsilon_{i,t} \quad (1)$$

$$NOP_{i,t} = \beta_0 + \beta_1 NOP_{i,t-1} + \beta_2 CCC_{i,t} + \beta_3 CCC^2_{i,t} + \beta_4 GROWTH_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 LEV_{i,t} + \epsilon_{i,t} \quad (2)$$

This study uses two proxies to measure the profitability of the firm. Where;

GOP is calculated by gross operating income [(sales – cost of goods sold)/ total assets]

NOP is calculated by gross operating income [(sales – cost of goods sold – Dep. & Amortization)/ total assets].

CCC and CCC² are the operating variables used in this model. Cash conversion cycle (CCC) is calculated by (accounts receivable/sales) x 365 + (inventories/cost of goods sold) x 365 – (accounts payable/ cost of goods sold) x 365.

SIZE is measured as the natural logarithm of sales.

GROWTH is measured by the ratio (sales₁ – sales₀) / sales₀.

LEV (Leverage) ratio of debt to total assets.

5. Results and Analysis

Before we present and discuss the main regression results, it would be useful to shed some light on the descriptive statistics to get some understanding about the data. Table 1 reports descriptive statistics of the data to be used in the analysis.

Table 1: Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min	Max
GOP	119	0.1242	0.1582	-0.5109	0.8350
Lagged GOP	119	0.0218	0.1377	-0.5950	0.8350
CCC	119	-45.7532	52.1218	-288.4715	90.8501
Growth	119	0.1437	0.3131	-0.8700	0.9800
Size	119	3.6665	0.4793	2.1622	4.8053
Leverage	119	0.6135	0.3770	0.1814	2.9797

Table 1 shows descriptive statistics of all the variables under consideration. Descriptive statistics includes the number of observation, mean, standard deviation, minimum and maximum values of the variable used in this study. It is observed that average gross operating profit (GOP) is 12.42% with a minimum of -51.09% and maximum of 83.50%. The standard deviation is 15.82% displaying an extensive variation in gross operating profit across the listed cement firms in Pakistan.

CCC (cash conversion cycle) which is used as a proxy of working capital management shows negative mean value -45.75 with a standard deviation of 52.12. Negative mean of cash conversion cycle shows that Cement Sector firms working in Pakistan finance their working capital through delay in accounts payables. Growth has a mean value of 14.37% with a minimum value of -87% and maximum value is 98%. Its standard deviation is 31.31%. Size (log of sales) has a mean of 3.66 with minimum of 2.16 and maximum of 4.80. Its standard deviation is 0.47. Leverage shows that an average 61.35% debt has been used by the cement sector firms to finance their assets. Its standard deviation is 37.70%.

In the next step, the correlation matrix is shown to check the possibility of the presence of high correlation. Table 2 shows the correlation between the variables.

Table 2: Correlation Matrix

	GOP	GOP (-1)	CCC	SIZE	GROWTH	LEV
GOP	1.0000					
GOP (-1)	0.5563***	1.0000				
CCC	0.1824**	0.0716	1.0000			
SIZE	0.6364***	0.1843**	0.0664	1.0000		
GROWTH	0.2629***	0.3753***	-0.0381	0.3194***	1.0000	
LEV	-0.1262	0.0837	-0.073	-0.1697*	0.1706*	1.0000

Notes: GOP, Gross operating income; CCC, Cash conversion cycle; SIZE, size of the firm; GROWTH, the growth of sales and LEVERAGE, the leverage.*** Indicates 1% significance. ** Indicates 5% significance and * Indicates 10% significance.

We present in Table 2 the correlation between all the variables used to examine the relation between

working capital and firm’s profitability. The results show that GOP (-1), Size, and growth have a high positive and significant relationship with GOP. The positive correlation between growth and firm’s profitability indicates that more growth opportunities improve firm’s profitability. Leverage shows a negative correlation with firm’s profitability. Size has a significant positive correlation with gross operating profitability. The higher value in correlation matrix is 0.6364 which is between GOP and size, indicating that there is no multicollinearity problem. Further, we have also provided results for the presence of the possibility of multicollinearity. Table 3 contains results for the tests of multicollinearity.

Table 3: Multicollinearity Test (VIF and Tolerance Factor):

Variable	VIF	Tolerance Factor (1/VIF)
CCC 2	3.47	0.288413
CCC	3.26	0.307179
Size	1.39	0.717014
Growth	1.33	0.753319
Lag. GOP	1.19	0.840863
Leverage	1.11	0.899638

Variance Inflation factor and Tolerance Factor for each independent variable used in our model are checked to ensure that whether or not there is multicollinearity or not. The largest value of Variance Inflation Factor is 3.47, which is the value of CCC square. The values of VIF vary from 1.11 to 3.47, which indicate that there is no multicollinearity problem in our analysis because the 3.47 is far below from 5 Studenmund, (1997). Moreover, 0.28 is the lowest tolerance coefficient of CCC square. The tolerance coefficient is 0.89 which is highest. The tolerance factor fluctuates from 0.28 to 0.89 which shows lack of multicollinearity because all the values of tolerance factor are greater than 0.10.

Having done with the descriptive statistics, we are moving towards our main regression results. Main regression results are reported in Table 4

Table 4: Generalized Method of Moment Results for the Gross Operating Profit and Net Operating Profit with Drift and without Drift

Variables	Without Drift		With Drift	
	Equation 1	Equation 2	Equation No.1	Equation No.2
NOP(-1)	-----	1.41224***	-----	0.3707222***
		(4.49)		(4.38)
GOP(-1)	1.382046***	-----	0.4387842***	-----
	(4.93)		(5.09)	
CCC	0.0000423	-0.0000131	0.0011907***	0.0011337***

	(0.04)	(-0.01)	(3.2)	(3.05)
CCC 2	-0.00000649	-0.00000724	0.0000304*	0.000028*
	(-0.16)	(-0.17)	(1.84)	(1.7)
Growth	0.279229***	0.2797421***	0.1504103***	0.140794***
	(3.53)	(3.31)	(4.28)	(4.02)
Size	-0.028606	-0.027769	0.1369856***	0.1329285***
	(-1.27)	(-1.17)	(5.64)	(5.7)
Leverage	0.0437135	0.0432146	0.0948666***	0.0757155**
	(0.75)	(0.66)	(3.25)	(2.32)
F-test	27.03	17.51	34.59	27.91
F-test p-value	0.000	0.000	0.000	0.000
Hansen	10.90	9.80	10.90	64.94
Hansen p-value	0.619	0.710	0.619	0.0000
m1	-2.65	-2.58	-2.79	-2.59
m2	0.60	0.53	0.63	0.39
m1 p-value	0.008	0.010	0.005	0.010
m2 p-value	0.546	0.597	0.530	0.697
Firms	17	17	17	17
Observation	170	170	170	170

Notes: *** Indicates 1% significance. ** Indicates 5% significance and * Indicates 10% significance. Table shows the results of Equation 1 & 2. The dependent variable in Eq.1 is gross operating profit (GOP) and in Eq.2 is net operating profit (NOP). Z statistics are given in parenthesis. Hansen test is used for over identified restrictions distributed asymptotically under the null hypothesis of exogeneity of instruments is satisfied. For serial correlation m1 and m2 test is used using the residuals of first difference, distributed asymptotically $N(0, 1)$ under the null hypothesis of no serial correlation.

5.2. Discussion on Main Regression Results

The results of this study indicate that the CCC (cash conversion cycle) variable is statistically insignificant with a co-efficient of 0.0000432. The results shows that the relationship between CCC and firms profitability is positive ($\beta_2 > 0$) and CCC^2 variable is also insignificant with a negative co-efficient of -0.00000649 ($\beta_3 < 0$). Optimal level of 33 days has been derived that balances the risk and returns and, hence, maximizes firm's profitability by using $CCC_{i,t} = [-\beta_2 / 2\beta_3]$.

The results of positive CCC indicates that investment in working capital below its optimal level is positively associated with firm's profitability due to higher sales resulting from granting more trade credits to customers which stimulates sales (Smith J. K. 1987; Long e al., 1993; Lee & Stowe, 1993), strengthens customer and supplier relationship Wilner, (2000). It also provide purchasers to verify the

quality of goods before payment Smith J. K., (1987), it is a very important selection criteria when it is difficult to make decision to differentiate goods.

Conversely, a negative relationship between CCC^2 and firms profitability indicates that high investment (above optimum level) in working capital is negatively associated with firms profitability due to increase in financial and opportunity costs and also the cost of keeping stocks available e.g. rent of where house, security and insurance expenses.

So, the negative relationship between CCC^2 and firm's profitability that is $-\beta_3$ validates our hypotheses that there is an inverted (Concave) relationship between working capital and firm's profitability, which balances the risk and return and consequently, maximizing the firm's value.

Lagged profitability is significant at 1% significant level. It shows that one percent increase in lagged profitability leads to 1.41 increase in gross operating profit.

The results of this study also indicate that growth is significant. There are many studies supporting our results namely Jang & Park (2011), Baños-Caballero et al. (2012), Baños-Caballero et al. (2014), Nurein et al. (2015) and Wang & Li (2015). The growth is significant at 1% level. It shows that one percent increase in growth leads to 0.279 improvement in gross operating profit of Cement Sector manufacturing firms. More growth opportunities increase firm's profitability.

The Results shows that management make consumer centered strategies to satisfy their needs and wants in a right time and at a right place with respect to consumer perception about organizations. The findings also suggest that firm's working in Cement Sector of Pakistan used advanced technology and modern techniques to increase quality and efficiency of their products which ultimately increases their products demand and hence, profitability rises with the increase in demand. Management also involves employees in decision making, give them proper training and provide job security which increases production. High production of goods decrease production cost per unit. That's why the relation between growth and firm's profitability is positive and significant.

The results of Equation 2 also shows that the relation between working capital management and firm profitability is nonlinear because the co-efficient of β_3 is negative. Results shows that NOP (-1) variable is significant with 1% significant level. It means that one percent increase in NOP (-1) will increase net operating profit by 1.41224.

6. Conclusion

The foremost objective of this study is to test the nonlinear relationship between working capital management and firm's profitability. The findings of this empirical study provide new evidence on the relation between working capital and firm's profitability. Unlike previous findings, the results of this study disclose that there is a concave (nonlinear) relationship between working capital level and firm's profitability, which the literature has not reflected yet.

The outcomes of this study support the idea that high investment in working capital can increase firm's sales and discounts for early payments to suppliers. However, higher investment from optimum level begins to be negative due to additional financing and opportunity costs and hereafter, credit risk and the probability of bankruptcy rises. This empirical study highlighted the role and importance of efficient management of working capital due to the costs of under and over investment in working capital.

6.1 Policy Implications

- It is necessary for the management to keep the optimum level of working capital and try to evade deviation from that optimal level either positive or negative in order to upturn the profitability of the firm.
- Opposing effect of lost sales and discount received from supplier for early payment or further financing cost should be avoided.
- This study provides new understandings on the relationship between working capital management and firm's profitability, that there is an inverted (U-shaped) relationship between working capital and firm's profitability rather than linear and hence, future research studies should use the quadratic relationship.

References:

- Arellano, M., Bond, S.; (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies*, Ltd. 58(2), 277-297.
- Baños-Caballero, S., García-Teruel, P. J., Martínez-Solano, P.; (2012). How does working capital management affect the profitability of Spanish SMEs? *Small Business Economics*, 39(2), 517-529.
- Baños-Caballero., S., García-Teruel, P. J., Martínez-Solano, P.; (2010). Working capital management in SMEs. *Accounting & Finance*, 50(3), 511–527.
- Blinder, A. S., Maccini, L. J.; (1991). The Resurgence of Inventory Research: What Have We Learned? *Journal of Economic Survey*, 5(4), 291-328.
- Brigham, E. F., Ehrhardt, M. C.; (2005). *Financial Management Theory and Practice* 11th Edition.
- Deloof, M., Jegers, M.; (1996). Trade Credit, Product Quality, and Intragroup Trade: Some European Evidence. *Financial Management*, 25(3), 33-43.
- Deloof, M.; (2003). Does Working Capital Management affect Profitability of Belgian Firms? *Journal of Business Finance and Accounting*, 30(3-4), 573-588.
- Jang, S., Park, K.; (2011). Inter-Relationship between Firm Growth and Profitability. *International Journal of Hospitality Management*, 30(4), 1027–1035.
- Jose, M. L., Lancaster, Stevens, J. L.; (1996). Corporate Return and Cash Conversion Cycles. *Journal of Economics and Finance*, 20(1), 33-46.

- Karaduman, H. A., Akbas, H. E., Ozsozgun, A., Durer, S.; (2010). Effects of Working Capital Management on Profitability: The Case for Selected Companies in the Istanbul Stock Exchange. *International Journal of Economics and Finance Studies*, 2(2), 47-54.
- Kim, Y. H., Chung, K. H.; (1990). An Integrated Evaluation of Investment in Inventory and Credit: A Cash Flow Approach. *Journal of Business Finance & Accounting*, 17(3), 381–389.
- Lazaridis, I., Tryfonidis, D.; (2006). Relationship between working capital management and profitability of listed companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis*, 19(1), 26-35.
- Lee, Y. W., Stowe, J. D.; (1993). Product Risk, Asymmetric Information, and Trade Credit. *Journal of Financial and Quantitative Analysis*, 28(2), 285–300.
- Long, M. S., Malitz, I. B., Ravid, S. A.; (1993). Trade Credit, Quality Guarantees, and Product Marketability. *Financial Management*, 22(4), 117–127.
- Ng, C. K., Smith, J. K., Smith, R. L.; (1999). Evidence on the Determinants of Credit Terms Used in Inter firm Trade. *Journal of Finance*, 54(3), 1109-1129.
- Nurein, S. A., Din, M. S., & Rus, R. M.; (2015). Nonlinear Relationship between Investment in Working Capital and Performance: Innovative Evidence from Food and Beverage Industry. *European Journal of Economics, Finance and Administrative Sciences* (77), 63-72.
- Raheman, A., Nasir, M.; (2007). Working Capital Management and Profitability – Case Of Pakistani Firms. *International Review of Business Research Papers*, 3(1), 279-300.
- Ray, D. S.; (2012). Evaluating the Impact of Working Capital Management Components on Corporate Profitability: Evidence from Indian Manufacturing Firms. *International Journal of Economic Practices and Theories*, 2(3), 127-136.
- Schall, L. D., Haley, C. W.; (1991). *Introduction to Financial Management*. New York: McGraw-Hill.
- Schiff, M., Lieber, Z.; (1974). A Model for the Integration of Credit and Inventory Management. *The Journal of Finance*, 29(1), 133–140.
- Shin, H.-H., Soenen, L.; (1988). Efficiency of Working Capital Management and Corporate Profitability. *Financial Practice and Education*, 8(2), 37-45.
- Shipley, D., Davies, L.; (1991). The Role and Burden-Allocation of Credit in Distribution Channels. *Journal of Marketing Channels*, 1(1), 3-22.
- Smith, J. K.; (1987). Trade Credit and Informational Asymmetry. *Journal of Finance*, 42(4), 863–872.
- Smith. (1980). Profitability versus Liquidity Tradeoffs in Working Capital Management. *Readings on the Management of Working Capital*, 549-562.
- Studenmund, A. H.; (1997). *Using Econometrics a Practical Guide*. Addison-Wesley (3rd edition).

Wang, L., & Li, Y.; (2015). Effects of Working Capital Management on Company Value Under Different Competitive Strategies. *Metallurgical and Mining Industry* (4), 122-131.

Wang, Y.-J.; (2002). Liquidity Management, Operating Performance, and Corporate Value: Evidence from Japan and Taiwan. *Journal of Multinational Financial Management*, 12(2), 159–169.

Wilner, B. S.; (2000). The Exploitation of Relationship in Financial Distress: The Case of Trade Credit. *Journal of Finance*, 55(1), 153–178.

BUILDING COMPANIES PROFIT: SIS AND STRATEGIC MANAGEMENT PERSPECTIVES

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Abstract

Business leaders are under pressure from stakeholders to comply with their demands while maintaining the organization's competitiveness in increasingly complex markets. So, leaders are striving to continuously formulate strategies with management elements that will help them deliver more value to their customers and stakeholders. Strategic thinking is important to guide for examining all markets which are relevant to the core business of interest. Also, information system is an essential component of a firm's strategy used in a global market.

Overall, the paper examine that strategic information systems planning process is still one of the key business activities where organizations will have to improve in order to be able to effectively participate on global market of the era of e-business. Successful business means good strategic management in the company. Competitive strategic management means implementation of integrated management model which enable company to determinate its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, as defines the range of business the company is pursue and positively affects business performance. This is previous aim for companies in making good decisions in accessing finance.

Key words: strategic management, business, strategic information systems, market.

1. Introduction

Strategic management is a relatively new scientific discipline, whose goal is to enable the company to work in the modern business environment and the everyday changes that businesses face, both from outside and from the inside. The main goal of strategic management is to equip the company to new operating conditions dictated by market and technical and technological changes, seize opportunities in terms of profit and avoid the threats from uncontrolled factors. Strategic management is actually a kind of special long-term organizational planning, in the direction of achieving long-term positive results, with which the organization will achieve a better competitive position in the future. The main goal of strategic management is making quality decisions, which will mean achieving profitability. These decisions are made by strategic managers and the very process of their adoption is very complex, because modern business operations are characterized by turbulent surroundings, and the quality of the decisions taken are

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a prerequisite for successful operation and development.

Also, in the paper we take focus on the crucial value of strategic information systems for business success.

A Strategic Information System (SIS) is a system that helps companies change their business strategy and structure. It is typically utilised to speed up the reaction time to environmental changes and aid it in achieving a competitive advantage.

Here are some points that SIS enable for the companies as a source of competitive advantage (Peppard et al., 2007):

- 1) Decision support systems that enable to develop a strategic approach to align Information Systems (IS) with an organisation's business strategies.
- 2) Primarily Enterprise resource planning solutions that integrate the business processes to meet the enterprise objectives for the optimisation of the enterprise resources.
- 3) Database systems with the "data mining" capabilities to make the best use of available corporate information for marketing, production, promotion and innovation. The SIS systems also facilitate identification of the data collection strategies to help optimize database marketing opportunities.
- 4) The real-time information Systems that intend to maintain a rapid-response and the quality indicators.

2. Literature review

Strategic management is a continuous process that monitors and controls the business and industries in which the company operates, monitors competition, and sets out strategies and goals to identify all existing and potential competitors, and then reviews the strategy on a regular basis to determine how it is implemented and whether it is successful or it is necessary to replace it. In this part of the paper, we examine a few authors and its opinion about strategic management as one of the biggest challenge today.

According this, the biggest challenge that today's companies face in the modern environment are rapid and sudden changes and the emerging conditions of operation caused by globalization (Daniels et al., 2011). The authors process several chapters as essential elements that need to be understood when solving the problems that companies face like managing the international value chain, operational goals and assets, the challenges and control of international operations and the care of the individual and the company .

David A. Ecker in his book covers the strategic elements and concepts, competition analysis, consumers and market analysis. This author provides guidance how to understand the market dynamics and the advantages of companies so that they can create winning business strategies enabling business success as well as managing strategic change and uncertainty.

Another authors focused on strategic management in a time of globalization and competitiveness (Heath et al., 2014). Their research includes inputs of strategic management, strategic actions (strategy creation and strategic actions), strategy implementation. These authors through theoretical presentations aim to establish a new standard in strategic management and provide a rich and comprehensive analysis of the concepts and tools of strategic management. Schmarmhorn (1996) helps readers about the foundations of managerial work, not only to see the basics of managerial discipline, but also to understand and foster their personal potential and develop their managerial tools and career skills. Through this analyze, the author explains the six conceptual sections that he considers to be the foundation of managerial work, such as management, environment, planning, organizing, leadership and managing.

In the era of competitiveness, some authors determinate and underline the crucial meaning of operational management (Chase et al., 2004). These authors explain the methods for effective production and distribution of products and services by the company. The book focuses on operational strategy and change management, process selection and design, as well as the design of the supply chain and its planning and control. As the main issue that is elaborated is the strategy and its implementation, where the authors state that each company must have a detailed business plan that is supported by three main strategies as financial strategy, marketing strategy and operational strategy.

3. Impact of information technology on strategy implementation

Technology is the application of scientific knowledge and practical skills in human life. We define technology as a set of techniques and methods that extend the possibility of human action and help manage the processes. In fact, this is a kind of set of actions that lead to the achievement of the goal, through the interaction of subjects and objects. Any value-producing activity uses a technology aid that combines purchased inputs and human resources to produce an output. Any value-creating activity also includes technology, whether it's a professional knowledge, procedures, or technologies embedded in equipment. Goals arising from technology management within a company are:

- achieving the efficiency of technology that lies within the company
- achieving the effectiveness of technology i.e. to provide products for which there is a real market demand with the help of technology.

4. Framework of Strategic Information Systems Planning

One of the most important issues that professionals in the field of information technologies face is the planning of information systems in order to achieve the strategic goals. Taking into account their importance as a driver in the transformation of companies, it all increases the pressure of the company for investing in technology and strategic information systems (SIS). Success depends on the key issue, and that is whether the company is capable of providing a link between SIS and company planning that can be achieved only in case of joint collaboration between them. In the company's budget it is necessary to

include funds for the annual planning and development of strategic information systems. In the past years, many companies made such decisions according to some of their personal beliefs, recommendations from colleagues or other companies, but the outcome is always unpredictable.

Planning of strategic information systems in each company begins with setting goals. It is a complex process that should match the needs of the lowest to the highest level of the organization. Planning of information resources other than development plans includes the collection and setting up of a framework in which specific subsystems and modules will better fit. These modules and subsystems produce large teams of people, and if previously not built proper and unique information architecture would lead to inconsistency of information. The following is that the basic goal of planning an information strategy is the achievement of consistent information. Strategic Planning of information systems serves for (Buble, 2006):

- a) linking IT and IP planning with strategic business planning
- b) assistance in building control mechanisms for the implementation of plans
- c) create a framework in which further analysis and shaping will allow a specially developed database of data and information subsystems and modules to be freely used and functioning in such a way as to ensure consistency of information.

Very important aspect in the planning process is determination of the priority of implementation the databases and information subsystems with the specific functional areas of the organization. Information is a significant organizational resource, therefore the design of information development is assessed just like business design. Necessary investments are taken into account, as cost-effectiveness, risk and significance of the problem that solves.

4.1. SIS: Source for competitive advantage

Strategic information systems are the basic mechanism through which the company provides a high degree of coordination between its sectors. By using them, a platform for exchange of information related to the business environment, ie with the partners, as well as within the company itself, is provided. In the 21st century, where business operations are characterized by rapid, unpredictable working conditions and a changing environment, information is a very important resource that every manager needs to know how to use it in the most efficient way. Since the main goal of strategic information systems is to exchange information and manage them efficiently in the direction of improving and facilitating the company's operations, it is a prerequisite for the company to be a step forward in terms of competition. Information is a source of knowledge and the need for implementation of strategic information systems is imminent, because without their existence managers are unable to dispose of the right information at the right time and in the right place and on the basis of making better decisions to be more competitive on the market. There are four generic strategies that companies use to manage competitive forces, each of them related to the functioning of strategic information systems, i.e. the benefits offered by their use.

Low Cost Leadership - company uses the benefits of SIS to achieve the lowest operating costs and lowest prices. For example, in the supply chain management system, an effective response and customer response system can be involved that quickly connects consumer behavior and changes to the distribution and supply system, thereby significantly reducing inventory costs and distribution cost.

Product Differentiation - company uses SIS to develop new products and services for consumers or to use existing products and services to meet their needs if it gets information that some initial behavioral changes have occurred in relation to the purchase of existing products.

Focus on Market Segment - the company uses SIS to conduct a detailed analysis of the targeted market and strive to meet the specific needs of potential consumers more effectively than competition. In this case, SIS helps in providing the company with accurate, precise information about consumers and their specific needs and thus contributes to managers to make decisions in the production of the right products and services as well as marketing decisions. The goal is to keep existing consumers and attract new ones by maintaining constant attention, additional discounts, rewards, privileges, to win the competition.

Strengthening partners' collaboration - companies through SIS maintain regular contact with partners, who show loyalty and connectivity, and thus benefit greatly from partners. Maintaining a high level of co-operation means that the company has a stable relationship with its partners based on loyalty, reliability and professionalism, and can mean cost savings as a result of ongoing collaboration and thereby gaining a competitive advantage.

5. Application of strategic information systems in Macedonian business entities

Macedonia is one of the countries that in the past years did not make big investments in the development of information technology, as a basis for gaining competitive advantage on the market, not only for the business entities, but also for the state as a whole. Macedonia has its own special characteristics, but also specific problems like difficulties in acting on the international market. All of this reflects on the companies work because they couldn't be adapted to the new conditions caused by globalization, and as a result, technical and technological backwardness, incomplete utilization of the capacities, low representation of products with a higher degree of processing, low profitability. Employees are less paid and therefore do not have the motivation to be innovative and use their creative abilities. Information society is a society based on the effective use of information provided by accelerated development and the growing use of information and communication technologies.

The development and penetration of information and communication technologies in all sectors of Macedonian society has a major impact on the economic and social changes in it. Global communications, e-commerce and the Internet bring many benefits, even greater development, economic expansion and democracy in the developed world. The measurement of the level of information society development by monitoring certain key indicators is a process of constant revision and improvement. In Macedonia, imposed the need to measure and monitor some indicators, such as: equipment with information and communication technologies, the degree, intended their use, information literacy,

benefits and barriers to the use of ICT in different categories of companies, households, individuals and the public sector.

In order to determine the availability and manner of using certain information and communication technologies, the State Statistical Office, since 2005, carries out the following statistical surveys according to the type of users:

- Use of information and communication technologies in business entities from the non-financial and financial sector (annual survey);
- Use of information and communication technologies in households and individuals (annual survey);
- Use of information and communication technologies in the public sector (two-year research).

6. Conclusion

Strategic management is a continuous process that monitors and controls the business and industries in which the company operates, monitors competition, and sets out strategies and goals to identify all existing and potential competitors, and then reviews the strategy on a regular basis to determine how it is implemented and whether it is successful or it is necessary to replace it. Strategic management provides a broader perspective for its employees in the company so they can better understand their working position in terms of organizational of the plan and how it is connected with all members of the company. The main goal of strategic management is to equip the company to new operating conditions dictated by the market and technical and technological changes, seize opportunities in terms of profit and avoid the threats from uncontrolled factors.

The development and penetration of information and communication technologies in all sectors of society has a major impact on the economic and social changes in it. Global communications, e-commerce and the Internet bring a lot of benefits, even greater development, economic expansion and democracy in the developed world. The functioning of the organization and management processes in it has become completely unthinkable without the existence of adequate data, information and knowledge. Thus, these components become equally important resources for the organization as well as raw materials, energy, labor, finance and the like. The data are recorded, prepared, stored, organized and stored in the database of the information system. He provides the organization with information and knowledge for conducting business operations and solving business problems.

Strategic information systems are the basic mechanism through which the company provides a high degree of coordination between its sectors. By using them, a platform for exchange of information related to the business environment, ie with the partners, as well as within the company itself, is provided. The implementation of strategic information systems is a financially large investment step and the benefits that it offers is crucial for the success of the company. Therefore, each company should create and implement its own SIS depending on its size, type and scope of operation, while also exploring and analyzing all critical success factors and eliminating deficiencies in the direction of developing and using an appropriate SIS that will achieves positive business results.

Reference

Bower, M. *The Will to manage Corporate Success Through*, McGraw-Hill, New York

Buble, M. "Osnove menadzmenta" nakladnistvo, Zagreb, 2006

F. Robert Jacobs, Nicholas J. Aquilano Richard B. Chase. 2004. *Operations Management for Competitive Advantage*. McGraw Hill.

John D. Daniels, Lee H. Radebaugh, Daniel P. Sullivan. 2011. *International Business*. Pearson; Custom edition.

John R. Schermerhorn, Robert F. Hartley. 1996. *Management*. John Wiley & Sons Inc; 5th edition.

Kroenke, David (2015). *MIS Essentials (Fourth ed.)*. Boston: Pearson

Macintosh, A. (1995) Position Paper on Knowledge Management, Artificial Intelligence Applications Institute, University of Edinburgh

Mašić, B., Babić, L. Đorđević – Boljanović, J, Dobrijević, G., Veselinović, S. (2010) *Menadžment: principi, koncepti i procesi*, Univerzitet Singidunum,

Michael M.A. Heath, R. Dwayne Ireland, Robert Hoskinson. 2014. *Strategic Management - Competitiveness and Globalization*. Cengage Learning Australia.

Nag, R.; Hambrick, D. C.; Chen, M.-J (2007). "What is strategic management, really? Inductive derivation of a consensus definition of the field". *Strategic Management Journal* 28 (9): 935–955

Peppard, J., J. Ward, and E. Daniel. 2007. "Managing the Realization of Business Benefits from IT Investments," *MIS Quarterly Executive*, 6(1), 1-11.

Samuel C. Certo and J. Paul Peter, *Strategic Management: Concepts and Applications* McGraw-Hill, 1991, 14

Schumpeter, Joseph A. *Business Cycles*. New York, McGraw Hill, 1939, Davila, Tony, Marc J. Epstein and Robert Shelton. *Making Innovation Work - How to Manage It, Measure It, and Profit from It*. Wharton School Publishing, 2006

CORPORATE SOCIAL RESPONSIBILITY (CSR) AND FIRM PERFORMANCE: IMPACT OF INTERNAL AND EXTERNAL CSR ON FINANCIAL PERFORMANCE

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Abstract

Despite the fact that investigation of the impact of corporate social responsibility (CSR) on firm performance is an extensively researched area, the outcomes are still inconclusive. Based on the target stakeholder group, CSR activities are categorized into internal and external CSR. We provide arguments favoring both internal and external CSR as determinants of financial performance. We use a sample of 112 listed companies in Colombo Stock Exchange, Sri Lanka for the period of 2011 to 2015. The findings indicate that although both types of CSR impact positively on financial performance, internal CSR is a major determinant of firm performance than the external CSR.

Keywords: Corporate Social Responsibility (CSR), Internal CSR, External CSR, Sri Lanka

Introduction

Corporate social responsibility (CSR) has rapidly become a worldwide phenomenon which has been gaining an increasing interest and recognition among the academia, business practitioners and the general public alike during the past few decades. Firms increasingly engage in CSR activities due to institutional pressures for responsible business practices (Fernandez-Kranz & Santalo, 2010; Matten & Moon, 2008), instrumental motivations for gaining competitive advantages (Siegel & Vitaliano, 2007) and for many more other social and environmental causes (Hawn & Ioannou, 2016). Much like the concept, outcomes of CSR, especially the link between CSR and corporate firm performance (CFP) has gained significant attention to make justifications of being a good corporate citizen. A vast number of research has been conducted to establish a link between CSR and CFP, however it is still debatable whether CSR payoff or not (Margolis & Walsh, 2003). Majority of studies have reported a positive relationship (Blackburn et al., 1994; Graves & Waddock, 1994; Lev et al., 2010; Margolis & Walsh, 2003; Saeidi et al., 2014; Waddock & Graves, 1997), while others showed either a negative (Julian & Ofori-Dankwa, 2013; Klassen & Whybark, 1999; Sundaram & Inkpen, 2004) or a neutral relationship (Peloza, 2009; Seifert et al., 2004; Surroca et al., 2010; Ullmann, 1985) between the two variables of interest. Most of the prevailing studies

have employed one aggregate measure for firms' CSR while others have used certain dimensions of the construct such as philanthropic donations or environmental performances in establishing a link between CSR and CFP (Surroca et al., 2010). Neither studies have attempted to investigate how a firm's CSR activities which are targeted at different audiences may impact on firm performance. To close this gap, we demarcate between internal and external CSR in line with the distinction between internal and external stakeholder groups in stakeholder theory (Freeman, 2010). Internal CSR activities address social concerns of internal stakeholders those who closely tie to the organization such as employees and managers (Madsen & Rodgers, 2015; Wood & Jones, 1995) while external CSR activities address broader social concerns of outside stakeholders such as customers, suppliers and the local community (Freeman, 2010; Madsen & Rodgers, 2015). We argue that since internal CSR addresses the well-being of internal stakeholders such as the employees, it affects positively on firm performance. Opposing to this view, we offer a counter argument such that it is the external CSR which may place significant impact on firm performance. Therefore, the purpose of the present study is to investigate the impact of firms' internal and external CSR activities on financial performance. The research hypotheses are tested using a panel data set of 112 companies listed in CSE (Colombo Stock Exchange, Sri Lanka) for the period of 2011 to 2015. This study attempts to sheds some light on the debatable area of the link between CSR and CFP by theorizing and empirically testing how internal and external CSR may impact individually and collectively on firm performance.

The remainder of the paper is organized as follows. Section two presents the theoretical background and research hypotheses. Section three describes the methodology which consists of sample, data collection, variable measures, statistical model and data analysis. Section four presents the results with a discussion of the major findings. Section five highlights the theoretical and managerial contributions and limitations of the study which may direct future studies.

Literature and hypotheses

Due to its multidimensionality and ever evolving nature (Waddock & Graves, 1997), CSR is a contested term (Lindgreen et al., 2009) which is difficult to define. Although the prevailing CSR literature shows countless definitions (sometimes confusing and contradictory) of the concept (Carroll, 1979; Dahlsrud, 2008; Hopkins, 2016; McWilliams & Siegel, 2001; Turker, 2009a; Van Marrewijk, 2003), still there is no universally accepted definition for CSR. A well-known and frequently cited definition for CSR is the one which identified CSR as the "economic, legal, ethical and discretionary expectations that society has of organizations at a given point of time" (Carroll, 1979). Since economic concerns are not businesses' responsibility but the exact reasons for their existence (Turker, 2009a), economic component was excluded from the subsequent CSR definitions. Voluntariness and stakeholder orientation are two key features that can be frequently noted in most of the CSR definitions (Hopkins, 2016; Van Marrewijk, 2003). Based on the purpose of the present study, a general definition of CSR is adopted as 'firms' voluntary social attempts aiming at their stakeholders for a better society and a cleaner environment' (Turker, 2009a). Stakeholder theory defines stakeholders as "any identifiable group or individual who can

affect the achievement of an organization's objectives, or is affected by the achievement of an organization's objectives" (Freeman & Reed, 1983) and argues that a firm's stakeholders may include not only the shareholders but also the customers, employees, suppliers, local communities and the natural environment (Jones, 1995; Wood, 1991). According to the literature, stakeholders can be placed into different groups such as primary versus secondary, internal versus external and contracting versus public stakeholders, etc (Verdeyen et al., 2004). In this study we utilize the stakeholder division which distinguishes them as internal and external stakeholders. Internal stakeholders such as employees and managers, lie within the firms' boundaries and have close connections to the firms (Madsen & Rodgers, 2015; Wood & Jones, 1995) while external stakeholders such as customers, local communities, suppliers and the government lie outside the boundaries of the firm and generally are not closely tied to the firm (Freeman, 2010; Madsen & Rodgers, 2015). Our conceptualization of the categorization of CSR as internal and external CSR relies on the distinction between internal and external stakeholders in the stakeholder theory.

A general definition for internal CSR is adopted as 'voluntary firm actions to improve the well-being of internal stakeholders such as the employees' (Turker, 2009b; Vives, 2006). Internal CSR typically includes employee training and development, health and safety, work place diversity, equal opportunities, work life balance, work environment and participation in business (Lindgreen et al., 2009; Turker, 2009; Vives, 2006). The adapted definition for external CSR is 'voluntary firm actions concerning and responding to society at large and its interaction with the physical environment' (Carroll, 1979). External CSR typically includes activities such as cause related marketing, employee volunteerism, charitable donations, philanthropic activities, community projects and environmental preservation and protection programs (Cornelius et al., 2008).

We argue that internal CSR affects positively on firm performance. A conceptually and empirically proven fact in the management literature is that if firms can make their employees happy and satisfied, then these firms are more likely to perform well. Most managers believe that having satisfied and happy employees is a key factor for achieving outstanding performances (Christian, 2004). Firms are better aware the importance of maintaining healthy employee relations in improving firm performance. Internal CSR addresses the concerns of the well-being of the internal stakeholders such as the employees. When employees perceive that they are taken care of by their organizations, they get happy, satisfied and motivated. Increased employee satisfaction and motivation lead higher organizational effectiveness. They get more engaged, are motivated to "go to the extra mile" for their companies and are able to present more of their whole selves at work (Aguinis & Glavas, 2013; Christian, 2004). Typical internal CSR practices such as employee training, health and safety, welfare facilities, rewarding and work life balance impact on employees' attitudes including their satisfaction attached to job security, benefits, pay and the job as a whole (Christian, 2004). Employees' positive attitudes towards the organization will pave the way for company performance. Internal CSR does make happy employees who are more productive and in turn improve organizational effectiveness leading to increased financial performance. Taking them together, we propose the hypothesis one as follows.

H1: Internal CSR impacts positively on financial performance than external CSR.

Unlike internal CSR which typically involves internal operations and is less likely to be recognized by the public, external CSR is more visible, more likely to attract public attention and help signal out social responsibility of firms (McWilliams & Siegel, 2000; Siegel & Vitaliano, 2007). Hence, external CSR activities tend to bring advertising effects and help firms building good image, reputation and high transparency (Kim et al., 2014; McWilliams & Siegel, 2000). Firms increasingly incorporate their CSR engagements, especially external CSR efforts into their marketing strategies to exploit the appeal of CSR to key segments of the market (McWilliams & Siegel, 2000). External CSR help create a reputation that a firm is honest and reliable which may signal that its products are high quality too, so that social conscious customers may attract which may ultimately lead to enhanced financial performance (Coldwell, 2001). We propose the second hypothesis summarizing the above arguments as follows.

H2: External CSR impacts positively on financial performance than internal CSR.

Methodology

Sample and data collection

To test the research hypotheses, we constructed a sample of firms that engage in CSR and disclose their social engagement to the public, for consecutively 5 years from 2011 to 2015. Sample companies are drawn from the Colombo Stock Exchange (CSE), Sri Lanka. Currently 295 companies are listed in CSE, representing 20 different business sectors as at 30th September 2017, with a market capitalization of 2,919 billion Sri Lankan Rupees (<https://www.cse.lk/>). The initial sample consisted of 150 companies that reported some kind of CSR engagement for consecutively during the specified period. The sample is reduced to 120 companies based on the availability of CSR data that may enable us to distinguish and measure internal and external CSR independently. Due to the lack of data which is essential for measuring key variables in the study, another 8 companies were excluded. These restrictions left a final sample of 112 listed companies. Annual and/or sustainability reports of the sample companies from 2010 to 2014 were referred to measure the independent and control variables of the study while annual reports from 2011-2015 were referred to measure the dependent variable. Table 01 presents the profile of the sample. Sample companies represent five industry sectors where majority of the companies (35.71%) are in the manufacturing industry.

Table 01 Sample Profile

Industry Sector	Number	Percentage (%)
Finance	34	30.36
Manufacturing	40	35.71
Service	27	24.11
Construction and Engineering	4	3.57
Diversified Holdings	7	6.25
Total	112	100.00

Source: CSE website (Industry Sector Classification)

Variables

Dependent variable

CSR is positively associated with accounting based performance measures such as ROA, ROE and ROS (Waddock & Graves, 1997). We selected return on asset (ROA) to proxy the dependent variable of the study, i.e. firm financial performance. ROA is measured by the ratio of profit to total asset.

Independent variables

The main independent variables of the study are internal and external CSR. Measurement of CSR is always challenging (Wood, 2010) and a variety of approaches have been using to measure the construct. We used CSR expenditure data to measure the two independent variables. Use of monetary quantifications in measuring firms' CSR offers two key advantages over the other CSR measurement techniques. It may avoid receiving erroneous and bias responses, usually attached with behavioral and perceptual measures (Griffin & Mahon, 1997). Monetary measures well represent the substantive resource commitments for CSR activities (Julian & Ofori-Dankwa, 2013), avoiding the symbolic commitments associated with techniques such as content analysis (Chapple & Moon, 2005). Employee related investments is considered as an important indicator of internal CSR (Cornelius et al., 2008; Fuentes-Garcia et al., 2008), therefore cost of employee training and development (Lindgreen et al., 2009; Turker, 2009a; Vives, 2006) is selected as the proxy for internal CSR. Firms' philanthropic activities aim at their external audiences (Brammer & Millington, 2008), thus well represents the external CSR, therefore cost of philanthropic donations (Amato & Amato, 2007; Brammer & Millington, 2008; Lev et al., 2010; Wang & Coffey, 1992) is selected as the proxy for external CSR.

Control variables

We include firm size, financial leverage and industry in the analysis as control variables since they may affect the financial performance and the amount of CSR, a firm may engaged. Size of the firm may influence its capacity to engage in social activities (Amato & Amato, 2007; McWilliams & Siegel, 2001), therefore firm size is controlled by adding the natural logarithm of total assets in the regressions acknowledging the evident positive skewness of the distribution of total assets. Firm's leverage ratio which is measured by the ratio of total debts to total assets is included as a proxy for firms' financial leverage (Flammer & Luo, 2017). Firms operating in different industries may have different benefits and pressures for pursuing CSR activities (Hull & Rothenberg, 2008). Further, industry level factors such as economies of scale and competition intensity have been identified as some of the factors that can explain variation in firm performances across industries (Mcwilliams & Siegel, 2000). Therefore, studies have considered industry factor as a controlling variable since some industries tend to be more socially responsible than others. We included a series of industrial sector dummy variables based on their industry sector classification.

Finally, we controlled for the possibility that sample selection bias may impact the results. We used the Heckman selection model (Heckman, 1977) which controls the selection effects by modeling the selection of observations into the sample from the broader population in the first stage and using the results of this first stage model to account for selection bias in the second stage (Madsen & Rodgers, 2015). Though there are 295 companies listed in the CSE, fifteen companies were excluded due to the unavailability of essential data which is required for the analysis. We included 280 publicly traded companies (a total of 1400 firm-years) in the first stage model which consists of four control variables; firm size, firm age, industry and prior firm performance (ROA). This first stage model generated the non-selection hazard which is known as the inverse Mills ratio. This value is included for each firm in the sample in the second stage as an additional control variable to control selection bias.

Statistical model and analysis

The basic empirical model expresses firm performance (ROA) as a function of internal, external CSR and control variables. We use the following equation (1) to test the research hypothesis by means of regression. Internal and external CSR are lagged one year behind performance variable acknowledging the fact that CSR is positively associated with future firm performance (Waddock & Graves, 1997).

$$\begin{aligned}
 ROA_{i,t+1} = & \beta_0 + \beta_1 ICSR_{i,t} + \beta_2 ECSR_{i,t} + \beta_3 Firm_Size_{i,t} + \beta_4 Lev_{i,t} \\
 & + \beta_5 Inverse_Mill_{i,t} + \beta_6 \sum_{k=1}^{M-1} IND_{i,t} + \varepsilon_{i,t} \quad (1)
 \end{aligned}$$

$ROA_{i,t+1}$ represents the firm performance of the i^{th} firm in year $t+1$. $ICSR_{i,t}$ and $ECSR_{i,t}$ represent the amount of internal and external CSR expenditure in year t for firm i respectively. $Firm_Size_{i,t}$ represents

the size of the i^{th} firm in year t . $Lev_{i,t}$ represents the financial leverage of the i^{th} firm in year t . $Inverse_Mill_{i,t}$ represents the inverse Mills ratio of the i^{th} firm in year t . IND_k represents the industry fixed effects where m being the number of industries in the sample. $\varepsilon_{i,t}$ is the uncorrelated error term.

Since the dependent variable of the study is continuous and fulfills the assumption of linearity and normality, we used linear regression models to test the research hypotheses. In the preliminary analysis we ran both the fixed effects and random effects models to control the potential of correlation between the error terms of observations due to the existence of any unobserved firm characteristics (Kennedy, 2003). Compared to the fixed effects models, random effects models are more efficient in inferencing which allow inferring something about the population from which the sample is drawn. However, random effects models assume that the individual specific effects are uncorrelated with the independent variables. To check whether this assumption is met, the Hausman specification is conducted which compares a random effect model with an equivalent fixed effect model (Kennedy, 2003). The results of this test (Chi-square = 0.97, $p > 0.05$) strongly suggests to accept the null hypothesis that the random effects model is appropriate. Therefore, random effects linear regression is used in modeling firm performance.

Results

Table 02 reports the descriptive statistics and pairwise correlations of all the study variables. As it can be seen, none of the correlations among the variables was large enough to cause multicollinearity issues in the subsequent analysis and thus may not threaten the interpretability of the research findings.

Correlations between ROA and internal and external CSR are positive and significant, suggesting that internal/external CSR activities are positively associated with firm performance.

Table 03 reports the results of the random-effects linear regression models of firm performance to internal and external CSR activities. Model 01 includes only the control variables. As it can be seen industry dummy for the manufacturing sector is significant. Further, the coefficient of the Inverse Mills ratio is negative and significant which indicates that the types of firms that chose to engage in internal and external CSR activities are more likely to perform better for these efforts than those that chose not to engage in internal and external CSR, on average. Control variables by themselves explain approximately 3.1% of the variability in financial performance.

Each of the two independent variables are added separately in Model 2 and Model 4 respectively. Model 2 includes only the internal CSR and control variables. The coefficient of the internal CSR is positive and significant which confirms that ROA and internal CSR is highly correlated. In Model 3, we replace the internal CSR with external CSR. The coefficient of the external CSR is positive and statistically significant which indicates that the external CSR is correlated with ROA. However, internal CSR (0.208) contributes to a greater extent than external CSR (0.135) to firm performance. Moreover, Model 2 explains more variance of ROA than Model 3 (adjusted R^2 0.044 versus 0.041), suggesting that internal CSR is a major determinant of financial performance than its counterpart. These findings support

H1 while do not support H2. This is further confirmed by the results of Model 4 in which we include both the internal and external CSR. When internal CSR is added, the magnitude of the coefficient of external CSR diminishes dramatically and is no longer significant. This finding further confirmed that the internal CSR is a major determinant of financial performance than external CSR.

The significant impact of internal CSR on firm performance (ROA) may be due to the fact that internal CSR activities such as employee relations and corporate governance, improve organizational effectiveness which leads to higher profits per sales (Hopkins, 2016). Internal CSR activities increase profits to a greater extent than the increase in total assets due to the long-term effect of certain internal CSR activities where some of the benefits of CSR might be delayed to the future periods such as accumulation of assets. One possible explanation for the insignificant impact of external CSR on firm performance is that compared to internal CSR, external CSR is more likely to be perceived by the public and therefore the market tends to incorporate the value of external CSR activities in the valuation. This suggests that firm value is more likely to driven by external CSR than firm performance.

This study shows that the impact of different dimensions of CSR on firm performance (accounting-based measure ROA) vary to a greater degree. Therefore, using an aggregated measure for CSR to investigate its impact on firm performance may yield inconclusive results consistent with the vast majority of studies (Margolis & Walsh, 2003; Ullmann, 1985; Waddock & Graves, 1997). However, the results of the present study need to be interpreted carefully since institutional differences among countries are likely to affect the nature, type and consequences of CSR (Matten & Moon, 2008) .

Discussion and conclusion

Theoretical and managerial contributions

This study makes the following key contributions to the literature. First, we conceptually distinguish CSR activities as internal and external CSR based on the distinction between internal and external stakeholders in the stakeholder theory (Freeman, 2010).

Table 02

Means, standard deviations and correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10
<i>Dependent Variable</i>												
1. ROA	5.24	8.53	1									
<i>Independent Variables</i>												
2. Internal CSR	2.91	0.83	0.130	1								
3. External CSR	3.09	0.7	0.162	0.329	1							
<i>Control Variables</i>												
4. Firm Size	9.92	0.72	0.001	0.194	0.086	1						
5. Leverage	0.18	0.15	-0.216	-0.097	-0.031	0.093	1					
6. Finance Sector	0.32	0.47	-0.267	0.211	0.194	0.418	-0.176	1				
7. Manufacturing Sector	0.34	0.47	0.246	-0.098	-0.063	-0.205	0.128	-0.091	1			
8. Service Sector	0.24	0.43	0.003	-0.133	-0.175	-0.404	-0.026	-0.386	-0.404	1		
9. Construction Sector	0.03	0.18	0.030	-0.058	-0.076	0.001	0.024	-0.132	-0.138	-0.108	1	
10. Inverse Mills Ratio	1.39	0.84	0.033	-0.028	-0.029	0.101	0.031	-0.085	-0.144	-0.153	0.094	1

n=112

Correlation coefficients in bold indicate that they are statistically significant at 5 percent level

Table 3
Random effects linear regression models of firm performance

Variables	Model 1	Model 2	Model 3	Model 4
Intercept	0.84 (0.73)	0.336 (0.37)	0.337 (0.36)	0.84 (0.72)
<i>Independent Variables</i>				
Internal CSR		0.208** (0.05)		0.182** (0.06)
External CSR			0.135** (0.04)	0.09 (0.05)
<i>Control Variables</i>				
Firm Size	-0.44 (0.39)	-0.44 (0.39)	-0.45 (0.33)	-0.45 (0.37)
Leverage	-0.11 (0.23)	-0.10 (0.23)	-0.11 (0.23)	-0.20 (0.22)
Finance Sector	-0.23 (0.32)	-0.23 (0.32)	-0.28 (0.31)	-0.31 (0.32)
Manufacturing Sector	-0.23** (0.39)	-0.23** (0.39)	-0.18** (0.38)	-0.23** (0.34)
Service Sector	-0.18 (0.37)	-0.18 (0.37)	-0.34 (0.36)	-0.42 (0.38)
Construction Sector	-0.17 (0.14)	-0.16 (0.24)	-0.17 (0.14)	-0.17 (0.13)
Inverse Mills ratio	-0.36** (0.22)	-0.28** (0.24)	-0.37** (0.30)	-0.42** (0.31)
Wald chi-square	189.26***	209.94***	195.88**	212.22***
R-squared	0.031	0.044	0.041	0.050

N=112

Omitted industry category = diversified sector

Significance levels: *P< 0.05, **P< 0.01, *** < 0.001 (two-tailed tests)

Standard errors are in parentheses

We suggest that, the impact of different types of CSR activities on firm performance vary to a greater degree. Second, we provide conceptual and empirical support to show that the internal CSR involves internal operations, thus leads to organizational effectiveness resulting increased financial performances. Unlike internal CSR, external CSR is highly visible to the public thus it is more likely that the market incorporates the value of firms' external CSR in firm valuation.

Our study offers two important practical implications for the managers too. First, managers should be

aware that CSR activities are not homogeneous and they may not address the same social goodness. Different CSR activities – say internal and external CSR – are perceived differently by different stakeholder groups. Thus their impact on the stakeholder groups and ultimately on firm performance vary to a greater degree. Second, knowing the existence of different types of CSR activities and more importantly knowing that their specific impact on the organization help managers allocating key resources. Managers constantly under the pressure of allocating scarce corporate resources concurrently meeting financial and social expectations of their organizations (Waddock & Graves, 1997). The findings of this study help them understand how internal and external CSR activities are perceived by their internal and external audiences and how these different types of CSR impact on firm performance. This understanding help them utilizing scarce resources on immediate and critical issues. For an instance, if a firm is in a need in improving its financial performance, then it should invest more in internal CSR activities since internal CSR activities are more likely to increase financial performances.

Limitations and directions for future studies

This study attempts to provide a fresh insight into the debatable link between CSR and CFP by demarcating CSR as internal and external. However, this study is limited in a number of ways which offers few avenues for future works. First, internal and external CSR were measured using company disclosure based data which was retrieved from annual and/or sustainability reports. The validity of these self-reported information is problematic since the management of the firm can decide what information should make available to the public (Chapple & Moon, 2005; Ullmann, 1985). Thus, the accuracy of the research findings largely depend on the fact that how accurately sample companies disclose information relating to their social engagements. Future studies can mitigate this limitation by referring to multiple sources to measure CSR in more accurate manner.

Second, though the internal and external CSR are composed of individual CSR dimensions, the study examined only one type of CSR activities – cost of employee training and development for internal CSR and donations for external CSR – to measure internal and external CSR. The different effects of internal and external CSR on firm performance may be driven by different type of CSR activities. Therefore, the results may not generalize to other types of CSR. For an example, according to the results, internal CSR is a major determinant of explaining firm performance. However, if we proxy internal CSR in a different manner –say if we use corporate governance instead of cost of employee training and development- it may result a different impact on firm performance. Future studies can examine different dimensions of CSR such as corporate governance, product relations, community engagement, environment protection and etc., to operationalize internal and external CSR to investigate their impact on firm performance.

Third, unavailability of social data in consistent manner for consecutively sufficient number of periods limited the sample size. Among the 295 companies listed in CSE, approximately 8% of companies have recently started following the GRI social reporting guidelines. Social reporting of the vast majority of the companies are qualitative in nature and the type and to what degree the information are disclosed is vary at a great deal (Thoradeniya et al., 2013). Future studies can replicate this study in a different context

where social reporting is well established. This will increase the sample size which may help generalizing the findings and will help measuring the CSR straightforwardly.

Forth, the present study employed ROA as the measure for firm performance. ROA is an accounting based indicator, thus rather historic in nature. A largely identified fact is that the paybacks of CSR investments are not immediate. It may take a considerable amount of time (may be few years depending on the type of CSR investment) to reap the benefits. Insignificant results of external CSR and firm performance may be due to the fact that a short term performance indicator such as ROA is not capable of sensing impact of investments in external CSR which may not incur immediate results. Future studies can employ both accounting based (ROA, ROE) and market based measures (Tobin's q) to examine short-term and long-term firm performances with respect to internal and external CSR.

Conclusion

The objective of this study is to expand the present understanding of the linkage between corporate social responsibility and financial performance. We distinguish CSR into internal and external CSR based on the target stakeholder group. CSR activities which are targeted at the internal stakeholders such as the employees are categorized as the internal CSR, while CSR activities which are targeted at the external stakeholders such as the local community are categorized as external CSR. When taken them individually, internal and external CSR affect positively on firm performance. However, when taken them jointly, the significance of the positive impact of external CSR diminishes while sign and significance of the internal CSR remains same. This finding further confirms that the impact of individual CSR dimension on firm performance vary to a greater degree. Therefore, aggregating individual CSR dimensions together to construct a single construct may produce inconsistent results.

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References

- Aguinis, H., & Glavas, A. (2013). Embedded versus peripheral corporate social responsibility: Psychological foundations. *Industrial and Organizational Psychology*, 6(4), 314–332.
- Amato, L. H., & Amato, C. H. (2007). The effects of firm size and industry on corporate giving. *Journal of Business Ethics*, 72(3), 229–241.
- Blackburn, V. ., Doran, M., & Shrader, C. B. (1994). The dimensions of social responsibility investigating and the consequences for corporate financial performance. *Journal of Managerial Issues*, 6(2), 195–212.

- Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, 29(12), 1325–1343.
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, 4(4), 497–505.
- Chapple, W., & Moon, J. (2005). Corporate social responsibility (CSR) in Asia: A seven country study of CSR web site reporting. *Business & Society*, 44(4), 415–441.
- Christian, K. (2004). Happy employees and firm performance: Have we been putting the cart before the horse? *The Academy of Management Executive*, 18(1), 127–129.
- Coldwell, D. A. . (2001). Perceptions and expectations of corporate social responsibility: Theoretical issues and empirical findings. *South African Journal of Business Management*, 32(1), 49–55.
- Cornelius, N., Janjuha-jivraj, S., Woods, A., & Wallace, J. (2008). Corporate social responsibility and the social enterprise. *Journal of Business Ethics*, 81(2), 355–370.
- Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management*, 15(1), 1–13.
- Fernandez-Kranz, D., & Santalo, J. (2010). When necessity becomes a virtue : The effect of product market competition on corporate social responsibility. *Journal of Economics and Management Strategy*, 19(2), 453–487.
- Flammer, C., & Luo, J. (2017). Corporate Social Responsibility as an employee governance tool: evidence from a quasi-experiment. *Strategic Management Journal*, 38(2), 163–183. <https://doi.org/10.1002/smj>
- Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge university press.
- Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review*, 25(3), 88–106.
- Fuentes-Garcia, F. J., Nunez-Tabales, J. M., & Veroz-herradon, R. (2008). Applicability of Corporate Social Responsibility to Human Resources Management : Perspective from Spain ´ a. *Journal of Business Ethics*, 82(1), 27–44.
- Graves, S. ., & Waddock, S. A. (1994). Institutional owners and corporate social performance. *Academy of Management Journal*, 37(4), 1034–1046.
- Griffin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research. *Business & Society*, 36(1), 5–31.
- Hawn, O., & Ioannou, I. (2016). Mind the gap: The interplay between external and internal actions in the case of corporate social responsibility. *Strategic Management Journal*, 37(13), 2569–2588.
- Heckman, J. J. (1977). Sample selection bias as a specification error. *Econometrica*, 47(1), 153–161.
- Hopkins, M. (2016). *The planetary bargain: corporate social responsibility comes of age*: Springer.

- Hull, C. E., & Rothenberg, S. (2008). Firm performance: the interactions of corporate social performance with innovation and industry differentiation. *Strategic Management Journal*, 29(7), 781–789.
- Jones, T. M. (1995). Instrumental stakeholder theory: A Synthesis of ethics and economics. *Academy of Management Review*, 20(2), 404–437.
- Julian, S. D., & Ofori-Dankwa, J. C. (2013). Financial Resource Availability and Corporate Social Responsibility Expenditures in a Sub-Saharan Economy: The Institutional Difference Hypothesis. *Strategic Management Journal*, 34(11), 1314–1330.
- Kennedy, P. (2003). *A guide to econometrics*: MIT press: Boston, MA.
- Kim, J., Ha, S., & Fong, C. (2014). Retailers ' CSR: the effects of legitimacy and social capital. *Journal of Retail & Distribution Management*, 42(2), 131–150. 2
- Klassen, R. D., & Whybark, D. C. (1999). The impact of environmental technologies on manufacturing performance. *Academy of Management Journal*, 42(6), 599–615.
- Lev, B., Petrovits, C., & Radhakrishnan, S. (2010). Is Doing Good Good For You? How Corporate Charitable Contributions Enhance Revenue Growth. *Strategic Management Journal*, 31(2), 182–200.
- Lindgreen, A., Swaen, V., & Johnston, W. J. (2009). Corporate social responsibility: An empirical investigation of U . S . organizations. *Journal of Business Ethics*, 85(2), 303–323.
- Madsen, P. M., & Rodgers, Z. J. (2015). Looking good by doing good: The antecedents and consequences of stakeholder attention to corporate disaster relief. *Strategic Management Journal*, 36(5), 776–794.
- Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*. *Administrative Science Quarterly*, 48(2), 268–305.
- Matten, D., & Moon, J. (2008). “ IMPLICIT ” and “ EXPLICIT ” CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, 33(2), 404–424.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127.
- Peloza, J. (2009). The challenge of measuring financial impacts from investments in corporate social performance. *Journal of Management*, 35(6), 1518–1541.
- Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saeidi, S. A. (2014). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research*, 68(2), 341–350.
- Seifert, B., Morris, S. a., & Bartkus, B. R. (2004). Having, Giving, and Getting: Slack Resources, Corporate Philanthropy, and Firm Financial Performance. *Business & Society*, 43(2), 135–161.

- Siegel, D., & Vitaliano, D. F. (2007). An empirical analysis of the strategic use of corporate social responsibility. *Journal of Economics & Management Strategy*, 16(3), 773–792.
- Sundaram, A. K., & Inkpen, A. C. (2004). The corporate objective revisited. *Organization Science*, 15(3), 350–363.
- Surroca, J., Tribo, J. A., & Waddock, S. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, 31(5), 463–490.
- Thoradeniya, P., Rebecca, J. L., & Ferreira, T. A. (2013). Sustainability reporting and the theory of planned behaviour. *Accounting, Auditing & Accountability Journal*, 28(7), 1099–1137.
- Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85(4), 411–427.
- Ullmann, A. . (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of U. S. firms. *Academy of Management Review*, 10(3), 540–557.
- Van Marrewijk, M. (2003). Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *Journal of Business Ethics*, 44, 95–105.
- Verdeyen, V., Put, J., & Buggenhout, B. van. (2004). A social stakeholder model. *International Journal of Social Welfare*, 13(4), 325–331.
- Vives, A. (2006). Social and environmental responsibility in small and medium enterprises in Latin America. *Journal of Corporate Citizenship*, 21, 39–50.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18(4), 303–319.
- Wang, J., & Coffey, B. S. (1992). Board composition and corporate philanthropy. *Journal of Business Ethics*, 11(10), 771–778.
- Wood, D. J. (1991). Corporate social performance revisited. *Academy of Management Proceedings*, 16(4), 691–718.
- Wood, D. J. (2010). Measuring corporate social performance: A review. *International Journal of Management Reviews*, 12(1), 50–84.
- Wood, D. J., & Jones, R. E. (1995). Stakeholder mismatching: A theoretical problem in empirical research on corporate social performance. *The International Journal of Organizational Analysis*, 3(3), 229–267.

MEASURING EMPLOYEES' EMPOWERMENT AT HIGHER EDUCATION INSTITUTIONS

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Abstract

Employee empowerment has become a popular management strategy and many managers and professional in various organizations claim to be practicing it. The objective of this study was to assess the construct validity and internal consistency of the Psychological Empowerment Questionnaire (PEQ) by administrating the questionnaire to employees in selected private higher education institutions in Republic of Macedonia. Psychological empowerment comprising four cognitive dimensions i.e. meaning, competence, self-determination and impact in the context of private higher education institutions is being validated using exploratory factor analysis. It is recommended that management of higher education institutions can use these findings and use the PEQ to measure the psychological empowerment and hence to improve the level of psychological empowerment of the employees.

Keywords: management; employee; private higher education; psychological empowerment; academia

JEL Classifications: J5, L6, M00, M54

INTRODUCTION

Employee empowerment is considered by many organizational theorists and practitioners to be one of the most important and popular management concepts of our time. Empowerment of the employees in the workplace provides them with opportunities to make their own decisions with regards to their tasks. Today many managers are practicing the concept of empowerment among their subordinates to provide them with better opportunities. Companies ranging from small to large and from low-technology

manufacturing concerns to high-tech software firms have been initiating empowerment programs in attempts to enhance employee motivation, increase efficiency, and gain competitive advantages in the turbulent contemporary business environment. Empowerment is a desirable management and organizational style that enables employees to practice autonomy, control their own jobs, and use their skills and abilities to benefit both their organization and themselves.

The word "empower" has potency and strength. Similar to the concept of "motivation," the most common misuse of the idea of empowerment is that one person can empower another. Empowerment is an inner-to-outer dynamic, most useful when preceded by silence and awareness of inner guidance. Empowerment is not simply another way to "get" something, it's a condition that supports you in living life fully. It is the process of providing production and managerial guidelines, and then allowing employees to make the day-to-day decisions that affect their job duties. Empowerment is the process of enabling or authorizing an individual to think, behaves, take action, and control work and decision making in autonomous ways. It is the state of feeling self-empowered to take control of one's own destiny.

The problem for most executives is that managing employees is complex. An organization may simultaneously be working on employee empowerment and several other programs designed to improve performance. The key goal for managers is to understand the balance of performance elements with employees and trust their employees by empowering them to help the organization.

Empowerment represents a kind of moral hazard for managers (Pfeffer at all, 1998); depends on the ability of the manager to reconcile the potential loss of control inherent in sharing power with the need to empower employees for higher levels of motivation and productivity that often come with empowerment (Mills & Ungson, 2003). To reduce the risk of the moral hazard, managers and organizations can (1) set clear limits and boundaries as to what level of empowerment is appropriate so employees know what is acceptable (Blanchard et al, 2001; Seibert et al., 2004), (2) build trusting relationships in which employees are less likely to operate on self-interest, and (3) measure and reward key performance goals to ensure that individual and organizational goals are aligned (Spreitzer & Mishra, 1997). Employee empowerment is considered by many organizational theorists and practitioners to be one of the most important and popular management concepts of our time. Empowerment of employees in the work place provides them with opportunities to make their own decisions with regards to their tasks. Today many managers are practicing the concept of empowerment among their subordinates to provide them with better opportunities. Companies ranging from small to large and from low-technology manufacturing concerns to high-tech software firms have been initiating empowerment programs in attempts to enhance employee motivation, increase efficiency, and gain competitive advantages in the turbulent contemporary business environment. Empowerment is a desirable management and organizational style that enables employees to practice autonomy, control their own jobs, and use their skills and abilities to benefit both their organization and themselves (Heathfield, 2000).

The above discussion suggests that a need for psychological empowerment exists for empirical research on psychological empowerment, and more specifically regarding a tool that can be used to assess the level of psychological empowerment of employees in higher education organisations. However, such a tool has

to be proven reliable and valid and because no studies have been reported regarding the reliability and validity of a measuring instrument of psychological empowerment in Macedonia. If psychological empowerment can be measured in a reliable and valid manner, interventions can be implemented to promote the empowerment of employees.

The objective of this study was to determine the construct validity and reliability of the Psychological Empowerment Questionnaire.

PSYCHOLOGICAL EMPOWERMENT

Psychological empowerment exists when employees perceive that they exercise some control over their work life. Various schools of thought regarding psychological empowerment have evolved over time. Conger and Kanungo (1988) classified empowerment in terms of five stages. The first stage entails the diagnosis of conditions within the organization that are responsible for the feelings of powerlessness among employees. This leads to the use of empowerment strategies by managers in stage two, directed at removing the external conditions responsible for powerlessness. Thomas and Velthouse (1990) propose a cognitive model in which empowerment is shaped by an individual's work context and personality traits. According to them, psychological empowerment consists of a set of four cognitions reflecting an employee's orientation to his or her role, namely meaning (i.e. the value of his or her work), competence (i.e. his or her capability to perform the work), choice (i.e. the choice in initiating and regulating actions) and impact (i.e. the ability to affect organizational outcomes). Spreitzer (1995) modified the model of Thomas and Velthouse and defined empowerment as a motivational construct manifested in four cognitions: meaning, competence, self-determination and impact. According to Spreitzer, psychological empowerment reflects an individual's active orientation to his or her work role and consists of cognitions that are shaped by the work environment rather than a fixed personality attribute. According to Menon (2001), psychological empowerment represents a psychological state that can be measured. It is regarded as a continuous variable, meaning that people can be viewed as either more or less empowered rather than empowered or not empowered. The four dimensions of psychological empowerment, namely meaning, competence, self-determination and impact, combine additively to create an overall construct of psychological empowerment. The lack of a single dimension will deflate but not completely eliminate the overall effect of experienced empowerment (Spreitzer, 1995). In summary, they are defined as follows: 'Meaning' is termed as "the value of a work goal or purpose, judged in relation to an individual's own ideals or standards" (Spreitzer, 1995). It reflects a sense of purpose or personal connection to work (Mishra & Spreitzer, 1998). Quinn and Spreitzer (1997) state that empowered people feel that their work is important to them and they care about what they are doing. 'Competence' or 'self-efficacy' is "an individual's belief in his or her capability to perform work role activities with skill" (Spreitzer, 1995). It indicates that individuals believe that they have the skills and abilities necessary to perform their work well (Mishra & Spreitzer, 1998). This dimension is labeled competence rather than self-esteem because of a focus on efficacy specific to a work role. 'Self-determination' is an individual's sense of having choice in initiating actions. It reflects a sense of freedom about how individuals do their own work (Mishra & Spreitzer, 1998). Self-determination relates to the opportunity to select task activities that make sense and

to perform in ways that seem appropriate (Quinn & Spreitzer, 1997). 'Impact' is the degree to which a person can influence strategic, administrative or operating outcomes at work. It describes a belief that individuals can influence the system in which they are embedded (Mishra & Spreitzer, 1998). This describes an individual's ability to influence outcomes at work. Quinn and Spreitzer (1997) state that impact is the accomplishment one feels in achieving goals. The feeling of perceived impact involves the sense that employees' activities are really accomplishing something and that others listen to them. (Spreitzer, 1995). The above-mentioned four dimensions represent the psychological perspective of empowerment.

MEASUREMENT OF PSYCHOLOGICAL EMPOWERMENT

Psychological empowerment was measured at a private university in Skopje/Macedonia by using 12 items from Spreitzer (1992, 1995b) based on four dimensions, namely meaning, competence, self-determination and impact. The scores from these dimensions are averaged to form an overall score for psychological empowerment for each respondent. The PEQ contains three items for each of the four sub dimensions of psychological empowerment (for example, Meaning: 'The work I do is meaningful to me'; Competence: 'I have mastered the skills necessary for my job'; Self-determination: 'I have significant autonomy in determining how to do my job'; and Impact: 'I have a great deal of control over what happens in my department'). Respondents were simply asked to indicate their agreement with the above items on a 5 points Likert scale ranging from "strongly disagree" to "strongly agree".

The problem with most of the studies that focused on the construct validity of the PEQ is that they made use of exploratory factor analyses. Exploratory factor analysis is used primarily as a tool for reducing the number of variables or examining patterns of correlations among variables (Tabachnick & Fidell, 2001). Decisions about the number of factors and rotational scheme are based on pragmatic rather than theoretical criteria. Confirmatory factor analysis, in which different competing theoretical models can be tested, is appropriate when the aim is to find the best fitting theoretical model. Confirmatory factor analysis also makes it possible to specify first-order and second-order latent variables. Notably, the literature review showed that deviations for the four-factor model of psychological empowerment were observed when exploratory factor analysis was implemented. Based on the above discussion, the following hypothesis is formulated for this study:

Hypothesis 1: Psychological empowerment, as measured by the PEQ, is a four-dimensional construct (meaning, competence, self-determination and impact).

Description of Sample:

For our study, there were forty-two participants, or 80% of the employees. Majority of employees (88%) were younger than 40, or the ages of our participants range from the lowest of age twenty four to the highest of age sixty-two. More men (55%) than women (45%) participated in the research. The majority of employees as it is expected (32) had a level of highest education (PhD and MCs), or 31 of the respondents are academic stuff and 11 administrative.

VERIFICATION OF PSYCHOLOGICAL EMPOWERMENT DIMENSIONS

The analysis was carried out with the SPSS 15.0 program (SPSS, 2006). The reliability and validity of the PEQ were assessed by means of Cronbach alpha coefficients and factor analysis. Descriptive statistics (means and standard deviations) were computed to describe the data. Table 1 below shows the mean and standard deviation for each factor. Low rating in any dimension will lower overall empowerment. Therefore, higher ratings in all dimensions are needed to ensure a high level of empowerment (Lee & Koh, 2001). According to Brancato (2006), a worker should understand the dimensions of psychological empowerment and the strategies related to this concept. The administration should examine each dimension and be ready to take actions necessary to increase the level of employee agreement towards the dimensions and increase the level of psychological empowerment experienced by employee (Hancer & George, 2003).

Table 1. Descriptive statistics and Cronbach alpha coefficients of the PEQ

	Mean	Std. Deviation	Cronbach alpha
Self-determination	10,9762	2,83263	0.836
Impact	9,5952	2,74137	0.846
Meaning	13,5714	1,50029	0.724
Competence	13,9286	1,27629	0.720
Psychological Empowerment	48,0714	5,63263	0.807

Author's calculation

Competence and Meaning received the highest evaluation compared to other dimensions of psychological empowerment. This shows that employees feel that they are competent without an inconsistency between his or her personality and the job and their work is meaningful and important to them. However, comparatively the level of impact received the lowest evaluation by the respondents. This means that employees do not really feel that they can influence their work outcome. They might not feel that their work can affect the overall goal achievement and do not really believe that he/she can influence the strategic output, management and operation in the workplace. Therefore, the dimension of impact should be improved. Being self-determinant means for one that he or she is able to define alternatives and choose between them. The mean of self-determination is in the middle as important factor because it is about taking initiative and feeling competent and responsible about work.

From Table 1 it is evident that the internal consistencies of the four subscales of the PEQ as well as the total scale are highly acceptable, compared to the guideline of 0.70 as set by Nunnally and Bernstein (1994).

Factor analysis utilizing principal component method with varimax rotation was carried out and identified four factors that explained 73% of the variance. This means that a large part of variances was caused by the first four factors. Hence, this study supported Spreitzer's (1992) theory that states that psychological empowerment is composed of four dimensions.

CONCLUSION

The aim of this study was to assess the construct validity and internal consistency of the PEQ for employees in selected organizations. This study proves the validity and reliability of the psychological empowerment scale (Spreitzer, 1992) in the work context of private higher education institutions. The results show that the PEQ can be assumed invariant across a test and replication sample of employees in selected universities in Macedonia. A four-factor model (including competence, meaning, impact and self-determination) of psychological empowerment fits the data best. The four subscales of the PEQ and the total scale show highly acceptable internal consistencies. The results of this study provide support for the construct validity of the PEQ in selected universities. The conclusion of the present study is similar to those of other related empirical studies. Similar study is hoped to be carried out in a public university as well. Future research could also compare the level of psychological empowerment and innovative behavior of employees from private higher education institutions with those from public higher education institutions. Clearly, more research is needed to establish the predictive, convergent and discriminant validity of the PEQ. Larger sample sizes might provide increased confidence that study findings would be consistent across other (similar) groups.

REFERENCES

- Blanchard, K., Carlos, J., & Randolph, A. 2001. Three keys to empowerment. San Francisco: Berrett-Koehler. 46
- Brancato, V. (June, 2006). Enhancing psychological empowerment for nurses. The Pennsylvania Nurse. Pennsylvania Nurses Association. p. 31.
- Conger, J. A. & Kanungo, R. N. 1988. The empowerment process: Integrating theory and practice. *Academy of Management Review*, 13: 471-482.
- Corsun, D. & C. Enz (1999). Predicting psychological empowerment among service workers: The effect of support-based relationships. *Human Relations*, 52(2), 205-224.
- Eylon, D. & Bamberger, P. 2000. Empowerment cognitions and empowerment acts: Recognizing the importance of gender. *Group and Organization Management*, 25: 354-372.
- Hancer, M. & George, R. T. (2003). Psychological empowerment of non-supervisory employees working in full-service restaurants. *Hospitality Management*, 22: 3 -16.
- Lee, M. & Koh, J. (2001). Is empowerment really a new concept? *International Journal of Human Resource Management*, 12(4): 684-695.
- Liden, R.C., & Arad, 1996. A power perspective of empowerment and work groups: Implication for HRM research. In G.R. Ferris (Ed.), *Research in personnel and HRM*, vol. 14:205-252. Greenwich, CT: JAI Press.
- Menon S.T. (2001) Employee Empowerment An Integrative Psychological Approach, *Applied Psychology An International Review*, 50, (1), 153-180
- Mills, P.K., & Ungson, G.R. 2003. Reassessing the limits of structural empowerment:

Organizational constitution and trust as controls. *Academy of Management Review*, 28: 143- 153.

Mishra, K., Mishra, A., & Spreitzer, G. 1998. Preserving employee morale during downsizing. *Sloan Management Review*, 39(2): 83-95.

Nunnally, J.C., & Bernstein, I.H. (1994). *Psychometric theory* (3rd edn.). New York: McGraw-Hill.

Peccei, R. & P. Rosenthal (2001). Delivering customer oriented behavior through empowerment: an empirical test of HRM assumptions. *Journal of Management Studies*, 38(6), 831-857.

Pfeffer, J., Cialdini, R. B., Hanna, B., & Knopoff, K. 1998. Faith in Supervision and the Self-Enhancement Bias: Two Psychological Reasons Why Managers Don't Empower Workers. *Basic and Applied Social Psychology*, 20: 313-321.

Quinn, R.E., & Spreitzer, G.M. (1997). The road to empowerment: Seven questions every leader should consider. *Organizational Dynamics*, 26(2), 37-48.

Seibert, S.E., Silver, S.R. & Randolph, W.A. 2004. Taking empowerment to the next level : A multiple-level model of empowerment, performance and satisfaction. *Academy of Management Journal*, 47(3): 332-349.

Siegall, M., & Gardner, S. (2000). Contextual factors of psychological empowerment. *Personnel Review*, 29, 703-722.

Spreitzer, G. M. (1992). When organizations dare: The dynamics of psychological empowerment in the workplace. UMI Microform Number 3011067. Ann Arbor: Bell &

Howell Information and Learning Company

Spreitzer, G. M. (1995a). An empirical test of a comprehensive model of intrapersonal empowerment in the workplace. *American Journal of Community Psychology*, 23 (5): 601-629.

Spreitzer, G. M. (1995b). Psychological empowerment in the workplace: Dimension, measurement, and validation. *Academy of Management Journal*, 38(5): 1442-1465.

Spreitzer, G.M., & Mishra, A.K. 1997. Giving up control without losing control: Trust and its substitutes' effects on managers' involving employees in decision making. *Group and Organization Management*, 24(2): 155-187.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics* (4th edn.). Boston: Allyn and Bacon.

Thomas, K. W. & Velthouse, B. A. 1990. Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review*, 15: 666-681.

RESEARCH ON THE TEACHING QUALITY STRUCTURE OF SINO FOREIGN JOINT UNIVERSITY AND ITS INSPIRATION--A SURVEY FROM XJTLU UNIVERSITY¹

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Abstract

With the Chinese economy' rising, the development of Sino foreign joint university also rapidly smoothly developed. As one of the few China jointly University, the teaching quality of Xi'an Jiao Tong - Liverpool University (XJTLU) has a typical characteristics of its remarkable advantage. This research through the analysis on the internal structure of its teaching quality, saying that there are three aspects playing very important roles: one is the teaching management system better rely on high efficient but simple functions; second is the research-led training or teaching process can guide teachers, students and teaching itself to stimulate the potential; third is the teaching quality assurance system essentially can effectively guide and

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control the teaching quality of higher education on the right way. It is proved that the teaching quality orientation system can flexibly adapt to the development of education industry.

Keywords: Sino foreign Joint University, teaching quality; Research-Led training/teaching

1. Background

With the rapid development of China's economy in recent years, the gradual opening of foreign joint universities in China has increasingly recorded, for example, Kunshan Duke University, Ningbo Notting Hill University, Xi'an Jiaotong Liverpool University (XJTLU), etc., In addition there are other forms, they are commonly called the branches-universities, means some overseas schools came to China to establish branch campuses, such as Shanghai New York University and Hong Kong Chinese University in Shenzhen. So they have a good growth space, because globalization makes economic, cultural and other aspects of the high degree of integration, so that information sharing and resource sharing in order to look for a common way to develop. University has been able to develop, the core of the quality of teaching is recognized by the industry. So, this article revolves around this core, seeks to provide the components and the mechanism that push its rapid development, especially on teaching quality through knowledge mobilization, knowledge delivery, teaching and learning in China's cross-cultural context.

2. Referent Review

2.1 General literature

The quality of teaching is the fundamental of educational institutions. Scholars have formed a consensus in this regard. For instance, Mok (2010) highlights that universities across the globe have developed new teaching and learning strategies that seek to enhance curricula multiculturalism and internationalization. He says that there is a need to enhance world-wide competence of tertiary graduates across different parts of the world with a wholistic approach in the curricula and ways to change academic learning and teaching from a teacher-centered to a student-centered orientation. In a recent study on learning design (LD), Rienties and Toetenel (2016), concluded that "researchers, teachers and policy makers need to be aware of how LD choices made by teachers influence subsequent learning processes and learning performance over time". Sandu, Frunza, and Roman (2014) Agree that, for a higher quality education it is necessary to devise a new strategy which enhances teaching quality, as well as methods for developing better teachers. Yusof, Roddin, and Awang (2015) highlight that teaching approach is perceived to be of priority because of its significance in curriculum delivery. Uzunboylu, Ozdamli, Rosendo-Ríos, Messia-de-la-Cerda, and Laguna-Sánchez (2013) propose that despite the country in which the institutions operate, it is essential to develop effective teaching assessment models that standardize structures in educational institutions. A study on learning design, Rienties and Toetenel (2016), concluded that "learner satisfaction was strongly influenced by learning design". Osma and Radid (2015), Confirm that most studies indicate the importance of design in developing quality. The need for innovation cannot be ignored. Marks-Maran (2015), Define innovation in teaching, learning and assessment as a process

of adopting new teaching ways. In such a scenario, the dynamic environment and diverse global cultures, socio integration becomes a necessity.

The paper thought, the excellent degree of university education is clearly reflected in the quality and content of leading and adapting to the social development, the socio integration part of adaptation. As such, modern universities have become an integration of numerous complex activities in which stakeholders need adequate information and expertise to manage these big socially responsive institutions. They increasingly become the huge scale, variety function organizations with complex activities, many stakeholders and social responsibility for a wide range of social organizations, hence the need to a large extend of information and expertise to carry on effective management. The future of campus Education lies not only in the data and the internet but also in the educational wisdom to respond to the development challenges in a more intelligent way. This means Educational wisdom, the wisdom of campus construction, is the focus of education quality which entails that and in the stage of the wisdom of the campus, all design and construction must be developed closely around teaching, study, service, the realization of hardware network, digital content, personalized learning, research collaboration and intelligent service. Such, as in most cases, these are methods, new to an organization, that are adopted from elsewhere via different academic and professional sources. For effective implementation, innovations should undergo intense evaluation through research. As the core of the teaching aspect, teaching quality will exactly guide the University's discipline development, XJTLU is fresh evidence.

2.2 General model of Xi'an Jiao Tong – Liverpool University

XJTLU, located in the beautiful city of Suzhou, is jointly built by the Chinese and British University in order to develop China's leading Sino foreign cooperative university. It is an international learning community, which has created new paradigms in Chinese higher education through its unique transnational model Joint venture between Xi'an Jiao Tong and University of Liverpool as established in 2004. It had an initial enrolment of 164 international students in 2004 with the first batch of graduates graduating in 2010. Through its innovative learning and teaching methodologies, XJTLU continues to attract students and academic staff from around China and internationally¹.

In the survey, International Business School Suzhou (IBSS) provided the materials, this study sums up the general teaching model in Figure 1, a prospective and effective teaching quality maintenance structure which is comprised of the important parts that have very strong practical linkages among each other. The total teaching model refers to ways in which learning instructions are delivered. The vision supplies the following mission: research-led training and research driven outcomes, where the two work together to guarantee the teaching quality level, the aim being Professionalism. Here, Research-led training mission is where the instructor utilizes research to benefit student learning. The research driven outcome based model mission is where the educational approach is centered on what each student should achieve in research. Professionalism will supply the expected conduct from a person who is trained for a particular job. The total teaching model is put in place to make sure that high quality levels of instruction and learning are achieved and maintained.

¹ The Research Group conducted in-depth interviews from the project: Innovative Education Management Training Program of IBSS of XJTLU for School of Management Teachers` Development of Jiangsu University on 2016.3.18-3.20.

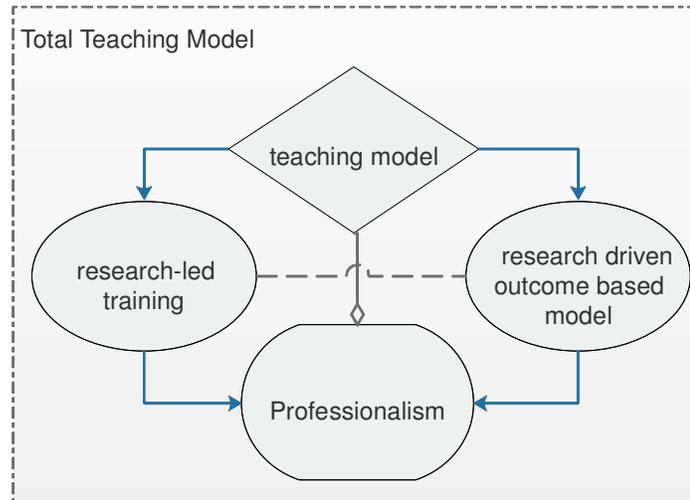


Figure 1

The study divides the above model into two key contents, that is, teaching quality system and teaching management system. Teaching quality system focuses on systematic and participatory teaching and learning activities that have distinctive features and principles. Teaching management system focuses on simplifying, yet making more effective, the organizational structure of a joint university. Also, the teaching management system designs relatively scientific, protected and complete criteria for assessing quality and details of teaching and management along the way. The following explains the two systems separately.

3. Decomposition of XJTLU's Teaching Quality System

XJTLU teaching Quality system in fact embodies these aspects, student-centered teaching and concrete assurance system.

3.1 Research-Led training /teaching process

Student-centered teaching is not unique to XJTLU, however, XJTLU put into practice the process in teaching. XJTLU built its own features to guide its object in Chinese context with the following elements: integrity, innovation, internationalism, and inspiration, which exactly push and deeply impact and exercise learners.

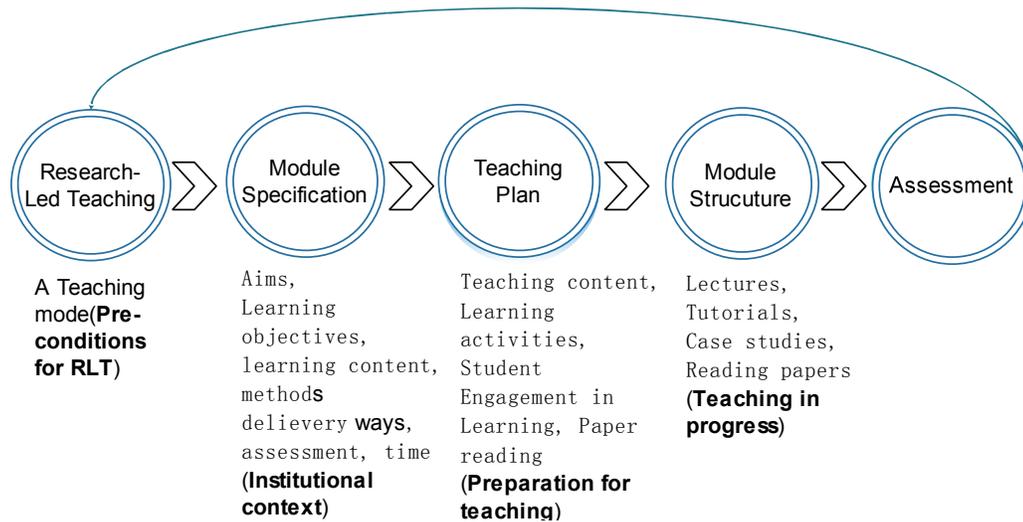


Figure 2 the teaching quality process

Figure 2 shows its teaching basic process where learners are centered, from Research-Led Teaching passing through module specification, teaching plan, module structure to assessment. This Design Process follows the identified logical thinking of a step-by-step development under research-led teaching. Below the research-led teaching is the module specification which focuses on the aims, objectives and content, among other things. Module specifications greatly inform the teaching plan thus letting teaching content, learning activities, and so on work effectively. The module structure through lectures, case studies, reading papers, tutorials, and so on controls the quality implementation. The process ends with assessment, the outcome thereof then drives the research-led teaching approach. Now, step by step, this study provides details on teaching to explain some reasons why XJTLU rapidly develops. XJTLU, by adopting the process, has a strong theory source and the thinking assumption. Through the deep communication findings, such as focus on teaching quality element, the study finds that the first important distinctive feature is Design and Delivery of Research-Driven Module, under which is the research-led teaching and outcomes-based module design (including module design process and session preparation that is research-led teaching and student engagement). XJTLU model has its theoretical basis on the relation between research and teaching links. Firstly, about research-led teaching: where curricula follow research Interest; research-oriented teaching is where teaching involves concentration on the process of research; research-based teaching is where curricula focus on inquiry-based activities; research-informed teaching is where teaching draws upon systematic enquiry into the teaching and learning process itself. However, Why Research-led training (RLT) ? The ever increasing concerns about research have raised questions about the relationship between research and teaching. RLT is content driven, skills driven, engagement driven and is informed by pedagogic research. Presenting the RLT concept, investigation supplies the RLT activities into five domains that direct teaching:

- (i) Preconditions for research-led training. These are the assumptions that define the parameters of research-led training.
- (ii) Preparation for teaching – How to prepare for teaching. Research-led teaching influences the way in which a teacher prepares for a teaching session.
- (iii) Teaching in progress – How to carry out the teaching;
- (iv) The backward glance – Teachers’ activities that follow after teaching;
- (V) The institutional context- How research and teaching are organized.

These independent five parts, when brought together they provide a framework for research-led training whereby preconditions and preparation focus on long-term planning whilst teaching in progress and backward glance focus on the quality of the implementation. The continuous improvement of the institutional context is influenced by both internal and external factors. Teaching here is the most important behavior and the teaching quality is a fundamental. The right research-driven training, outcomes based model, together they build the teaching effective and efficiency mechanism. More importantly, is the professionalism oriental “live” elements.

About the domains of Research-led Teaching, the assumptions related to research and teaching which define the limits and possibilities for research-led teaching, these are preconditions for research-led teaching. And, how the academic prepares for teaching is the preparation for teaching; how the teaching is actually carried out present teaching in progress; and what the teacher does after the teaching can reflect on or disseminates the teaching, this is the backward glance; finally, how research and teaching are organized point out the institutional context. The reason why Research-led Teaching is concerned, because of these remarkable characteristics: content-driven; skills-driven; engagement-driven; supported by many Pedagogic Researchers.

Why select Outcomes-based Module Design? Because of two important parts, one is Module Design Process; another is Session Preparation, which consists of Research-led Teaching, student Engagement in Learning and assessment. More detail on the Module Design Process at XJTLU shows that module specification inherits from Liverpool University module documents and includes such elements as aims, learning objectives, syllabus (learning content), method of learning and teaching, assessment, mode of delivery and hours. The design process concludes with intended learning outcomes(ILOs) and Tentative Module Teaching Plan where the former undertakes to transfer leaning outcomes into a set of ILOs, and the latter, for example, will generally cover teaching content, learning activities, formative assessment (paper reading, problem-solving and group project through tutorials) and summative assessment (on-spot exams). On Session Preparation, intended Learning Outcomes (ILOs) guides students, then combines the alignment of ILOs with Research-led Teaching, allows student engagement in learning and finally aligns ILOs with Assessment.

3.2 Teaching assurance system

Teaching management mode mainly points to Teaching Quality Assurance System with the aim of keeping teaching affairs within a smoothly operational framework.

The system ensures XJTLU keeps on the right path. This system hinges on respective committees and

boards that hold periodic meetings and reviews aimed at assessing progress at different levels and functions of the complete teaching structure. For example, the board of examiners moderates the examinations and the resultant student assessments in view of maintaining quality. Another example is the international advisory board which regularly meets to review if the university is upholding quality international standards. The quality assurance system, although simplified to avoid duplication of roles, has proved to be effective in upholding quality standards.

In figure 3, assurance of learning in XJTLU is overseen by University learning and Teaching Committee.

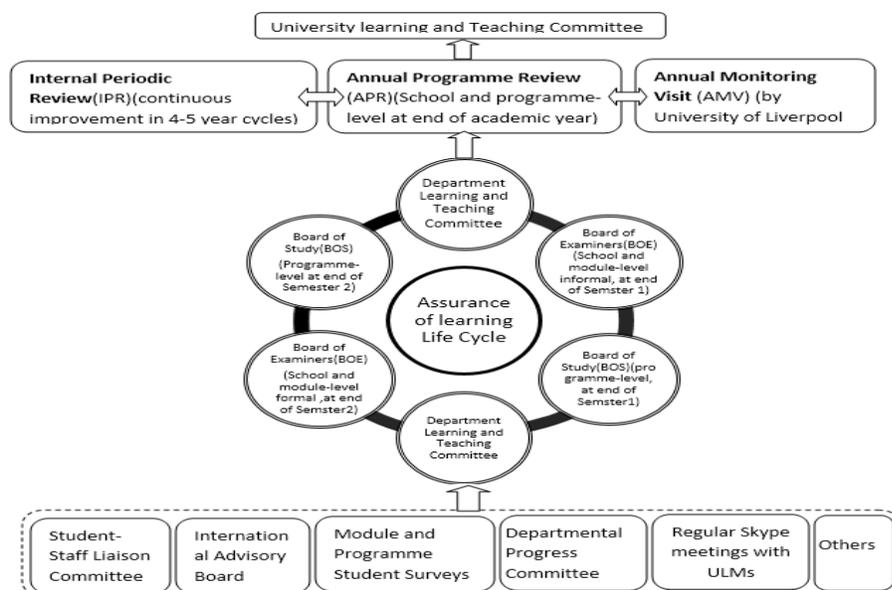


Figure 3 IBSS Annual Assurance of Learning Life cycle teaching quality (Note: From XJTLU’s communication learning Project investigation)

Figure 3 illustrates the teaching quality assurance life cycle. In this cycle, committees/boards exist at all levels of the teaching structure. At the base of the cycle, the operational committees that are tasked with implementing and monitoring of day to day activities. For example, the student-staff liaison committee exists at this level with the task of ensuring smooth dialogue between students and staff. These committees conduct regular meetings as they seek to address day to day issues. These operational committees interact with boards that exist at managerial level. At the managerial level, boards meet, in most cases annually or bi-annually, to set up parameters for effective implementation by the operational level committees. These managerial boards, for example, the board of examiners draft relevant policies and procedures according to expected quality standards. To conclude the structure, review and assessment committees/boards exist and often meet annually and in the long run to evaluate the effectiveness of the teaching structure and of the chosen learning activities. At the helm of the structure, the university teaching and learning committee that oversees the structure.

In the structure, on the class lecture, the teach mode will design a didactic by the teacher and collaboration with peer learning, except lecture notes preparation, specifying research tasks to students carrying out after learning, the teacher will help learners by identifying key knowledge sources and

gaining feedback from them. Most important is students learning in and outside the classroom. Students need to read and learn from learning materials provided, more generally are engaging the group presentations in tutorial to report their findings and actively participate in group discussion. Outside the classroom, students should actively read and discuss research papers with peers, do more research on the case to prepare presentation collaboratively, help learners build understanding about the importance and operation, finally get the reflection from learners.

Learner’s engagement in research groups or individually is the classical mode. On the lectures, the teacher will use event study methodology or refer to key recent research papers to explain or identify the reasons or results. Especially important is the Assessment Method (Criteria), for example, for Course work, students demonstrate their motivations to identify problems and show the capability of solving problems by searching for relevant information, and even reading academic papers. For instance, if is group presentation, students clearly specify or deeply analyze the causes of this event from a special perspective, and well understand the operation.

Additionally, multi method` case study varied is a very effective way to train learners, which has different kinds, for example, typical written case-method; video Case Studies; student-led Seminar (Case-based); industry Guest Speakers and Corporate Visits Method 6: Case Writing.

The study thought XJTLU already established its own features.

3.3 Teaching management system

Teaching management system is another XJTLU`s effective means and aim. Professionalism is at the core of this system just as Teaching Quality is inadequate for the sustainable development of XJTLU if professionalism is left outside. Meanwhile, the teaching management aim plays a very important role in teaching quality and it reflects the level of professionalism, as viewed in figure 4.

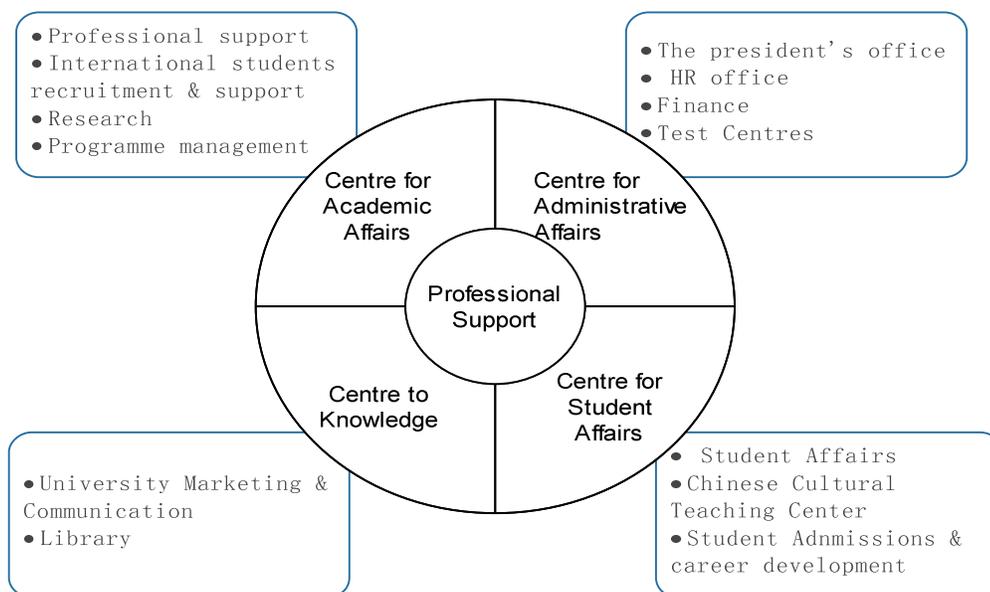


Figure 4(Note: From XJTLU`s communication learning Project investigation)

Figure 4 show that management teaching in XJTLU involves four important structural parts. The four centers have different functions. The center for academic affairs provides support for recruitment of international students and professional support among other things. The center for administrative affairs provides support in Finance, Human resources and other administrative functions. The center for student affairs deals with student affairs such as career development, and cultural teaching whilst the center for knowledge provides the library, marketing and communication support. The structure points out that the service object is the student for their academic, social and career development in preparation for a bright future life experience. The four centers provide a systematic and comprehensive guarantee system that covers the learning and all other educational needs, such as study and life support.

From the above, it is noted that the teaching model of IBSS in XJTLU has distinctive quality features. Because of XJTLU growth within the Chinese university ecosphere, it greatly caters for Chinese psychological needs. This can be a very good interpretation of both international and at the same time, there is no loss of mainstream characteristics, and the reasons for the favor.

In a word, XJTLU has well defined vision and mission which communicate the desired outcomes. Part of its mission is to educate technical and managerial professionals who have international perspectives and competitive capabilities. In its teaching system, for example, the university puts much emphasis on research-led activities whereby International Business School staff is grouped into different areas of expertise in order to steer research collaboration and foster support between academics of similar or related research areas. In the clusters, there are discussions and exchange of ideas that seek to advance knowledge in their particular areas as well as collaborate on various projects. Common cluster activities include joint research, funding applications, and research seminars, invitation of guest speakers, joint consultancy, knowledge transfer activities, and services to the community, among others.

4. Challenges and Inspiration to the traditional teaching quality

In the modern dynamic world, great universities continue to face different challenges. XJTLU as a good example of the joint universities, it identified the following main challenges for the traditional university teaching development:

4.1 Instructional Challenges

Non-joint universities generally have the longer history, their concrete management system inherited very rigidly, especially on the moderate style of teaching management pattern, lack of flexibility. Specifically, those traditional instructional challenges are obstacles that prevent students from achieving specific learning outcomes to keep up the changes of the world, which can be motivational, cognitive, or even logistical in nature. For instance, the identified instructional challenges some time keep the gaps with world-class universities, including language, teaching style, communication and less practical experience, among others.

4.2 Managerial challenges

For international students in Chinese local Universities, general there is an observed need for optimal division of labor which in turn enhances administrative focus on supporting the University's primary activities often leading to increased funding for research and teaching. However, the specific works from

the most of them exist some correlation problems.

4.3 Social challenges

Social experiences by international university students can sometimes pose major challenges to study, play, socializing, and living. They still greatly face language barriers and further to that, social activities are seldom held collaboratively with different sources students. For non-jointly universities, this is much more difficult, either for students or for the teaching quality system of those universities themselves.

4.4 Curriculum challenges

The dynamic socio-economic trends within the global village continue to attach new international meanings to universities. Universities need to align their curriculum with these new meanings. There is therefore a need for traditional Universities to internationalize its curriculum, for clarity of its curriculum goals and objectives and that these be communicated effectively across all levels.

These above challenges are not all universities will encounter. However, Lessons and experiences from the advanced models are always able to provide beneficial inspiration for their industries` teaching, including traditional schools, as following.

Firstly, on language, for international teaching, fluency in language is basic. A good command of class language is important for effective teaching and communication between Chinese teachers and international students. It is also important for the global relevancy of Chinese teachers. The study proposes that the administrators, students and teachers work together to establish a language support service that addresses the language needs of the relevant departmental stakeholders. Currently international students are learning the local language but rarely does the content include language material that is relevant to the students` areas of study. English is the instructional language in the international school. At least half of the professors in traditional universities highlighted that their English proficiency was not high. Most of student participants cited difficulties in communicating with their professors due to a language barrier. The students highlighted that interaction and communication inside and outside the classroom were greatly compromised due to the language barrier. The language difficulties range from accents, tones and pronunciations. International students also face language difficulties in their social life. They face difficulties in interacting with the local community and service providers such as banks, retailers and others. So to completed management system it`s very important to including student life.

Secondly, the teaching style is also important. To address the challenge of deficient teaching styles, borrowing ideas from the XJTU model, it is important for academic staff to have internationally recognized teacher status. Whereas teachers can be recruited internationally, other options may be considered to equip current teachers with international skills. A teacher-exchange program is one of the options that can be considered whereby departmental lectures can be placed on offshore institutions on an exchange program. It was also established that the teaching style has limited interaction with the students. Most departmental professors highly depend on power point presentations which in most cases they read through swiftly leaving no room for student conceptualization and interaction.

Thirdly, a managerial approach that streamlines the governance structure ensures that there are checks and balances at every level of the teaching process.

Further, reinforcement of curriculum design is an important factor in bringing internationalized curriculum which is relevant to international students; here XJTLU's international curriculum is a good model. Traditional teaching can consider various curriculum collaborative approaches with international professional institutions in pursuit of curriculum relevancy on the international scale. Curriculum design has a major impact on the quality of education, and let the related professors very clear on the established process of setting goals and objectives. Where goals and objectives are available, in most cases these are communicated to students hence students will clear about the goals and objectives of the topics/modules they undertake. Further to that, the choice of topics and teaching methods are to a greater extender left to the professor. Such an approach compromises the design's relevance to the international students' educational needs.

Another important aspect is to redesign the structure. Here, the discussions above lead us to identify the need for structural redesign Structures are responsive to environmental needs hence structural redesigning is a continuous process that is shaped by the dynamic internal and external factors. Because most students believe that the current testing system does not promote students' creativity. Students feel that the testing approach promotes memorizing and reproducing the information during tests.

Teaching is also enriched and enhanced by a teaching environment that values teaching excellence and provides good support for teachers. Such aspects as modern offices, well equipped lecture halls as well as recognition for teacher excellence, among other things are examples of how traditional universities can enhance the teaching environment.

5. Discussion

XJTLU is not a model for Chinese University neither is Chinese Universities models for XJTLU. But from XJTLU, differences and features analysis within this article is for the purpose of indicating how it operates. The traditional Chinese education system by inheriting and carrying forward the Chinese culture should have more innovative rhythm. As with the rapidly changing environment, developing important strengths, constant personnel training, service to the community become the role of innovation. However, learning from each other through benchmarking is necessary since the common goal is to develop students into qualified professional citizens who are equipped to transform societies positively. Issues of sustainability in the face of rapid growth cannot be ignored. There is need to be sure that internal quality assurance processes are firmly embedded that they can be relied upon to provide a strong foundation in the background of rapid growth and expansion. An enhanced teaching quality strengthens the student's ability for application and practice. To achieve this, it is necessary to develop objective, precise and systematic approaches to teaching. It should however be noted that such a comprehensive pedagogic turnaround can be labor intensive and time consuming as it requires adequate scholarly attention, expertise, proper change management and collaborative support. Some universities in China should therefore be cognizant of the need to amend its traditional localized approach and consider applying the findings of this study so that it aligns its academic operations with dynamic international demands. The need to understand international business and academic demands also gives motivation for further development.

6. Conclusion

The survey findings of this study reveals the features existed in XJTU jointly University. As a Sino-foreign joint University, XJTU has international ‘genes’ whose educational goal is to produce ‘citizens of the world’ who are shaped for cross-border, cross-culture and cross-training of professional education. This is the ultimate goal of the present XJTU who’s President Xi Youmin believes that “University is not only a place for learning knowledge. Learning knowledge is just a process and a means, University is a place where students grow up”. His view is that the mission of the university should be “influence”: to influence students, to influence society, through academic research that pushes human civilization forward, this is university’s most fundamental value. Therefore, universities should have the dream; such the university will allow students to grow. Of course, the history of a university generally cannot be ignored as is it plays a major role in influencing the inherent drive. Today different universities have different developmental strengths and judgment wisdom needed to build university’s personalized features positioning. No doubt, the traditional view all time works with education services for human being focus on respect for the dignity of life and society, social justice, cultural diversity, identity, and responsibility for sustainable future of society.

References

- [1] Dearn, J. M. (2010). Innovation in Teaching and Curriculum Design A2 - Peterson, Penelope. In E. Baker & B. McGaw (Eds.), *International Encyclopedia of Education (Third Edition)* (pp. 448-454). Oxford: Elsevier.
- [2] Marks-Maran, D. (2015). Educational research methods for researching innovations in teaching, learning and assessment: The nursing lecturer as researcher. *Nurse Education in Practice*, 15(6), 472-479. doi: <http://dx.doi.org/10.1016/j.nepr.2015.01.001>
- [3] Mok, K. H. (2010). Curriculum and Globalization: Higher Education A2 - Peterson, Penelope. In E. Baker & B. McGaw (Eds.), *International Encyclopedia of Education (Third Edition)* (pp. 403-410). Oxford: Elsevier.
- [4] Osmar, I., & Radid, M. (2015). Analysis of the Students’ Judgments on the Quality of Teaching Received: Case of Chemistry Students at the Faculty of Sciences Ben M’sik. *Procedia - Social and Behavioral Sciences*, 197, 2223-2228. doi: <http://dx.doi.org/10.1016/j.sbspro.2015.07.362>
- [5] Rienties, B., & Toetenel, L. (2016). The impact of learning design on student behaviour, satisfaction and performance: A cross-institutional comparison across 151 modules. *Computers in Human Behavior*, 60, 333-341. doi: <http://dx.doi.org/10.1016/j.chb.2016.02.074>
- [6] Sandu, A., Frunza, A. C., & Roman, I. (2014). LUMEN 2014 - From Theory to Inquiry in Social Sciences, Iasi, Romania, 10-12 April 2014 Qualitative Methods for Determining Students’ Satisfaction with Teaching Quality. *Procedia - Social and Behavioral Sciences*, 149, 825-830. doi: <http://dx.doi.org/10.1016/j.sbspro.2014.08.320>

[7] Uzunboylu, H., Ozdamli, F., Rosendo-Ríos, V., Messia-de-la-Cerda, J. A., & Laguna-Sánchez, P. (2013). 2nd World Conference on Educational Technology Research Proposal of a Model of Teaching Quality Assessment at University Level. *Procedia - Social and Behavioral Sciences*, 83, 883-894. doi: <http://dx.doi.org/10.1016/j.sbspro.2013.06.166>

[8] Yusof, Y., Roddin, R., & Awang, H. (2015). What Students Need, and What Teacher Did: The Impact of Teacher's Teaching Approaches to the Development of Students' Generic Competences. *Procedia - Social and Behavioral Sciences*, 204, 36-44. doi: <http://dx.doi.org/10.1016/j.sbspro.2015.08.107>

[9] Shulian Wu. 2016.

<http://edu.sina.cn/gaokao/bkzn/2016-04-06/detail-ifxqxcnr5380588.d.html?from=timeline&isappinstalled=0>

SKEW CORRECTION IN BRAILLE RECOGNITION SYSTEMS

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ABSTRACT

Recently, several works were proposed for OBR systems, while a little attention was taken for the enhancement techniques over the imported images. The preprocessing stage contains many operations such as: binary conversion, enhancement of dot's shape, and to increase the robustness of the proposed system, we propose a skew correction technique. Experimental results showed high accuracy of skew correction using the proposed technique, and consequently, it increased the cell recognition rates of an OBR system.

Keywords: OBR; Skew correction; Braille; Recognition.

1. INTRODUCTION

For visually impaired people, the most popular method of reading and writing is the Braille system. Nowadays, it is important to convert Braille documents to a digital form in order to facilitate communication between visually impaired and sighted people. These digital forms can be easily maintained, translated to any other language, and they may also be converted into voice, etc. Consequently, Optical Braille Recognition systems (OBR) were developed to achieve these requirements.

OBR systems start with importing a Braille document image using specific equipments such as scanners or cameras. Sometimes, because of the manually importing process, documents may be affected by skewness, which consequently, may affect the recognition of the imported image. That is why an OBR System must take into consideration the skew correction process. Thus, in this paper, a skew correction technique for OBR systems is proposed.

The rest of the paper is organized in six sections. Section 2 summarizes the concepts of OBR systems and the skewness of documents. Section 3 provides a brief review of the related works. Section 4 presents the proposed technique. Section 5 shows the experimental results. Finally, conclusions are summarized in Section 6.

2. BACKGROUND

This section introduces a theoretical background about optical Braille recognition systems and the concept of skewness in text documents.

2.1. Optical Braille Recognition Systems (OBR)

Braille system is the most famous system that enables visually impaired people to create documents which could be read through touch (Al-Salman et al., 2007).

The basic concept of Braille system is the cell. Each cell consists of two columns where a column has three raised dots with a uniform size and position. The dot positions are numbered starting from top to bottom in each column; the three positions in the left column are numbered 1 through 3, and the three positions in the right column are numbered 4 through 6 as shown in Fig. 1. A dot may be embossed or raised at any of the six positions. Thus, there are 64 possible characters that can be represented in a cell.

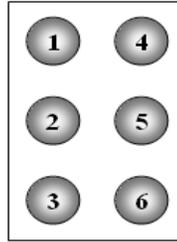


Fig. 1. Braille Cell.

However sometimes, it is difficult for blind people to read Braille documents, and it is also difficult for sighted people to understand what blind people write using Braille system. So, many computerized OBR systems were developed to scan a Braille document and translate it to a textual form in many languages including Arabic language. Furthermore, these textual forms can be converted into voice to help blind and sighted people understand it.

2.2 Skewness

Skewness refers to the rotation in the manually imported image. Actually, it is caused when a document is not well aligned on the scanner. This may cause some problems, specially, when it is important to be edited. Thus, skew angle detection is considered as a very important technique in OBR systems (Abuhaiba, 2003; Ramteke et al., 2011; Najman, 2004).

3. RELATED WORK

This section introduces some efforts in developing OBR systems. Yousefi et al. (2011) proposed a robust statistical method for estimating the scaling, spacing, and skewness parameters in Braille documents. Al-Salman et al. (2011) designed a new approach for adjusting Braille image skewness, their approach is summarized in three steps: segmentation of a Braille image, detection of Braille cells, and the rotation angle of Braille image. Kumar and Gopinath (2011) proposed a two phase method that can detect skew on a wide variety of document images, and they presented a comparison of their method against the simple Hough transformation algorithm. Ramteke et al. (2011) proposed a skew angle estimation and correction for Urdu document images script using moments method. Al-Shamma and Fathi (2010) presented a system for a design and implementation of Optical Arabic Braille Recognition with voice and text conversion, their algorithm achieved high accuracy rate. Abdelmonem et al. (2009) developed an OBR system that is completely invariant to scale of the scanned image, their technique can be applied regardless the grade or the language of the Braille document. Saragiotis and Papamarkos (2008) proposed a technique for detecting and correcting the skew of a regular text document. Nandini et al. (2008) proposed two techniques for skew estimation of binary document images, their algorithms are based on connected component analysis and Hough transform to reduce the computational complexity of Hough transform based skew estimation algorithms. Al-Salman et al. (2007) developed a fully functional Optical Arabic Braille Recognition system to recognize an image of embossed Arabic Braille and then convert it to text. Wong et al. (2004) proposed a software solution prototype to optically recognize single sided embossed Braille documents using a simple image processing algorithm and probabilistic neural networks. Antonacopoulos and Bridson (2004) described a new system that recognizes Braille characters

in scanned single and double-sided Braille document. Najman (2004) proposed a concise definition of the skew angle of document based on mathematical morphology and discussed various possible implementations of this definition. Abuhaiba (2003) proposed two algorithms for skew detection and correction of textual documents depending on finding a horizontal RLSA image of the skewed document.

4. PROPOSED TECHNIQUE

The proposed technique starts by applying a set of pre-processing steps that are applied on the skewed imported Braille document image, as illustrated in the following steps:

- 1) Binarization: is to convert the imported image into a black and white image, as shown in parts (a) and (b) of Fig. 2, this is done by choosing a suitable threshold value to distinguish between the background color and the color of the raised area.

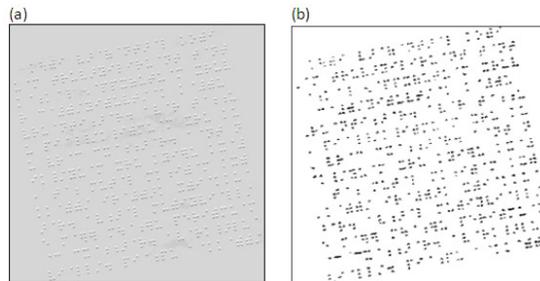


Fig. 2. (a) Imported Braille Image Affected with a Skew. (b) The Imported Image after Binarization.

- 2) Image Preparation: in this step the image is pre-processed by the morphological filters through the line dilation process as shown in Fig. 3.



Fig. 3. Braille Image after Applying the Line Dilation Process.

- 3) Segmentation is applied then a single segment is elected in order to detect the rotation angle as shown in Fig. 4.



Fig. 4. Braille Image for Only One Line Segment.

- 4) To improve the result, it is better to apply thinning process to the selected segment.
- 5) Apply Line Fitting technique over the resulted line segment.
- 6) Find the linear equation for the fitted line. For example, Fig. 5 shows the equation of the line in Fig. 4 after fitting, where the linear equation as depicted in Fig. 5, is: $y = -0.17x + 178.7$.

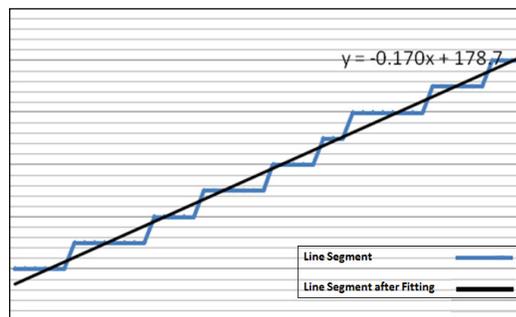


Fig. 5. Line Segment in Braille Image with its Fitted Line Together with its Equation.

- 7) Skew angle Detection: from the slope of the fitted line, we can compute the rotation angle using Eq.1.

$$\theta = \tan^{-1}(S) \quad (1)$$

Where S is the slope of the fitted line. For more illustration, recall the equation of the fitted line in Fig. 5, this means that the slope $S = -0.17$. Now, we can compute θ by using Eq.1, so, $\theta = 10$. We can conclude that the imported image was skewed by angle $\theta = 10$.

- 8) Image Correction: finally you can rotate the image by the angle $-\theta$. In our example, you can rotate the image in Fig. 2 (b), by angle $= -10$ to return the image into its normal form.

Now, the enhanced image is ready to be entered into the OBR system in order to be recognized.

5. EXPERIAMENTAL RESULTS

The proposed system has been tested and evaluated with a wide variety of imported single sided Arabic

Braille documents that are affected by a skew. Different scanners and cameras are used with different resolutions. Also, different types of Braille documents are imported: printed documents and manually written documents. All experiments were performed under the Matlab environment on a PC 3 GHz Pentium IV, with 1GB of memory.

Table 1, shows the results of the proposed system in handling Braille text documents that are skewed in multiple angles.

Furthermore, after inserting the enhanced image to an OBR system¹ high recognition rates were achieved. It is about 98% over the printed documents, and 96% over the manually written documents.

Table 1. Results of the proposed technique in handling some possible skew angles.

The Actual Skew Angle	Skew Angle that Identified by the Proposed Method
5	5
10	10
15	13
25	22
35	32

6. CONCLUSION

In this paper, a skew correction technique was proposed for scanned single sided Braille documents. The experimental results for the proposed technique were encouraging. It showed very good results and high performance not only in skew detection but also in Braille cell recognition.

7. REFERENCES

- Abdelmonem, M., M. El-Hoseiny, A. Ali, K. Emara, H. Abdel_Hafez, and A. Gamal, 2009. Dynamic Optical Braille Recognition (OBR) System. Proceedings of the International Conference on Image Processing, Computer Vision, & Pattern Recognition IPCV'09, July. 13-16, Las Vegas Nevada, USA, pp: 779-786. URL:[http://www.researchgate.net/publication/220809045_Dynamic_Optical_Braille_Recognition_\(OBR\)_System](http://www.researchgate.net/publication/220809045_Dynamic_Optical_Braille_Recognition_(OBR)_System).
- Abuhaiba, I. 2003. Skew Correction of Textural Documents. Journal of King Saud University-Computer and Information Sciences, 15: 67-86. URL: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.105.7629&rep=rep1&type=pdf>.
- Al-Salman, A., A. El-Zaart and A. Gomai. 2011. A New Approach for Adjusting Braille Image Skewness in Optical Braille Recognition. Software Engineering and Computer Systems- Communications in Computer and Information Science, 179: 735-746. DOI:10.1007/978-3-642-22170-5_63.

¹ In this experiment the enhanced image was tested on an OBR system that was proposed by the authors in an earlier work.

Al-Salman, A., Y. AlOhal, M. AlKahal, and A. AlRajih, 2007. An Arabic Optical Braille Recognition System. ICTA'07, April.12-14, Hammamet, Tunisia, pp:81-87. URL: <http://eprints.soton.ac.uk/272253/1/Arabic-OPR.pdf>.

Al-Shamma, S. and S. Fathi, 2010. Arabic Braille Recognition and Transcription into Text and Voice. 5th Cairo International Biomedical Engineering Conference, Dec. 16-18, Egypt, pp: 227-231. DOI:10.1109/CIBEC.2010.5716095. URL:<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5716095&isnumber=5716039>.

Antonacopoulos, A. and D. Bridson. 2004. A Robust Braille Recognition System. Document Analysis Systems VI, Springer Lecture Notes in Computer Science, 3163: 533-545. URL: http://link.springer.com/chapter/10.1007%2F978-3-540-28640-0_50.

Kumar, S. and S. Gopinath. 2011. Two Phase Data Reduction for Hough Transformation to Detect Skew. International Journal on Computer Science and Engineering, 3 (10): 3403-3411. URL:<http://www.enggjournals.com/ijcse/doc/IJCSE11-03-10-084.pdf>.

Najman, L., 2004. Using Mathematical Morphology for Document Skew Estimation. Proceedings SPIE Document Recognition and Retrieval XI, France, pp: 182-191. URL: <http://www.esiee.fr/~info/a2si/sdi/biblio/Category/conferences.html>.

Nandini N, K. Murthy, and G. Hemantha Kumar. 2008. Estimation of Skew Angle in Binary Document Images Using Hough Transform. World Academy of Science, Engineering and Technology. 18: 44-49. URL: <https://nom-ocr-android.googlecode.com/hg/DOCUMENT/DOC%20tai%20lieu%20xu%20ly%20anh%20nghieng/v42-9.pdf>.

Ramteke, R., I. Pathan and S. Mehrotra. 2011. Skew Angle Estimation of Urdu Document Images: A Moments Based Approach. International Journal of Machine Learning and Computing, 1 (1): 7-12. URL:<http://ijmlc.org/papers/02-C00429-R002.pdf>.

Saragiotis, P. and N. Papamarkos. 2008. Local Skew Correction In Documents. International Journal of Pattern Recognition and Artificial Intelligence, 22 (4): 691-710. DOI:10.1142/S0218001408006417. URL:<http://www.worldscientific.com/doi/abs/10.1142/S0218001408006417?journalCode=ijprai>.

Wong, L., W. Abdulla and S.Hussmann, 2004. A Software Algorithm Prototype for Optical Recognition of Embossed Braille. International Conference on Pattern Recognition, August ,Cambridge UK, pp: 586-589. DOI:<http://doi.ieeecomputersociety.org/10.1109/ICPR.2004.1334316>.

Yousefi, M., M. Famouri, B. Nasihatkon, Z. Azimifar and P. Fieguth. 2011. A robust probabilistic Braille recognition system. IJDAR, Springer-Verlag, 15 (3): 253-266. DOI:10.1007/s10032-011-0171-7.

THE CONTRIBUTION OF BEHAVIORAL FINANCE IN THE DECISION OF THE MICROCREDIT GRANTING: EMPIRICAL APPLICATION TO THE TUNISIAN AMC CASE

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Abstract

The objective of this paper is to study the validity of the hypothesis of the rationality of the decisions of granting micro-credits to the micro-borrowers in MFIs through a behavioral approach as long as the latter attempts to provide new behavioral assumptions of microfinance by introducing behavioral and psychological biases of the micro-borrowers. We tried to explore the main theoretical studies dealing with the hypothesis of rationality of the micro-borrowers within the MFIs and the factors that affect it. At the empirical level, and using a survey, we are interested in studying the psychological variables which affect the micro-borrowers' rationality of the Tunisian AMCs. This study is based on an analysis of a survey, as well as a logistic regression of an econometric model containing the behavioral and psychological variables. In fact, these techniques enabled us to support the limited decision rationality of granting micro-credits to the micro-borrowers within the AMCs.

Keywords: Lack of reimbursement, microfinance, Behavioral finance, psychological bias, rationality, emotional bias, Tunisia.

1. Introduction

The role of the financial intermediary played by the MFIs shows that the activity of micro-credit granting is at the centre of the banking activity (Servin, R; Lensink, R and Van den Berg, M., 2011). For this purpose, the overdue repayment is not only conceived by the micro-borrowers, but can be linked to the decision-making process of the microcredit agent, in general, and to his emotional and cognitive biases, in particular, (Busemeyer et al. 2009; Flazer, 2004; Patel, 2003; Shefrin, 1999).

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Actually, the funding of a micro-project creating agreement is the result of a process covering different stages starting with a cognitive stage of understanding and appropriation of the information transmitted by the micro-entrepreneur, continuing an evaluative stage generating a more or less favorable attitude towards this information and closing by a behavioral stage, a predisposition to act in a positive sense and on which we focus in the desire of funding. This decision-making takes place in a natural environment precluding the possibility of perfect rationality (Fletcher, s., 2012 and Andersson, 2004). In fact, the decision appears to be fast under a constraint of time and with a little information.

Cognitive information processing is guided by emotions and emotional reactions to stimuli appearing automatically. In other words, we introduce insights from psychological research into the assessment of the credit risk of the micro-borrowers of an MFI (Uchida, h., Yamori, N and Udell, G. F., 2012). In fact, this research is carried out under the behavioral theory of the microcredit granting decision which focuses mainly on the observable behavior of the agent in microfinance to determine how it is conditioned by its emotional and cognitive biases.

Similarly, the chapter aims to understand the degree of influence of behavioral factors, such as (professional experience, gender, age) and psychological, such as, (the attitude to risk, on the -confidence-the optimism, lack of cognitive flexibility ... etc.) micro-finance agents on repayment delay. For this reason, our central research question is to find out what the explanatory delay factors linked to the microcredit agents' of behavioral and psychological characteristics are.

Our goal in this chapter is to identify the main factors of the agents' behavioral and psychological characteristics which affect the delay. For this purpose, these factors must be studied in depth because no secondary or university training gives enough studying material about such a topic. Therefore, knowing the factors that affect the delay conceived by the agents could help the AMCs and the leaders to develop skills and intelligence to a priori design precatory strategies to avoid it.

2. A summary of theoretical literature

The role of cognitive biases in decision making

Cognitive biases are incorporated into the process of human reasoning which is expressed through the creation of heuristics. For this reason, cognitive biases are a central element of reasoning rather than a mechanism to eliminate negative. Many studies, especially under the influence of cognitive psychology, have shown that individual attitudes to risk frequently deviated rationality and thus could lead to decision-making biases. Indeed, Kahneman, D., Slovic, P. & Tversky, A. (1982) highlighted the central role of cognitive biases in decision making of any person faced with a situation of uncertainty. Several studies included in a behavioral approach specifically highlighted the cognitive biases in expert judgment. Other studies sought to eliminate or reduce these cognitive biases (Frischoff. 1982, Lesage, 1999). This current research considers expertise as a rare skill that develops only after a long training and experience. This category suggests a model that mimics the decision processes of experts.

The errors cannot be managed through their removal and thus the elimination of cognitive biases.

Indeed, reasoning plays a key role in the development of heuristics to the extent that the deviation of the decision maker's intention will improve heuristics. Thereby, removing the bias leads to the impoverishment and even the denial of the heuristics. In other words, the problem is not to eliminate the bias to reduce the errors, but rather to strengthen protection mechanisms through the creation of conditions to make the errors of the decision maker visible (for [Argyris, 1999](#)). The decision maker will then retain the choice between, on the one hand, refocusing his reasoning on the relation with his original intention, and, on the other hand, changing his original intention (intention in action) based on the new state of the others' reasoning. As a consequence, he should reduce the decision errors visibility cognitive biases policymakers. [Tversky and Kahneman \(1974\)](#) equate the decision result of a series of choices made at each step restoring cognitive sequence. The activation of this new line of research is based on the assumption of "developing heuristics" as a means of "reducing errors."

In this regard, the experience could be negatively related to the risk of default if the loan officers gained experience on the borrowers' screening and monitoring over time ([Anderson, 2003](#)). Moreover career concerns may encourage loan and less experienced loan officers to undertake a greater effort to avoid losses to maximize their career progression and income prospects and their future. Henceforth, [Anderson \(2004\)](#) supports this idea by stating that the credit officers who have professional experience can achieve more consistently than the inexperienced credit decision agents. Inversely, [Honlonkou et al \(2006\)](#) found that the number of years of experience of the manager of the fund is among the determinants of repayment rates. Indeed, the number of years of experience of the manager of the fund has a negative effect on the reimbursement rate which can be explained by familiarity with the manager of the MFI micro-borrowers. As his experience extends into the area, while the coefficient on profitability study has a positive sign and shows that cost-benefit analysis of projects submitted for funding should become routine in MFIs. This is explained by the fact that the achievement of pre-investment study assesses the seriousness of the project of the borrower, which allows the agency to provide credits to finance activities in which the probability of success is greater.

An equally important additional component of behavioral characteristics of the IMF's agent is the one related to his gender, male or female. For this reason, many studies showed that female decision makers are more risk averse than men decision makers ([Barsky et al, 1997](#)) and that risk aversion affects financial decisions ([Charness and Gneezy, 2007, Christiansen et al, 2006; Barber and Odean, 2001](#)). Other authors explored the behavior of women in different competitive environments and their treatment within financial institutions ([Black, Sandra, Strahan and Philip 2001, Goldin and Rouse, 2000](#)).

Female loan officers generally have fewer options outside the labor market and therefore stronger to excel in the form of low default rates in their loan incentives. In addition, especially in the developing countries, women are more conservative and more afraid of social sanctions, which increases the pressure on the loan officers women outperform their male colleagues. These arguments are similar to the ones that explain why women borrowers in the developing countries are generally better placed alongside the relations with clients (microborrowers) than their male counterparts ([Armendariz de Aghion and Morduch, 2005](#)). In patriarchal societies, men agents may have a stronger willing vis-à-vis the status of borrowers, whether they are men or women, in terms of surveillance and discipline, ensuring repayment of the loan.

In this case, there would be a lower probability of default loans approved and monitored by male loan officers. Finally, loan officers (microcredit) would be easier to control and discipline micro-borrowers their own kind. Therefore, we expect to find a lower probability of failure of female microfinance borrowers if the loan is approved and supervised by a woman rather than by a man, with the opposite holding loan officers masculine. The preceding discussion suggests that cognitive biases agents microfinance evidenced by their professional experience and their ages significantly influence the delay repayment microborrowers. Our goal is to verify the influence. Therefore, in the light of what has been suggested, the underlying hypothesis (H.1) that we test that "cognitive biases agents microfinance evidenced by their professional experience, their ages and genres act significantly on defaulting borrowers, ":

Hypothesis 1: *Cognitive agents through microfinance evidenced by their professional experience, their age and gender to significantly reduce defaulting borrowers.*

Bias and emotional decision making loan officers

The traditional models of decision making under risk or uncertainty focus mainly on the cognitive aspects of information processing. More recently, several researchers have begun to develop models of cognition that include an emotional dimension. According to [Zajonc \(1980\)](#), emotional processing precedes cognitive processing. Indeed, in this section, we present the literature and assumptions about the relationship and correlation between the borrowers' delayed repayment and psychological characteristics (emotional bias) of the loan officers. In contrast, among the psychological biases, we will particularly consider the emotional ones. Thus, this research studies the correlations between the repayment delay and emotional biases. More clearly, we will study the impact of emotional biases of the loan officers on the late payment. Henceforth, the question that arises at this stage is to know what impact emotional biases of the loan officers have on the default risk of the microborrowers.

Five types of biases have been widely discussed in the literature: loss aversion, lack of cognitive flexibility (Cognitive Flexibility) Optimism (Optimism), overconfidence (Overconfidence) and error conjunction (Conjunction Fallacy). In contrast, among the psychological biases, we will particularly study, in this research, emotional biases. Thus, this research studies the correlation between the repayment delay of the micro-borrowers and emotional biases loan officers of an MFI. More specifically, we study the relationship between emotional biases and repayment at maturity. Consequently, in the light of what has been suggested, the underlying hypothesis that we test (H.2) can be derived from the central hypothesis (H.2) which states that "emotions, which mean emotional loan officers are possible sources of repayment delay "is as follows:

Hypothesis 2: *The emotional biases of the loan officers significantly reduce the reimbursement delay.*

This general hypothesis is divided into several sub-hypotheses (H.2.1, H.2.2, H.2.3 and H.2.4), with each corresponding to a specific bias.

- *The overconfidence*

Overconfidence results in a static map with both overweight granted to private information (as opposed to public information) and an overestimation in the personal ability to interpret this information and in an aggressive plan resulting in an erroneous inference of self-attribution bias. For [De bondt and Thaler \(1995\)](#), it is the most robust element of the psychological judgment. In this way, the effects on the mispricing were modeled by [Daniel et al \(1998\)](#), which leads individuals to attribute good results to their own actions and bad outcomes to external circumstances. This bias has important effects on both inference resulting from overconfidence and persistence of overconfidence. Thus, according to [Daniel et al \(1998\)](#), overconfidence is stronger in activities that involve valuation difficulties for which the feedback on the quality of the assessment is ambiguous. [Kahneman and Tversky \(1979\)](#) showed that when uncertainty is high, individuals tend to construct overly confident scenarios on their probability of success (or schedule fallacy). On the other hand, the binding of this bias with uncertainty is particularly complex, as it is perceived by the decision maker, leading to a problem of reverse causality and paradoxical uncertainty: uncertainty promotes overconfidence, but this bias decreases perceived uncertainty. In addition, this link is dependent on the information held by the decision-maker: when there is private information, overconfidence leads to overweight this even more strongly that the uncertainty is high information.

Competence also tends to exacerbate overconfidence ([Heath and Tversky., 1991](#)). Overconfidence bias leads people to overestimate their own skills and knowledge ([Camerer and Lovallo., 1999](#)). As an underestimation of the variance, overconfidence is one of the most documented behavioral biases ([Daniel and Titman., 1999](#)). Thus, the study of the leader' overconfidence (loan officers) is not well documented, especially in comparison to the literature on investors in financial markets. Indeed, studies on the effects of overconfidence on training courses are already relatively provided through over and under-reactions to the model of [Daniel et al \(1998\)](#) and volatilities and volumes following the model [Odean \(1998\)](#). Henceforth, the first empirical results, which we will develop in this review, confirm the strong presence of this bias among business leaders and its effect on their choices, especially in terms of investment policy and funding. This bias, combined with the optimism, is a central aspect of the current literature in behavioral finance business as highlighted by [Baker et al \(2004\)](#). Besides, the focus on overconfidence seems particularly fertile for at least three reasons.

The process of making financial decisions of the bank (loan officer) is generally divided into two major blocks. The first is the block in the back office with a production role of trust. In this case, the teams of the first block filter the quality of the securities that the bank buys and sells securities with quality financial commitment of trust, the bank is then an information specialist. Indeed, the performance of back office based on the balance in its relationship with the front office is then the second block. The latter includes all operations in direct contact with the customer. It is responsible for advising and supporting the customer, but its activities and decisions are guided by a system of incentives for the development of cross-selling. In other words, the process of making the decision of granting credit, conceived as process of buying shares worth being studied in a logic of Supply Chain Management, that is to say, as a chain of logistics purchase where different involved actors are, externally, the final and

intermediate supplier / prescribers, and internally, the client and advise him before any delegation chain that validates the decision to purchase debt securities. Because it is a bank loan flows is studied. Thus, the characteristics of managerial decision (complexity, low repetition, slow and difficult to interpret feedback) and the policy environment (uncertainty, weak disciplinary controls) tend to favor overconfidence. In addition, the specific attributes associated with the management function also tend to justify a stronger presence of excess through trust in the leaders (loan officers) than in the general population.

Hackbarth (2004) models the choice of capital structure in the context of the theory of trade-off decisions and compares a biased and unbiased leader. Optimism and overconfidence are distinguished here: Optimism produces overestimation of earnings growth, while overconfidence reduces the variance from the expected results. Both effects lead to underestimate the probability of bankruptcy and, therefore, under the mobilized theory of higher debt. Therefore, Keiber (2006) also showed that overconfidence is not necessarily negative. It is not the level of overconfidence that defines optimality, but the positive or not information. Overconfidence is then favorable to the shareholder in the presence of positive information on the projects and, conversely, in the case of negative information. In all cases, overconfidence reduces agency costs and increases (decreases) the demand for variable executive remuneration when information is positive (negative). In addition, banks and microfinance institutions, in particular, are guarantors of confidence in their financial commitments. Indeed, they are experts on one side of the selection of their clients' investment and evaluators of these projects as well as projects. Based on these ideas, banks must determine the level of confidence that the credits are granted. The preceding discussion suggests that the overconfidence of the loan officer significantly influences the borrowers' repayment delay. Therefore, our objective is to verify the influence. In light of what has been advanced, hypothesis (H.2.1) that we test is as follows:

Hypothesis 2.1: *The more over-confident the credit agents are, the more likely a the micro-borrower's late payment is low.*

- *The attitude to the risk*

In prospect theory (Prospect Theory), the loss aversion refers to the tendency of people to prefer more the avoidance of loss rather than the acquisition of a gain Kahneman and Tversky (1979). In an uncertain environment, it is the investors' choices as choices on lotteries. Traditional finance, such as behavioral finance, focuses on risk. There are two types of variables that may influence this attitude; individual variables, such as wealth, level of education, occupational status, temporal variables, such as generation, and especially the investor's age.

The risk behavior has been the subject of numerous investigations relating to various theoretical anchors under managerial, psychological, sociological or anthropological theories. For this purpose, the concept of risk is multidimensional and difficult to understand. Thus, the classical notion of risk is the variance of the probability distribution of the results (Vlek and Stallen., 1980, Shapira., 1995). The risk is often expressed by the composite index of the probability of occurrence of an event and its value (Von Neumann and Morgenstern., 1947). Beyond these one-dimensional representations of risk, we retain a

sense of risk considered a future danger the outcome of which is uncertain. If multiple hazards simultaneously exist (for example, neither profit nor loss), it is clear that people seem to care more particularly about some dangers while ignoring others. As a result, risk has two species one objective and the other subjective.

Future dangers vary depending on the degree of uncertainty and the nature of the losses. In other words, the risk has two characteristics: a quantitative and qualitative. More consequences of future events are unpredictable and difficult to control over the important degree of risk. The nature of the risk to the characteristics of future events that the decision maker is concerned: their time horizon, the potential victims, the importance of the benefits and potential losses. Given the limited cognitive capacity of the decision maker, it will not be more often than not objectively understanding the concept of risk.

In this context, shared within a community heuristics can influence risk perception of the individual drawing the attention of decision makers on certain criteria and that through modeling the management of risky situations or filtering information. In addition, national culture may influence the risk appetite of the individual (Williams and Narendran., 1999). Individual attitudes and values are thus partly influenced by those shared within the cultural community of the decision maker (Hofstede. 1991). The valuation of risky behavior in a given society is likely to encourage the acceptance of risk (Baird and Thomas., 1985). As national culture it is likely to influence the perception of risk directly or indirectly through the risk appetite of the decision maker. Strong cultures may induce avoidance behavior patterns characterized by low propensity to risk. In this perspective, an individual with a low risk appetite overestimates the probability and the level of potential losses associated with risk-taking (Sitkin and Weingart., 1995).

Although the degree of risk assumed (behavior) is higher or lower depending on the degree of perceived risk, the risk behavior does not always reflect the perception of risk. Bettman (1973) distinguishes the inherent risk assumed a given alternative risk. However, the decision maker is not always able to assess the objective risk that characterizes the studied alternative. The risk of an alternative may well be linked to the risk perceived by the individual. Thus, the nature of the assumed risk may be distinct from perceived risk. Indeed, once the risk is perceived, the decision maker can implement different strategies to channel even master (MacCrimmon and Wehrung, 1986., Mitchell and McGoldrick, 1996). The decision-maker as the case may want to increase profits, reduce losses and the uncertainty of the realization of his benefits (March and Shapira, 1987. Mitchell, 1995 Chiles and McMackin, 1996...)

Risky behavior will be characterized by a strategy to improve profits while a conservative behavior will result in the quest to reduce losses. We define risky behavior as the acceptance of risks, including the degree and the significant potential benefits. The degree of the assumed risk may be studied through the number of times where the individual is willing to take actions the consequences of which are uncertain. The nature of the assumed risk in this case can be understood by the criteria of risk taking the most used by the decision maker. Thus, the criteria for assessing risk reflect, as specified by Wildavski and Douglas (1982), the structure of social relations which is closely related to the profile of the decision maker and rooted in a specific social environment. Risk assessment depends on the social forms promoted by the socio-cultural environment. Proponents of cultural risk analysis (Douglas and Wildavsky, 1982) highlight that each institution's vehicle values, codes and practices that induce different cognitive styles referring to

perceptions of time or projection capabilities in differentiated future.

Based on the cultural theory of risk, [Thompson et al. \(1990\)](#) and [Dake \(1992\)](#) define different types of institutions that shape patterns of perceptions and different attitudes to risk. In this perspective, [Dake \(1992\)](#) identifies three key cultural archetypes that influence patterns of risk perception. If the hierarchical ideology ("hierarchy ideology") values the expertise and a social conformity, individualistic ideology ("individualist ideology") encourages, for its part, individual initiative and advocates for payments backed by individual performance.

Promoting fairness and brotherhood, egalitarian ideology ("egalitarian"), is characterized by great distrust of institutions and experts. The latter vehicle modes of perception of high risk behaviors inducing risk aversion unlike the individualistic and egalitarian ideology associated with propensity to take higher risks. Internalizing social pressures and the decision maker is required to manage risk without knowing following social rules that it to ignore the risks. In this perspective, institutions are considered shared within the community heuristics. Constructions considered socially developed, they shape and legitimize as informational sources relied on by the decision maker that the modes of assessment of potential impacts and probabilities of occurrence of decisions.

The preceding discussion suggests that, based on these ideas, the attitude vis-à-vis the risk of the loan officer significantly influences the borrowers' delay repayment. Therefore, our objective is to verify the influence. In light of what has been advanced, additional 1'hypothèse (H.2.2):

Hypothesis 2.2: The attitude vis-à-vis the risk of reduced loan officer significantly delays the micro-borrowers reimbursement.

- *Optimism*

Optimism bias leads individuals to believe that their future will be better compared to others' ([Bazerman., 2006](#)). For this purpose, optimism reflects a preference for the positive outlook and an unrealistic overestimation of future events not related to personal skills, besides, it is understood as an average error (overestimation). Thus, the two terms, optimizing and overconfidence are often used interchangeably ([Fairchild., 2005](#)). In addition, these two biases are often simultaneous ([Heaton., 2002., Gervais et al, 2003](#)). And combine especially in the illusion of control which the individual expects to control, thanks to its abilities, events purely random. [Weinstein \(1980\)](#) points out that the natural tendency of people to overestimate the result of a decision is enhanced when the decision maker thinks he can control the outcome. In addition, optimism bias leads agents to favor a positive outcome scenario rather than a darker one. This excessive optimism of lenders and, therefore of borrowers, which results in an excessive bank debt, will be fatal when the true value of the returns, is perceived. This banking behavior is described as "aggressive" ([McKinnon and Pill \(1997, p.191\)](#)).

In this context, [Heaton \(2002\)](#) believes that over-investment and under-investment resulting from a managerial optimism. Leaders take more risk due to the overvaluation of investment opportunities and misperceptions of the cash flows generated by the projects. Henceforth, we are particularly interested in this chapter related to the emotional attitudes of optimism revealed by the micro-agents in the decision to

grant credits and their impact on the default. The preceding discussion suggests that the optimism of the loan officer significantly influences the delay repayment borrowers. Therefore, our objective is to verify the influence. In light of what has been advanced, I hypothesise that we test is as follows:

Hypothesis 2.3: The agents have optimism resulting in significant impact on the delay of repayment.

- *The lack of cognitive flexibility*

According to studies by [Canas, Quesada, Antoli and Fajardo \(2003\)](#), cognitive flexibility refers to the ability to adjust strategies and cognitive processes in response to new environmental and / or unforeseen conditions. This definition can lead to three important features of concept. First, cognitive flexibility is the ability to involve a process of learning, i.e. d. it could be accumulated through experience. Then, cognitive flexibility includes the adaptation of cognitive processing strategies. Based on this definition and referring to the analysis of [Payne, Bettman and Johnson., \(1993\)](#), it is conceivable that a strategy is a sequence of operations that are looking for a problem in space. Indeed, cognitive flexibility for changes in complex behaviors, not discrete answers. Finally, adaptation to produce new and unexpected environmental changes after a person has completed a task for a while. Although, through their studies, [Payne, Bettman and Johnson. \(1993\)](#), argue that flexibility could be considered as an adaptive capacity of individuals, which does not occur in a continuous manner. In situations where a person should be flexible if he treats the environment changes, so this is the cognitive inflexibility or lack of cognitive flexibility. Henceforth, according to [Canas, Quesada, Antoli and Fajardo. \(2003\)](#), cognitive flexibility describes the ability to adjust strategies and cognitive processes taking into account the new environmental conditions and / or unexpected. In the context of our research, it is rather the lack of cognitive flexibility is through. When a person is not cognitively flexible, he has a non-functional way, agreeing to deal with situational demands, which will result in an incorrect performance. Psychological endowments of the individual play an important role in the individual creativity.

Thus, the above discussion suggests that the lack of cognitive flexibility of the loan officer has a positive / negative delay repayment of borrowers. Therefore, our objective is to verify the influence. In light of what has been advanced, the hypothesis to be tested is as follows:

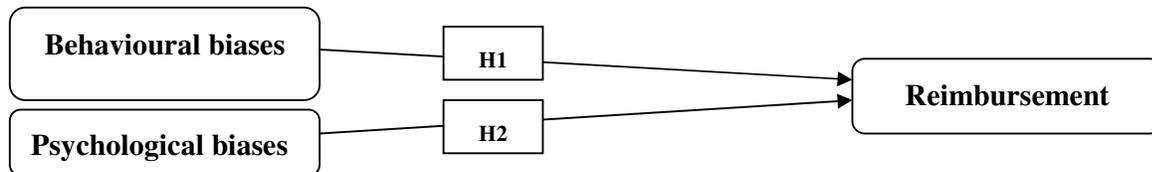
Hypothesis 2.4: The lack of cognitive flexibility of the loan officer determines significantly the default.

In fact, little empirical work embedded in behavioral finance has tried to highlight the role of the specific loan officer's cognitive flexibility to limit credit risk. Indeed, the analysis of the validity of this assumption in the case of MFIs is a valuable contribution in the absence of specific regulations in this area, on the one hand, and in the presence of a some emotional intelligence credit agent, on the other hand.

- *Conceptual research framework*

On the basis of the arguments presented above, the conceptual model suggested in this study is presented in the following figure (1):

Figure 1: The conceptual research model



3. Research methodology

3.1 Targetted population and sampling method

To test our hypotheses and consider these variables, we used a sample survey at the end of 2010 and during 2011 on the technique of the semi-structured interview of 88 Tunisian microcredit officers belonging to the AMCs in the Sfax region and, finally, we formed our sample.

We also used, in a second stage of our analysis, factors distributed over the four studied psychological bias: the attitude to risk, overconfidence, optimism and lack of cognitive flexibility.

In fact, in a second part, (Q1 to Q5) have been set reflecting the factors related to the officers' attitude in front of the risk of insolvency. In a third part, questions (Q6 to Q9) were set reflecting the emotional bias related to the agents' optimism towards their customers which seems relevant. In the fourth part, through questions (Q10 to Q13) the focus is on overconfidence towards the customers as a specific factor of each agent's own psychology.

In a final part, questions (Q14 to Q17) were set supposed to define the degree of cognitive flexibility of servants towards the owned. More clearly, for the preparation of the questionnaire, we have adopted for a two-step approach.

3.2. Analysis method and data processing

- *Statistical analysis of factors related to the agents' behavioral profiles*

In order to do so, we relied on factors that seem to be difficult to assess by means of a 17 question questionnaire. Actually, to better measure these variables, three tools will be used, namely: flat tabulation; cross tabulation; Chi2 and PCR dependence test.

Table 1

Descriptive statistics of the population behavioral profile (Flat tabulation)

Variables	Description	Staff	Rate
Gender	Male	58	65.9%
	Female	30	34.01%

Age	<i>Under 31 years of age</i>	22	25%
	<i>Between 31 and 39 years of age</i>	43	48.86%
	<i>Over 39 years of age</i>	23	36.5%
Professional experience	<i>Under 5 years of age</i>	21	23.86%
	<i>Between 5 and 11 years of age</i>	45	51.13%
	<i>Over 11 years of age</i>	22	25%

Source : Sample data

Classification of the variables related to the age and professional experience according to the quantile of order 0.25, 0.5 and 0.75

Regarding gender, in our sample, we find that most respondents are men whose rate is higher than that of women. This rate is in the order of 65.9% for men and 34.01% for women. As for age, we find that most of the respondents are over the age of 36, the youngest is 27 years old while the oldest is 47. According to this table, the analysis of the experiment tells us that the number of agents having more than 5 years and less than 11 years of experience in this position is the highest, or 51.13% of the sample, that is to say, 51.13% of respondents have professional experience between 5 and 11 years and 25% of respondents of the population have more than 11 years. Therefore, it turns out that most of the sampled individuals have a good and broad experience that can affect the result quality of. However, agents may not make the right decision, that is why their experience in this field is, on the one hand, an asset to remedy this bias and, on the other hand, it improves productivity of the analyzes of the microcredit requests. Moreover, the seniority relationship with the customers, in general, and future customers, in particular, and the importance of the commitment of the bank to financing its customers and even the industry growth prospects despite the repayment on maturity situations to decide whether the applicant's request may be a bad or a good micro-borrower.

• *Bivariate relationship between psychological indices and the repayment rate*

In what follows, we will try to analyze the correlations of each of the variables related to psychological biases through the delay. This is can be achieved using a bivariate analysis method, which is the dependence Chi2 test. This method is based essentially on Chi2 statistics by the means of which the intensity dependence between two variables can be measured. This is a connection between the variables with a psychological dimension and delay. This test is the formalization of the so-called symmetrical zero hypothesis of independence and consideration of the result of the test based on the Chi2value, the degree of freedom and the probability of Chi2significance.

Therefore, under the null hypothesis, the probability of the Chi2meaning is low to indicate a non-significant link between the questioned variables, that is to say, smaller than 10%. However, hypothesis (a) corresponds to a high Chi2 to indicate a significant link with the questioned variables.

Table 2:*Test result of dependence between psychological profile and repayment rates*

Attitude to risk	Reimbursement rate
Chi-two ¹	240.35***
p-value	0.0000
degree of freedom	168
Optimism	Reimbursement rate
Chi-two	213.69***
p-value	0.005
degree of freedom	164
Overconfidence	Reimbursement rate
Chi-two	206.42***
p-value	0.001
degree of freedom	148
Lack of Flexibility	Reimbursement rate
Chi-two	147.05***
p-value	0.00
degree of freedom	92

(***) *Significant coefficient at threshold of 1%*

The Chi2 Test clearly shows the existence of a relationship between the attitude and the reimbursement rate. Therefore, the null hypothesis of independence (p-value=0.000) cannot be accepted, in other words, the presence of a significant link at 1% threshold. Actually, our results emphasize the role of these agents as risk takers for the decision making. Moreover, the amount considered under a different type was not cautiously and carefully examined by the agents in question to decide either the rejection or the amendment of the loan characteristics due to the requirement for the additional guarantees or the reduction of the amount to be disbursed so that they could come out with a minimum of damage, on the one hand, and the minimization of the delay probability, on the other hand. In addition, our results using the Chi2 dependency test show a globally significant link between optimism and the repayment rate (p-value = 0.005). Indeed, this personality trait of each agent in our study is likely to influence the delay. In other words, this behavior facilitates staff analysis of the expectations of the owned and the most demanding overestimates of clients with credibility, which reduces the likelihood of delay.

Similarly, the main results of the Chi2 dependence Test show that the reimbursement rate seems to be explained not only by overconfidence, but also by the cognitive flexibility. In fact, the test shows a Chi2 = 206.42 and 147.05, respectively, which is significant at 1% threshold. However, these statistics of cause and effect indicate that the role that the behavioral and psychological profile may play is to set subject to

¹ By contingency table and under the chi2 statistic, one seeks the risk λ is the chi-square table for the number of degrees of freedom $df = (N-1) * (N-1)$. If $P < 10\%$ indicates acceptance of the hypothesis of addiction.

the deepening of credit study to decide the grant according to the objectives and the policy of the Organization in order to distinguish between a bad and a good micro-borrower. Actually, to build our psychological dimension, we have issued the hypothesis which states that delay is determined by emotional biases. This observation of relative similarity of agents leads us to wonder about the relationship that can develop between the process of the delay and the psychological bias. As a result, the aim of this study is to characterize the psychological profile of 88 agents to focus on identifying the common characteristics and dominant features that enable to distinguish between the agents. Besides, these issues are measured using a Likert scale which consists in writing proposals.

Therefore, the presentation of our sample of respondents as well as the measuring instruments enable us to check if all the items assigned to the extent of our theoretical concept with those we have previously defined. Thus, it should ensure that the wording of the items does not exceed the definition of the concept. In the next section, we will try to highlight the specificities of the agents' psychological profile through a multidimensional approach in order to provide a variety of personality traits.

For this reason, to summarize our work, we wished to conduct a multidimensional approach of the agents' psychological bias. For this reason, some data analysis tools, such as the ACP, are used. These instruments help represent each variable in a finite space. In fact, our ACP takes into account 16 variables to quantify the psychological bias. Therefore, the CPA enables us to identify four areas that represent 64.19% of the total cloud variance.

Therefore, the observation of these results helped us conduct an ACP with the "oblimin¹" rotation. It also helped us synthesize 16 variables out of 19 iterations to present the credit behavior of four factors that explain 64.19% of the total variance. Indeed, the first axis explains 40.76% and includes the five variables related to attitude, while the second axis, which is represented by four variables based on optimism, explains 9.29%.

As a result, the series of indicators that contributed to the construction of a third factor (7.86% of the variance), defines the subject which has contributed to the construction of a fourth factor (6.26%) and the lack of cognitive flexibility.

Table 3 :
CPA Result: psychological bias index

Variables	Attitude	Optimism	Overconfidence	Flexibility	Saturation
Attitude1	0.665	0.033	0.460	-0.185	0.76
Attitude2	0.7	0.234	-0.026	0.096	0.58
Attitude3	0.59	0.127	0.375	-0.086	0.847
Attitude4	0.78	0.08	0.197	0.086	0.644
Attitude5	0.629	0.256	0.112	0.057	0.65
Optimism 1	0.283	0.78	0.052	0.22	0.83

¹ The correlations of the items through the four axes extracted from the CPA are presented following a oblimin rotation the choice of high indicates that factors are inseparable.

Optimism2	0.225	0.75	0.424	0.22	0.76
Optimism3	0.407	0.41	0.267	0.407	0.74
Optimism4	0.117	0.628	0.512	-0.184	0.63
Overconfidence 1	0.044	0.431	0.639	0.225	0.89
Overconfidence 2	0.124	0.321	0.672	0.157	0.84
Overconfidence 3	0.075	0.452	0.597	-0.148	0.55
Overconfidence 4	0.377	0.165	0.694	0.045	0.66
Flexibility1	0.041	0.019	0.059	0.918	0.79
Flexibility2	0.291	0.066	0.127	0.744	0.64
Flexibility3	0.413	0.026	0.138	0.69	0.89
<i>Own values</i>	<i>6.25</i>	<i>1.48</i>	<i>1.25</i>	<i>1.002</i>	
<i>% Variance</i>	<i>40.76%</i>	<i>9.29%</i>	<i>7.86%</i>	<i>6.26%</i>	
Kaiser criterion:	Four factors were selected				
% Total variance	64.19%				
α-Cronbach	0.88				

Source : our calculations

All the items are well represented on their respective axis with loadings¹ which are all above 0.4 and the obtained factorial structure is clear. Regarding internal consistency, the items are converging with a Cronbach alpha of 0.88.

3.3. Estimation results

- *Specification of the model to be estimated*

In this article, in accordance with a literature review (Bhagavatula et al., 2010), two indicators related to behavioral dimensions as well as others related to the psychological dimensions of each agent which constitute the independent variables.

Table 4 :

Distribution of delay levels based on the behavioral bias of the microcredit agent (cross tabulation)

Delay	Creditworthy borrowers			Level 2		Level 3		3 All levels	
	Caractéristiques	Nbr	%	Nbr	%	Nbr	%	Nbr	%
Sex	Male	9	(15.5%)	16	(27.9%)	33	(56.9%)	58	(65.9%)
	Female	2	(6%)	5	(16.6%)	23	(76.6%)	30	(34.1%)
Age group	Under 15 years of age	4	(16%)	3	(12%)	18	(72%)	25	(28.4%)

¹ The psychological characteristics are presented through a loading greater than 0.2, indicating a clear factor structure.

	Between 31 and 39 years of age	5	(13.5%)	8	(21.6%)	24	(64.8%)	37	(42%)
	Over 39 years of age	2	(7.6%)	10	(38.4%)	14	(53.8%)	26	(29.54%)
Expérience	Under 5 years of age	3	(13.6%)	5	(22.7%)	14	(63.6%)	22	(25%)
Professionnel	Between 5 and 11 years of age	6	(14.28%)	10	(23.8%)	26	(61.9%)	42	(47.7%)
	Over 11 years of age	2	(8.23%)	6	(25%)	16	(66.6%)	24	(27.2%)
Total		11		21		56		88	

Source : Our calculations

On the basis of this table, it is noticeable that men are riskier than women with a rate of 56.9% for the realization of a very high delay (more than 3 years of delay) and a rate of 27.9% for a delay of less than 2 months. The average age category (between 31 and 39 years of age), is the riskiest, that is (64.8%), while the most solvent is that of young people (under 31 years of age). Regarding professional experience, it may be noted that 25% of agents have little experience (limited under 5). Almost 2/3 are reluctant to risk which is very high (63%). However, the results are very low regarding the agents who undergo a very low risk (13.6%). It may be noted that almost 1/4 of the agents who have professional experience have more than 11 years, among whom, 66% have an aversion to the very limited risk (3 years of higher education). These results seem to justify the finding that experience is listed as a potential factor of insolvency of micro-borrowers. Our final model to estimate can be written as follows:

$$\text{Log} \left[\frac{\text{Pr}(\text{Retard}=i)}{\text{Pr}(\text{Retard}=1)} \right] = \beta_{\text{Attitude}} * \text{Attitude}_i + \beta_{\text{Flexibility}} * \text{Flexibility}_i + \beta_{\text{Optimisme}} * \text{Optimisme}_i + \beta_{\text{Overconfidence}}$$

* $\text{Overconfidence}_i + \beta_{\text{Expref}} * \text{Expérience}_i + \beta_{\text{Age}} * \text{Age}_i + \xi_i$, with:

- $\text{Log} \left[\frac{\text{Pr}(\text{Retard}=i)}{\text{Pr}(\text{Retard}=1)} \right]^1$: It is the logarithm of the probability of achieving a level of delay compared to the probability of the borrowers' creditworthiness under the effect of each explanatory variable x_i^1 .

¹ We studied a dependent variable for delay in accordance with previous studies of (Shepherdeshpande., 2005). Therefore, the risk classes are identified on the basis of objective criteria, with:

- ✓ $\text{Log} \left[\frac{\text{Pr}(\text{Retard}=1)}{\text{Pr}(\text{Retard}=1)} \right]$: It is the logarithm of the achievement probability of a delay level i compared to the probability of the micro-borrowers' solvency.
- ✓ $\text{Log} \left[\frac{\text{Pr}(\text{Retard}=2)}{\text{Pr}(\text{Retard}=1)} \right]$: It is the logarithm of the probability of the level achievement of a low delay in relation to the likelihood of micro-borrowers' creditworthiness.

- **Gender j** : refers to the kind of microcredit agent
- **Age j**: means the microcredit agent’s age expressed in number of years
- **Ex prof j** : refers to the agent’s professional experience expressed in number of years;
- **Attitude j** : refers to the attitude towards risk
- **Overconfidence** e_j : refers to the agent’s overconfidence
- **Optimism j**: means the agent’s optimism
- **flexibility j**: refers to the agent’s cognitive flexibility
- **Bj** is the slope of the explanatory variables coefficients
- ξ_i refers to the error term of zero mean and a variance equal to σ_1^2 of equation 1
- ξ_i^* refers to the error term of zero mean and a variance equal to σ_2^2 of equation 2.

In this article, seven independent variables, with three variables related to the behavioral bias and four to the agents’ psychological biases, are measured in relation to the dependent variable (the delay). We studied a dependent variable “delay” in accordance with the previous studies of (Shepherd et Deshpande., 2005). As a result, the risk classes are identified on the basis of objective criteria, with:

Log $\left[\frac{\Pr(\text{Delay}=i)}{\Pr(\text{Delay}=1)} \right]$: It is the logarithm of the probability of the achievement of a delay level i compared to the probability of the micro-borrowers solvency.

The model to be estimated should depend on both the degree of delay and the agents who represent the statistical unit in our study. Moreover, the probabilistic multinomial Logit model with 3 alternatives depends, on the one hand, on the explanatory variables of the agents, as a statistical unit and, on the other hand, on the 3 alternatives specifying the logarithm of the delay probability. Finally, this model depends both on the agents, as a statistical unit, and on the alternatives. Therefore, in this section, we attempt to explain, via a structural response model of type Multinomial Logit, the quantification of the variables effects of the characteristics of 88 microcredit agents on the basis of their characteristics. More specifically, our research aims at analyzing the report of logarithm of the achievement probability of a delay level i compared to the solvency degree of the micro-borrowers, as a dependent variable.

As a result, the presentation of the main results of the econometric assessment via the Multinomial Logit model will be, in a first step, inconclusive. In a second step, we compare these results with the tested model prediction regarding the variation effect of each explanatory variable on the deadline report compared to creditworthy borrowers.

This is why an effective analysis of our model requires the use of various econometric techniques that will help us better explain the relationship between our variables and the probability of the repayment delay. In fact, the statistical quality of the Multinomial Logit model is based on the following predictive

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- ✓ **Log $\left[\frac{\Pr(\text{Delay}=3)}{\Pr(\text{Delay}=1)} \right]$** : It is the logarithm of the probability of the achievement of a very high delay level in relation to the probability of micro-borrowers’ creditworthiness.under the effect of each explanatory variable xi.

¹ In this article, seven independent variables, with three of which related to behavioral biases and four to the agents’ psychological biases, are measured compare to the dependent variable (delay).

tools:

Concept of independence of alternatives (IIA); the calculation of the chance ratios; the calculation of the marginal effects and the calculation of the predicted probabilities. Moreover, the classes of the three alternatives, which are inspired from the concept of the delay probability, are calculated on the basis of various risks: alternatives 1¹, 2² and 3³. Therefore, based on these alternatives, the chance probability can be quantified so that the customer is overdue, on the one hand, and gain efficiency in accuracy of the estimates, on the other hand.

4. Application and results

Our analysis is based on a central hypothesis (H2) which states that “the agents’ behavioral and psychological characteristics are possible sources of delay. This hypothesis comes in two sub-hypotheses that provide evidence of the effect of the agents’ characteristics f the on the repayment.

Table 5

Estimation results of multinomial logit: the Variable that explains the delay repayment

Variables	No delay = 1 (solvent)	Low level of delay = 2		High level of delay = 3	
		Coefficient	(Z-stat)	Coefficient	(Z-stat)
Age	** Alternative of Ref**	0.922	(1.39)	0.0012	(0.1)
Experience		-0.559**	(-2.97)	- 0.029***	(3.05)
Attitude		0.24***	(4.04)	0.158***	(2.76)
Optimism		-0.04	(-0.15)	-0.18	(-0.78)
Overconfidence		0.094	(0.36)	0.1	(0.44)
Flexibility		-0.48 *	(-3.07)	0.108*	(5.29)
Number of observations		88			
L-likelihood		-73.872884			
LR Chi2		45.61			
p-value		0.000			
R ²		0.23			

(*), (**), (***), Coefficients respectively significant at the 10%, 5% and 1%.

Table 5 shows the results of the regressions of both equations as well as the estimation results of the regressions between the logarithms of the probability of achievement of a level of delay i compared to creditworthy micro-borrowers, under the effect of each explanatory variable xi. From then on, the estimates presented in the table emphasize the crucial role played by the behavioral and psychological characteristics alongside the reimbursement rates. This idea is empirically consolidated by the presence of

¹ Represents the creditworthy micro-borrowers, with an excellent risk

² Represents the non-creditworthy micro-borrowers for at least two months, with a low risk

³ Represents the non-creditworthy micro-borrowers at least for more than three years with a very high risk

an acceptable explanatory power of the model ($R^2 = 0.23$) and therefore an acceptable quality adjustment. This implies that the variables related to the agents explain an acceptable part of the logarithm of the probability of achieving a level of delay I, compared to the creditworthy micro-borrowers in our sample, with a percentage of 23%. Actually, from the above table, the overall significance of Chi2 test shows that the model is globally significant ($p\text{-value} = 0.000$), which makes us reject the null hypothesis of coefficients to be estimated which states that the coefficients are all zero and the likelihood test ensures that the estimated coefficients of both equations are simultaneously different from zero. This is actually the overall significance of the model in terms of the joint effect of each variable that generates the delay probability.

4.1 First results of the Multinomial Logit estimates

The results of our empirical investigation are consistent with this chapter by suggesting that, first, for the two levels of delay, link analysis between the logarithm of the probability of achieving a level of delay according, to the creditworthiness of borrowers and variables related to the optimism and over-confidence of the agents are not statistically significant. Henceforth, assumptions H2.1 and H2.3 could not be validated. Therefore, these results have shown the weakness of the relationship between these variables and delay. Then, we see that the variables related to the experience, attitude and flexibility are statistically significant with the logarithm of the probability of achieving of level of delay according to the level of solvency of borrowers. Consequently, the assumptions H2.1, H2.2 and H2.4 were validated. Moreover, these results have shown an explanatory relationship between the characteristics of agents and delay. Therefore, the model which integrates behavioral and psychological variables is written as follows:

$$\text{Log} \left[\frac{\text{Pr}(\text{Retard}=2)}{\text{Pr}(\text{Retard}=1)} \right] = \beta_{\text{Attitude2}} * \text{Attitude} + \beta_{\text{Flexibility2}} * \text{Flexibility} + \beta_{\text{Exprof2}} * \text{Exprof}$$

By analogy to the explanatory factors previously identified, the logarithm of the probability of achievement, when it comes to a very high level of delay compared to the level of creditworthiness of micro-borrowers, that is to say, the agents' behavioral and psychological variables, gives us the following causal effect reporting relationship:

$$\text{Log} \left[\frac{\text{Pr}(\text{Retard}=3)}{\text{Pr}(\text{Retard}=1)} \right] = \beta'_{\text{Attitude3}} * \text{Attitude} + \beta'_{\text{Flexibility3}} * \text{Flexibility} + \beta'_{\text{Exprof3}} * \text{Exprof}$$

The latter two use the maximum likelihood as a measure of adjustment but penalize the introduction of additional parameters.

$$\text{Log} \left[\frac{\text{Pr}(\text{Retard}=2)}{\text{Pr}(\text{Retard}=1)} \right] = 0.24 * \text{Attitude} - 0.48 * \text{Flexibility} - 0.559 * \text{Exprof}$$

$$\text{Log} \left[\frac{\text{Pr}(\text{Retard}=3)}{\text{Pr}(\text{Retard}=1)} \right] = 0.158 * \text{Attitude} + 0.108 * \text{Flexibility} - 0.029 * \text{Expref}$$

First, regarding the variable 'Experience' for both delay levels relative to the degree of the creditworthy micro-borrowers on the logarithm of the probability ratio of achieving both a low and high level of delay, it was found that our estimation results based on the ratio of the coefficient logarithm of the probability of achieving a degree of delay i with respect to creditworthy micro-borrowers revealed the impact of a significance negative impact at the threshold of 5% and 1%, successively, while the coefficients relative to this variable have negative signs (-0.559 - 0.029).

Then, regarding the variable "Flexibility", it was found that the estimation results, which are based on the logarithm of the coefficient ratio of the probability of achieving a degree of delay i in relation to creditworthy micro-borrowers, revealed a negative impact of the explanatory variable on the logarithm of the probability ratio of achieving a low degree of delay with respect to the creditworthy micro-borrowers. The results also showed that there is a positive impact on the logarithm of the probability ratio of achieving a very high degree of delay in relation to the micro-borrowers at a significance threshold of 10%, successively, whereas the coefficient related to this variable are both negative and positive (-0.48; 0.108).

Finally, concerning the variable "Attitude" for both delay levels compared to the creditworthy micro-borrowers on the logarithm of the probability ratio of achieving both a low and high degree of delay regarding the micro-borrowers, the estimation results, which are based on the logarithm of the coefficient ratio of the probability of achieving a degree of delay i with respect to creditworthy micro-borrowers, showed a positive impact at a significance threshold of 1 %, whereas the coefficient related to this variable has a positive sign (0.24; 0.158).

4.2. Test of the independence of alternatives (IIG)

Actually, this approach is exposed to a problem that leads to biased estimates. For this reason, its solution requires the use of the independence test between the three alternatives. Therefore, the method to be applied is that of [Hausman and Small Hsiao \(1984\)](#). The latter has also proposed a test to detect the presence or absence of a significant link. In fact, to better diagnose the effects of the factors underlying the delay, we will try to conduct a further empirical research by checking whether there is a link or not between the three alternatives specific to the delay. Therefore, this result needs to be justified in our work about the empirical studies using the Tests of Hausman (HM) and Small Hsiao (SH). Actually, both of these tests are generally based on the measurement of the difference between the estimated parameters in the full model and those of another model from which an alternative was deleted. If the difference is statistically significant, the IIA hypothesis will then be rejected.

Henceforth, our estimation results, which are presented in the table below, show independence between the three alternatives. In fact, Hausman's Test, which is based on the CHI2 statistics, shows that the null hypothesis of independence between the three alternatives will be accepted (p-value = 0.47, 0.93). On the other hand, Small-Hsiao's test, in turn, shows that this is an independence model of the

alternatives (p-value = 0.62, 0.75), otherwise, the alternatives are similar. The following table illustrates the results of both tests:

Table 6

Result of the Alternatives Independence Test

Equations	Hausman's Test (1984)	Small-Hsiao's Test (1984)
Delay (alternative) =1 in reference		
Absence of delay=2	24.25 (0.47)	1.45 (0.6247)
Absence of delay =3	12.3 (0.936)	1.33 (0.755)
Delay =2 in reference		
Absence of delay =1	22.5 (0.332)	4.78 (0.554)
Absence of delay =3	17.8 (0.845)	1.47 (0.11)
Delay =3 in reference		
Absence of delay =1	33.4 (0.45)	1.87 (0.214)
Absence of delay =2	24.3 (0.902)	2.34 (0.55)

H₀ : Accepting the independence hypothesis (the three alternatives are distinct)
H₁ : Accepting the independence hypothesis (the three alternatives are different)
p-value : The acceptance probability (the alternative hypothesis which should be below 10%)

Source : our calculations

First, we will try to explain the probability that a micro-borrower is delayed, since the choice of Logit Multinomial model depends, on the one hand, on the agents' explanatory variables, as a statistical unit and, on the other hand, on the three alternatives specifying the delay. With this model, the agents in decision making situations can be described via a number of behavioral variables and variables having a psychological dimension. In general, this model depends on both agents, as the statistical unit, and on the alternatives.

4.3. Second result: the calculation of the chance ratios

To predict the quality of our model, as an efficient estimator, we wonder about the calculation of the chance ratio or the risk ratio (odd Ratio) which measures the probability ratio of achieving a level of delay i in relation to the creditworthy micro-borrowers under the effect of the variables xi, and the probability of achieving or not achieving a repayment delay. Therefore, it should be noted that:

$$RR_i : RR = \frac{\Pr [(Retard=i)/x_i]}{\Pr [(Retard=1)/x_i]}$$

Therefore, we have to take into consideration two hypotheses to confirm the existence or absence of some opportunity of achieving a delay for our model. As a result, to identify the opportunity ratio of achieving a level of delay i, the following hypothesis should be tested:

H0: $RR_i < 1$ and

H1: $RR_i > 1$. With $i=2, 3$.

Under the Hypothesis 0, the model should be specified through an opportunity ratio under 1, which indicates that it is most likely that the delay is not achieved. However, the acceptance of hypothesis (Ha) justifies the impact of the rise of the (xi) variable on the deadline report in relation to the creditworthy customers and subsequently regarding chance delay of 1. Moreover, the estimation of this model was carried out according to the maximum-likelihood estimation method and gave results of the ratio test that exists in the table below:

Table 7

The chance Ratio after the multinomial Logit model: the Variable to be Explained: the Delayed repayment

Variables	No delay=1 (solvent)	Low level of delay = 2		High level of delay = 3	
		Coefficient	(Z-stat)	Coefficient	(Z-stat)
Age	**Alternative of Ref**	2.51	(1.48)	0.97	(0.39)
Experience		-0.57*	(-3.04)	1.09**	(4.72)
Attitude		1.27**	(4.04)	1.31***	(2.28)
Optimism		0.094	(0.93)	0.96	(0.09)
Overconfidence		1.09	(0.37)	1.17	(0.6)
Flexibility		1.23 **	(0.99)	0.61**	(5.29)
Number of observations				88	
L-likelihood				-75.355575	
LR Chi2				35.38	
p-value				0.0004	
R ²				0.22	

(*), (*), (*), significant Coefficients at the threshold of 10%, 5% and 1%, respectively

This table shows the results of the regression estimation linking the chance ratio of achieving a level of delay (i) compared to the creditworthy micro-borrowers under the effect of each explanatory variable xi. As a consequence, the estimates shown in the table emphasize the crucial role played by the behavioral and psychological characteristics with the repayment rate. This idea is empirically reinforced by the presence of explanatory power of the model ($R^2 = 0.22$), and therefore, an acceptable adjustment quality.

This means that the variables identified and linked to the agents explain an acceptable part of the chance ratio of achieving a level of delay i compared to the creditworthy customers under the effect of each explanatory variable xi for the agents of our sample with a rate of 22%. In fact, from the table above, the overall significance Test of 2 shows that the model is globally significant (p-value = 0.0004). This makes it possible to reject the void hypothesis of the ratios to be estimated which states that all these ratios are nil while the likelihood Test ensures that the estimated ratios on both equations are

simultaneously different from zero. In fact, it is the overall significance of the model in terms of the combined effect of each variable which gives rise to the probability of repayment delay.

The results of our empirical investigation are very much in line with this chapter by suggesting that, for a low and very high level of delay regarding the creditworthy micro-borrowers, the opportunity ratio of achieving a level of delay i compared to the creditworthy micro-borrowers. In fact, the variables related to optimism are not statistically significant. Therefore, both of these hypotheses could not be validated, what lies within the limits for which our work can be criticized. Similarly, this result enabled us to show the relationship weakness for both types of behavior. Actually, the non-validity of these hypotheses can be explained by the sensitivity of the studied behavior. However, these dimensions appear to help with the development of explanatory behavior theories during the decision-making process and its effect on the repayment delay, and more clearly, on the distinction of a good micro-micro-borrower from a credit-unworthy one. It can be said that the existence of such behavior is based on the frequency analysis, which is an analysis by item. Nevertheless, in a perfectly financial sector, this behavior is implied or unexpressed. Moreover, according to the economic conditions of the previous period, which was a very disturbed phase on the economic level following the Tunisian revolution, the agents can be neither optimistic nor pessimistic.

5. Debate and conclusions

In what follows, the results are put into context with the existing literature to illustrate what they mean for researchers and practitioners.

Hypothesis 2.1: Professional experience: For the variable "Experience", we find that, for both levels of delay, our estimation results based on the ratios of the probability of achieving a degree of delay i in relation to creditworthy micro-borrowers, revealed a negative and positive impact, at the threshold of 10% and 5%, successively, on the ratio of the probability of achieving a low and very high degree of delay in connection to creditworthy micro-borrowers. Furthermore, the ratios related to this variable have negative signs (-0.57; 1.09). In fact, the theoretical literature shows that the agents' professional experience significantly affects the delay. Indeed, for a very high level of delay in relation to creditworthy micro-borrowers, the estimates results revealed a positive and significant impact at the threshold of 5% on the report of the chances of achieving a level of very high delay

More clearly, the agents' attitude has a low level of delay chance of (-0.57)¹ which cannot be realized and a very high level of delay chance of 1.09² which cannot be realized. This means that, if experience increases, the opportunity ratio of achieving a very high level of delay in relation to the micro-borrowers, increases by 1.09 at a significance threshold of 5%. In other words, the higher the agents' experience is, the better the repayment performance will be and, subsequently, the lower the chance ratio of achieving a very high level of delay in relation to the micro-borrowers will be. More clearly, this basically indicates

¹ $(RR_2 = \frac{Pr[(Retard=2)/Attitude]}{Pr[(Retard=1)/Attitude]} = -0.57)$

² $(RR_3 = \frac{Pr[(Retard=3)/Attitude]}{Pr[(Retard=1)/Attitude]} = 1.09)$.

that the more the agent is experienced, the lower the delay level in relation to the solvent category will be. It is clear that agents' professional experience positively affects the delay. In fact, the more the agents' experience is important, the better the delay and the less solvent the micro-borrowers at maturity will be. On the other hand, this indicates that, in general, the more an agent is experienced, the lower level of delay, in relation to solvent category, will be. This result is expected and actually confirms our hypothesis which states the importance of professional experience in reducing of the probability of delay. Actually, this result is consistent with the view of Anderson (2004) according to which the agents who have experience make more consistent decisions than inexperienced ones. On the other hand, Agarwal and Wang (2008) tend to corroborate, according to the youngest and less experienced agents, the opinions to be undertaken in order to avoid losses and then maximize their career progression. As a result, the MFIs are strongly recommended to pay particular attention to newcomers into the profession via an extra effort in learning and in a continuous procurement of the fundamental requirements to be implemented so as to alleviate the delay risk. Moreover, frequent monitoring of new agents is therefore essential.

A loan granted by a more experienced agent is less exposed to default risk. In fact, he has a greater potential of repayment at maturity and an improvement of the portfolio quality. Due to their skills and experience, the agents are interested in the qualitative aspects by performing studies in a thorough and rigorous way. Moreover, a microfinance institution is requested to enhance the knowledge of its agents without being limited to their experience. The mission suggests the revision of the training mode given to the staff. Currently, many round trips between theory and practice are a source of confusion for newcomers. It is recommended to start with an approach of theoretical initialization based on the learning of textbook dealing with the most appropriate procedures before putting this knowledge into practice. For this reason, working in pairs on the ground may be considered. Finally, it is important to limit the number of the partners involved in this type of training. Actually, the main results showed that the probability of delay seems to be explained not only by experience, but also by the cognitive flexibility of the credit officers.

Hypothesis 2.2.4: Lack of cognitive flexibility

For the variable 'flexibility', it was found that, for both levels of delay, our estimate results based on the ratio of the probability of achievement of a delay degree 'i', compared to the creditworthy micro-borrowers revealed a positive impact at the threshold of 5%, on the ratio of the probability of achieving a low and very high degree of delay in relation to the creditworthy micro-borrowers and that the ratios related to this variable have negative signs (1.23; 0.61). Moreover, the theoretical literature showed that the lack of flexibility significantly affects the delay. Actually, an assessment of our results using the risk ratio coefficient showed that the variable synthesized by hypothesis 2.2.4., according to which the agent's lack of flexibility significantly affects the delay, is validated. Therefore, the test reveals the impact of a rise of this explanatory variable on the opportunity ratio of achieving a low degree of delay compared to the solvency degree. In other words, it is more likely that the micro-borrowers are not overdue; but the effects of each variable differ depending on both degrees of delay.

On the other hand, the test revealed a positive impact of this explanatory variable on the opportunity ratio of achieving a low level of delay compared to that of the creditworthy micro-borrowers. In fact, for a

low level of delay compared to the creditworthy micro-borrowers. our assessment results revealed a positive and significant impact at the threshold of 5% significance of the agents' 'flexibility' on the opportunity ratio of achieving a low level of delay (N2) compared to the creditworthy micro-borrowers and that the ratio related to this variable has a positive sign (1.23). This therefore means that if the lack of flexibility rises by one unit, the opportunity ratio of achieving a low level of delay compared to creditworthy micro-borrowers, increases by 1.23¹ at a significance threshold of 5%. In addition, the higher the absence of flexibility is, the better the repayment performance will be and, subsequently, the lower the opportunity ratio of achieving a low level of delay compared to the creditworthy micro-borrowers will be. More clearly, the agents' attitude towards risk at 1.23² of the opportunity of low level of delay which cannot be achieved and 0.61³ of very high chance of delay which cannot be realized.

It was found that the agents' lack of cognitive flexibility positively affects the delay. Besides, the results showed that this lack is materialized, on the one hand, by the agents' weak reaction during an economic crisis and, on the other hand, by the difficulty of developing these increasingly intense ideas. This result was actually expected and confirmed our hypothesis stating the importance of the agents' cognitive flexibility towards their customers in the reduction of the delay probability. In other words, the minimization of the MFIs' insolvency risk goes hand in hand with a greater flexibility by the agent. This result is consistent with the previously discussed theoretical foundations. These results reflect the role of the situations where an agent should be flexible so that he can secure the risks associated with the repayment delay. Actually, they confirm the work of Low and Mac Milan (1988) which is based mainly on strategy and psychology that define the lack of flexibility for an individual, as a trait of inability to make good predictions, which illustrates the multiplicity of their physiological characteristics, a bad choice in the case of decision making. Moreover, the empirical results of D. Ansia, L. Bergery, C. Dejoux, I. Dherment-fell and H. Wechtler (2007) showed that the use of emotions in the resolution of problems is a factor which contributes to greater cognitive flexibility.

On his part, Amabile (1997) showed that creativity skills can also be refined on the basis of learning and practicing techniques that aim at increasing both the individual's cognitive flexibility and intellectual independence. Similarly, Canas, Quesada, Antolí and Fajardo (2003), believe that cognitive flexibility refers to the ability to adapt cognitive strategies and processes depending on the new and/or unexpected environmental conditions.

At this level, Sternberg and Lubart (1999) advocated that the development of individual creativity requires the combination of six resources: knowledge, intellectual skills, way of thinking, motivation, personality and environment. On the basis of this debate, it is both important and essential to provide the agents with more scope in adopting a cognitive flexibility in order to adapt to cyclical events that may accidentally occur when granting credits. However, this imperative should take into account an accumulated minimum experience and in-depth knowledge of the working mechanisms by the agent. On

¹ $(RR_2 = \frac{Pr[(Retard=2)/Flexibilité]}{Pr[(Retard=1)/Flexibilité]} = 1.23)$
² $(RR_2 = \frac{Pr[(Retard=2)/Attitude]}{Pr[(Retard=1)/Attitude]} = 1.23)$
³ $(RR_3 = \frac{Pr[(Retard=3)/Attitude]}{Pr[(Retard=1)/Attitude]} = 0.61)$

the other hand, the main results showed that the delay seems to be explained not only by flexibility but also the agents' attitude towards risk.

Hypothesis 2.2.2: Attitude towards risk

Regarding the 'attitude' variable, it was found that, for both levels of delay, the estimation results based on the probability ratio of achieving a delay level 'i' compared in relation to the creditworthy micro-borrowers revealed a positive impact at the threshold of 5% and 1%, successively, on the probability ratio of achieving a low and very high delay level in relation to the creditworthy micro-borrowers and that the ratios related to this variable have negative signs (1.27¹; 1.31²). Actually, the theoretical literature showed that the agents' attitude towards risk significantly affects the delay. "Therefore, the examination of our estimation results based on the risk ratio coefficient in which hypothesis 2.2.2, states the significant effect of the agents' attitude" towards risk on the delay, is validated. Thus, the test revealed the impact of an increase of this explanatory variable on the opportunity ratio of achieving a low and very high degree of delay in relation to the creditworthy micro-borrowers. On the one hand, for a given level of respectively low and high delay regarding the micro-creditworthy borrowers. The estimation results showed a positive and significant impact at 5% and 1% threshold, respectively, of the agents' attitude on the opportunity ratio of achieving a low and very high level of delay to the creditworthy micro-borrowers.

In other words, we can see that the ratio for that variable is statistically significant and positive (1.27 and 1.31), respectively. This therefore indicates that if the agent's attitude to risk increases by one unit, the opportunity ratio achieves a low and a very high level of delay compared to the creditworthy micro-borrowers, as it increases by 1.27 and 1.31, respectively at the threshold of 5 and 1%. More clearly, the agents' attitude to risk has a 1.27 chance of low degree of delay that cannot be achieved, and a 1.31 chance of very high delay that cannot be realized. In other words, the more important the agents' attitude to risk is, the worse their repayment efficiency will be and subsequently, the opportunity ratio of achieving a degree of delay I, with respect to creditworthy micro-borrowers, declines. Furthermore, it should be noted that the agents' attitude to risk positively affects the delay. Actually, the more important the agents' attitude to risk is, the greater the delay is and the less the micro-borrowers repayment of their loans at maturity will be.

In fact, in accordance with pre-exposed theoretical developments from which our hypothesis is inspired, an emotional position characterized by some risk aversion is a timely way to minimize the repayment delay. On the other hand, [Sitkin and Pablo \(1992\)](#), state that the policymakers' propensity and perception of risk affect their risk behavior ([Sitkin and Weingart. 1995](#)). Moreover, risk perception depends on both the individual's willingness to take risk and the specific decision-making context that attracts his attention on some dimensions rather than other risk ([Chakravarti and Lynch. 1983](#)). A strong culture of risk-taking encourages the individual to underestimate the risk and decide quickly, unlike a culture with a moderate direction, for a risk which is likely to favor a more cautious behavior. In addition,

¹ $(RR_2 = \frac{Pr[(Retard=2)/Attitude]}{Pr[(Retard=1)/Attitude]} = 1.27)$
² $(RR_3 = \frac{Pr[(Retard=3)/Attitude]}{Pr[(Retard=1)/Attitude]} = 1.31)$

the national culture is likely to affect the propensity to risk of the individual (Williams and Narendran., 1999). In fact, once the risk is perceived, the decision-maker may use different strategies to channel or even control it (MacCrimmon & Walker., 1986). The decision-maker may, as the case may be, want to increase his profits and reduce his losses or the uncertainty associated with the achievement of his benefits (March and Shapira., 1987; Mitchell., 1995 Chiles and McMackin, 1996).

Therefore, this result is unexpected and does not confirm our hypothesis. Indeed, in order to minimize the damage caused by the repayment delay, it is essential for the agents to avoid risk-averse attitudes and adopt some kind of tolerance even in situations where there is an apparent risk. Generally, the results of this study show that the behavioral and psychological factors significantly affect the opportunity ratio of achieving a level *i* of the repayment delay in relation with the creditworthy micro-borrowers and show the role of these factors in the repayment at maturity. This means that the factors determining the repayment should be implemented by the IMF in order to reduce insolvency risk. Subsequently, the specific implications that emerged from our results contribute to the theoretical literature about micro-finance in various ways. In fact, although studies focused on the analysis of the creditworthy micro-borrowers' factors, little research analyzed the agents' behavioral and psychological factors which are still among those that support the repayment. Subsequently, our results confirm the importance of these factors as determinants of the repayment.

Finally, the results of this analysis verify our initial hypothesis. As a result, the results show that loan repayment is based on characteristics related to the agents during the granting decision. Moreover, the comparison of the types of the micro-borrowers shows that they are significantly different. In other words, the causes of the repayment delay are affected primarily by behavioral and psychological factors. Therefore, in order to prevent and assess microcredit risk, the agent should maintain the appropriate information about his customers. As a consequence, it's better to have a good information system either to establish sustainable prevention measures or move toward procedures so as to achieve the AMC's survival. Furthermore, it is essential to have a minimum of information on the customer. As a consequence, the agent collects information about the customer and other external sources in order to show the credit file and supplement it with internal information where the applicant is already a customer. In this context, the sustainability of a MAC depends on its ability to collect and effectively use the information.

6. Conclusion

This helps it, on the one hand, select the job-seekers and, on the other hand, monitor their performance. Moreover, the literature extensively studied the adverse consequences of the existence of an information asymmetry in the default process. The information asymmetry regarding the customers' characteristics is predictable at the time of the loan granting because it reduces the lender's capacity of distinguishing between the good and bad micro-borrowers. A synthesis of the results also led to the provision of a revised and useful tool for the policy-makers. In this way, it is possible to put forward proposals and recommendations in order to improve the functioning of the CMA and help create more micro-projects

and mainly to promote employment. In general, in micro-finance literature, too little attention has been paid to the loan repayment process; however, the focus was particularly on the success factors. However, although it is almost always unpleasant, the delay can become, on several occasions, a tool to discover new success opportunities. Therefore, the analysis could lead to targeted strategic actions so as to predict the constraints that might reduce the success opportunities. As a result, delay brings us to design recommendations for the policymakers. In fact, the type of MFI may largely contribute to repayment through several methods of granting loans among which we can cite: political risk-taking, previous training and the agents' lack of cognitive flexibility. Following this contribution, the question to be asked is about identifying the advantages, the recommendations, and the implications that can be drawn to minimize the delay. All these are the subject of our fourth chapter. This is particularly to implement specific measures to enable the MFIs achieve financial viability. More precisely, our focus is on the recommendations that the bank should implement to minimize risk. Therefore, to continue with this idea, the next chapter will clarify the MFIs governance mechanisms and their impact on the TR. The figure below shows the approach we have followed so far.

7. References

- Anderson, M. L. (2003). « Embodied cognition: A field guide », *Artificial Intelligence* 149 (1): 91-103.
- Argyris, C. (1999). « On Organizational Learning », 2nd Ed. Malden, MA: Blackwell Publishing.
- Armendáriz de Aghion, B., & Morduch, J. (2005). « The economics of microfinance », *Cambridge, Massachusetts: The MIT Press*.
- Baird, I. S., & Thomas, H. (1985). « Toward a contingency model of strategic risk taking », *Academy of Management Review*, 10, 230-243.
- Baker M., Ruback R. et Wurgler J. (2004). « Behavioral Corporate Finance: A Survey », NBER Working Paper, n° W10863, <http://ssrn.com/abstract=612064>.
- Barber, B.M. and T. Odean (2001). « Boys Will Be Boys: Gender, Overconfidence, and Common Stock », *Investment, c Quarterly Journal of Economics* 116:261-292.
- Bar-On, R. (2003). « How important is it to educate people to be emotionally and socially intelligent and can it be done? », *Perspectives in Education*, 21, 3-13.
- Barsky, Robert B., Thomas F. Juster, Miles S. Kimball, and Matthew D. Shapiro. 1997. « Preference Parameters and Behavioral Heterogeneity: An Experimental Approach in the Health and Retirement Study », *Quarterly Journal of Economics*, 112(2): 537-79
- Bazerman, M. H. (2006). « Judgment in Managerial Decision Making », (6th ed.). Hoboken, NJ: John Wiley.
- Bettman, J.R. (1973). « Perceived risk and its components: a model and empirical test », *Journal of Marketing Research*, Vol. 10, May, pp. 184-90.

- Black, Sandra E. and Strahan, Philip. « E. ì The Division of Spoils: Rent-Sharing and Discrimination in a Regulated Industry.î », *American Economic Review*, 91(4), September 2001, pp. 814-831.
- Camerer, C. and Lovo, D. (1999). « Overconfidence and excess entry: an experimental approach », *American Economic Review*, 89(1), pp. 306 n°18.
- Canas, J., Quesada, J., Antoli, A., & Fajardo, I. (2003). « Cognitive Flexibility and Adaptability to Environmental Changes in Dynamic Complex Problem-Solving Tasks », *Ergonomics*, 46(5): p. 482-501.
- Charness, G., Gneezy, U., 2007. « Strong Gender Differences in Investment », *mimeo*
- Christiansen, C., Schröter-Joensen, J. and H. Skyt-Nielsen (2006). « The Risk-Return Trade-Off in Human Capital Investment », *IZA Discussion Paper N° 1962*, IZA, Institute for the Study of Labour, Bonn, Germany.
- Cote S, Miners CTH (2006). « Emotional intelligence, cognitive intelligence, and job performance », *Admin. Sci. Quart.*, 51: 1–28.
- Dake, K. (1992). « Myths of nature: culture and the social construction of risk », *Journal of Social Issues*, 48(4), pp. 21-37.
- Daniel, K., Hirshleifer, D., Subrahmanyam, A., 1998. « Investor psychology and security market under- and overreactions », *Journal of Finance* 53, 1839–1885.
- Daniel, Kent D., and Sheridan Titman, 1999. « Market efficiency in an irrational world », *Financial Analysts Journal* 55, 28–40.
- De Bondt, F.M., and Thaler, R.H.,(1995). « Financial decision making in markets and firms: A behavioral perspective, in R. A. Jarrow, V. Maksimovic, and W.T. Ziemba, ed. *Handbooks in operations research and management science* », volume 9, Finance, p385-410 (Elsevier).
- Douglas, M., and Wildavsky, A. (1982). « Risk and culture », *Berkeley, CA: University of California Press*.
- Fairchild R. (2005). « The Effect of Managerial Overconfidence, Asymmetric Information, and Moral Hazard on Capital Structure Decisions », *Working Paper*, <http://ssrn.com/abstract=711845>.
- Fischhoff B. (1982). « Debiassing dans Kahneman D., Solvic P. et Tversky A. (1982). « Judgment under Uncertainty: Heuristics and Biases », Cambridge University Press.
- Gervais, S., Heaton, J. B. and Odean, T. « Overconfidence, investment policy and stock options », *Working Paper* (Duke University, 2003).
- Gneezy U., Niederle M. & Rustichini A. (2003). « Performance in Competitive Environments: Gender Differences », *Quarterly Journal of Economics*, 118, 1049-1074.
- Goldin, Claudia, and Cecilia Rouse, 2000, « Orchestrating Impartiality: The Impact of ‘Blind’ Auditions on Female Musicians », *American Economic Review*, Sept: 714-741.
- Goleman, D. (1995a). « Emotional intelligence », New York: Bantam Books

- Hackbarth, Dirk (2004). «Managerial Traits and Capital Structure Decisions », SSRN *working paper*
- Heath, C. and A. Tversky (1991). « Preference and Belief: Ambiguity and Competence in Choice under Uncertainty », *Journal of Risk and Uncertainty*, IV, pp 5-28.
- Heaton, J.B., 2002, «Managerial optimism and corporate finance », *Financial Management* 33-45.
- Hofstede, G. (1991). « Cultures and organizations: Software of the mind. », UK: McGraw-Hill.
- Honlonkou, A. Acclassato, D. and Quenum V. (2006). « Déterminants de la Performance de Remboursement dans les institutions de microfinance au Bénin. », *Annals of Public and Cooperatives Economy* (CIRIEC), Blackwell Publishing, Vol. 77, N_1, march 2006, PP. 53-81(29).
- Kahneman, D., and A. Tversky. 1979. « Prospect Theory: an Analysis of Decision under Risk », *Econometrica* 47: 263–291.
- Kahneman, D., Slovic, P. & Tversky, A. (Eds.). (1982). « Judgment under uncertainty: Heuristics and biases », New York: Cambridge University Press.
- Keiber K. (2006). « Managerial Compensation Contracts and Overconfidence », *EFMA Behavioral Finance Symposium Paper*, <http://efmaefm.org/0EFMSYMPOSIUM/durham-2006/sympopart.shtml>
- Lesage C. (1999). «Traitement de l'information imparfaite en analyse de coûts : application au modèle coût-volume-profit », *Thèse de doctorat en sciences de gestion*, Université de Rennes 1
- MacCrimmon, K. R. & Wehrung, D. A. (1986a). « Taking Risks: The Management of Uncertainty », New York: Free Press.
- MacCrimmon, K. R. & Wehrung, D. A. (1986b). « Assesing risk propensity. In L. Daboni, A. Montesano & M. Lines (Eds.). *Recent Developments in the foundations of utility and risk theory* », pp. 291–309. Dordrecht: *Dordrecht Reidel Publishing Company*.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). « Emotional intelligence meets traditional standards for an intelligence », *Intelligence*, 27, 267–298.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). « Models of emotional intelligence », In R. J. Sternberg (Ed.), *Handbook of intelligence* (pp. 396–420). *Cambridge, England: Cambridge University Press*
- McKinnon, R. and H. Pill. 1997. « Credible Economic Liberalizations and Overborrowing », *American Economic Review* 87(2): 189–193.
- Mitchell, V.W. and Mcgoldrick, P.J. (1996). « Consumers' riskreduction strategies: a review and synthesis », *The international review of retail, distribution and consumer research*, vol. 6, n° 1, enero, pp. 1-33.
- Odean, Terrance. « Volume, Volatility, Price, and Profit When All Traders Are above Average », *Journal of Finance*, LIII (1998), 1887–1934
- Payne, John WJames R. Bettman, and Eric J. Johnson (1993). «The Adaptive Decision Maker », (Cambridge, UK:

Cambridge University Press).

Shapira, Z. (1995). « Risk taking: A managerial perspective », New York: Russell Sage Foundation.

Sitkin, S. B., & Weingart, L. R. 1995. « Determinants of risky decision-making behavior: A test of the mediating role of risk perceptions and propensity », *Academy of Management Journal*, 38(6): 1573-1592

Thompson, M., Ellis, R. & Wildavsky, A. (1990). « Cultural Theory », (Oxford, West View)

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases », *Science*, 185, 1124–1131.

Vlek, C. A. J., & Stallen, P. J. (1980). « Rational and personal aspects of risk », *Acta Psychologica*, 45, 273-300

Von Neumann, J., & Morgenstern, O. (1947). « Theory of games and economic behavior », 2nd ed. Princeton, NJ: Princeton University Press

Weinstein, N. D. (1980). « Unrealistic optimism about future life events », *Journal of Personality and Social Psychology*, 39, 806–820. doi:10.1037/0022-3514.39.5.806

Williams, S. and Narendran, S. (1999). « Determinants of managerial risk: exploring personality and cultural influences », *The Journal of Social Psychology*, Vol. 139 No. 1, pp. 102-25.

Wong, C.-S., & Law, K. S. (2002). « The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study », *The Leadership Quarterly*, 13, 243–274.

Zajonc, R. B. (1980). « Feeling and thinking: Preferences need no inferences », *American Psychologist*, 35, 151–175.

THE IMPLEMENTATION OF CULINARY SEARCH ENGINE BY USING WEB AND MOBILE- BASED GLOBAL POSITIONING SYSTEM (GPS) TECHNOLOGY AS THE SUPPORT SYSTEM OF CULINARY TOURISM DEVELOPMENT AT MARGONDA RAYA STREET, DEPOK CITY

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Abstract

This research was aimed to create such efficient system and technology in order to promote culinary tourism by using web and mobile- based system application which will facilitate all culinary lovers in accessing the culinary search engine trough their mobile phone by using GPS as the support system. It will assist and facilitate all culinary lovers in generating any information in respect with the foods, place, food prices at every restaurant or diner. This technology is expected to bring many advantages in generating information on Indonesian culinary varieties, especially in Depok City. This technology will facilitate the culinary lovers and tourists in accessing any culinary spots. It can also provide assistant for the Culinary Centre management as the positive information materials which may be used for the consideration and improvement suggestion for business owner, in addition as the endeavour to enhance product quality in order to achieve customer satisfaction while sustainably improving sale rate through income generating in culinary centres in the future. Furthermore, this research was expected to benefit the local government of Depok City to improve the efficient strategy in increasing tourist visit level, especially culinary travellers, which is intended for the development of tourism for Indonesia and its citizen.

Keywords:

Culinary, Web and Mobile based Application, E-Culinary

1. INTRODUCTION

1.1 Background

Depok becomes one of the settlement areas in Jabodetabek that is located near to Jakarta where million people come to seek for job. Depok City is a city in West Java Province, Indonesia. It is located in the southern border of Jakarta, which is in the middle of Jakarta and Bogor. Word

“Depok”, in Sundanese Language, has a meaning of hermitage or abode of one living in seclusion. Meanwhile, some people also state that Depok is an acronym of De Eerste Protestants Onderdaan Kerk (DEPOK) or First Protestan Christian Organisation in English. In addition as the settlement, Depok City also grows as one of the icons of Education City, where Universities or Colleges are located, such as University of Indonesia, University of Gunadarma, which is located near University of Pancasila, Bina Sarana Informatika (BSI), Gici Economics Institute, Mercu Buana University and others. This is the reason why Depok has turned into a city which is frequently visited, both from local or those that come from Jakarta.

Likewise to Jakarta, according to Lance Castles’s statement, Depok City also becomes the melting plot, in which various ethnic groups in the Archipelago with its importance and cultural value varieties merge into one (Castles, 2007: 2). Depok rises with its new identity which differs from the previous one as being reflected by the existence of local society in Depok. This cultural identity becomes more attractive when being linked up with the urban society dynamics in Depok, along with its cultural products, all snacks, foods and culinary also come as the one of new identities in Depok.

In this case, culinary can stand away from tourism activities. Culinary trip, today, has turned into special attraction for the Indonesian tourism. After its rapid growth, thousand societies also jump into it. Where such tourism spot exists, there will also be culinary spot and this will be the economic driver for the society. For the last few years, franchise businesses have been growing rapidly. This circumstance changes the culinary business as one of the favourite businesses of the entrepreneurs, especially women as the housewives who want to have entrepreneurial activity. For most society who live in this area, they are encouraged to develop their typical food, such as one group who chooses healthy food, while another group chooses to present luxurious food, there is an extreme food or kind of food with distinctive culinary taste. Culinary industry cannot grow further if there are no societies or local government who support its development.

2. LITERATURE REVIEW

2.1 Definition of Culinary

Culinary is a term being adopted from English language. In http://en.wikipedia.org/wiki/Culinary_profession it can be generated the definition of culinary as follow: “*The word culinary derives from the latin word culina, meaning kitchen. It is commonly used as reference to things related to cooking or the culinary profession .The culinary profession is cooking or preparing food as a profession, i.e. chefs, restaurant management, dieticians, nutritionists, etc*”. While according to English Indonesian Dictionary written by John M. Echols (1993 : 159) *Culinary* is defined to have correlation with kitchen and cuisine. From the above definitions, it can be literally described as a kitchen which can be used to refer to something in connection to cooking or culinary profession. Culinary profession itself can be defined as the profession in cooking or preparing foods, such as chefs, restaurant management, diet expert, nutritionists, and others. Therefore, what is meant by culinary is a travelling activity or part of this

activity is done voluntarily and temporary in nature in order to enjoy foods or drinks. The main magnet of this culinary is food products. Food product is the result of raw ingredients processing into ready to serve food which is done through cooking activity (Farida Arifianti: 38). Furthermore, Davis and Stone (1994: 44) state that the physical characteristics of foods and beverages products consist of the quality, presentation, menu arrangement, meal portion, product life cycle, room decoration and table arrangement. Most of the food and drinks served and provided in the restaurant which is a place or building that is organized commercially, which carries out the service properly to all its guest, both from the food and beverage serving (Marsum WA. 1991:7). Besides Restaurant, foods and beverage shops which mushroom are diner, where it sells main dish in a small scale and more simple compared to restaurant, and snack store or snack centre which can be defined as the place that specifically sells side dish as being dominated by dried food (Hasan Saputro 2004: 12- 13).

2.2 Tourism Sector

In the development of tourism needs to be assessed on the travellers that will be addressed in the future will come to a tourist destination. These Travellers that will become the market share of tourism sector. According Fandeli (2003: 4), the tourism market (demand) is a party who requests or requires travelling activities. Therefore, lots of demand to be met by providers of tourism activities. Still according Fandeli, there are some important elements that must be considered in this aspect of the tourism market, i.e. the element of Traveller, Events, Promotions and technology, and Institutional. One of the factors that cause a person to perform activities of travel or travel is related to the needs, motives and personality. There are driving factors (needs and motives), namely the need to free yourself, find yourself, rest and relaxation, prestige, family, looking for new experiences, adventure and challenge, as well as attraction, which includes humans, places and activities (Arma in Fandeli , 1995). Meanwhile, according to Mathiesen and Wall (in Fandeli: 1995) demands of the tourism activities is mainly influenced by economic, social, and technology, as well as including the rising incomes and purchasing power of the higher up, the desire to escape from the pressures of life daily in the city, the desire to get a change of scenery and take advantage of free time after work, increasing advances in the field of transportation resulted in a trip easier, faster and convenient, as well as easiness in mobility, as well as the level of higher education will improve also the desire people to see and gain new experience about the people and places you want to visit. Provision of objects and tourist attractions (supply) should have the complementary / conformance with the tourism market (demand). In addition to those already mentioned above it is no less important in market segmentation which is the tourist's age factor, because of the age factor influence the mindset and their views on the type of travel chosen.

2.3 *Electronic Commerce (E-commerce)*

Kalakota and Whinston (1997) see E- Commerce from 4 perspectives, such as:

1. From communication perspective, E- Commerce refers to goods shipping, service, information and payment which is made through computer system or other electronic devices.

2. From business process perspective, E-commerce refers to an application of such technology being used for business transaction and work flow atomization.
3. From Service Perspective, E- Commerce refers to a device which can satisfy the corporate, customer, and management's need in reducing service cost while improving goods quality and shipment speed.
4. From On- Line perspective, E- Commerce plays role in providing such support for goods purchase and sale process or even information on the internet as well as other on- line facilities.

2.4 Definition of System

Sutarman (2009:5) defines System as “ a set of elements which correlate from one to another and mutually interact in a single unit in order to achieve the main goal ”.

While according to Jogiyanto (2009:34), “System may be defined as procedural approach and with component approach”.

There are two fundamental groups of such approaches in defining system, which are based on its procedural approach and its component approach.

1. System Approach through its procedure

A system is formed by a network and a procedure correlating one with another, working together to perform such job or settle a certain issue.

2. System approach through its component

A system is a set of several elements which interact with each other on a regular pattern thus it will lead into totality to settle a certain issue.

3. RESEARCH METHOD

3.1 Measurement Location and Planning

The research on this paper used the data being generated from culinary data processing, namely data from every restaurant/ diner/ food store located along Margonda Raya Street, in Depok City, West Java.

3.2 Research Data

This research engaged this following data:

- a) Before data collection, the researcher was asked to obtain research permission to Pondok Cina sub- district, Beji sub- district, and Kemiri Muka sub- district, which then being continuous to the government of Depok City, namely Kantor Kesatuan Bangsa dan Politik.
- b) Data collection from the restaurant owner/ business owner, of which the researcher collected the owner name, restaurant address, menus, foods price, and also took a picture of the outside

- view and inside view of every restaurant, and collected any information in respect with the culinary.
- c) Data processing and collection were done through the interview, of which this data collection was performed through face to face interaction and direct interview session between the data collector and the researcher towards the interviewee or data source.

3.3 Research Implementation

- a) Planning Phase consists of issue definition; system needs identification, cost estimation and activity planning.
- b) Analysis Phase consists of process modelling and data modelling.
- c) Design Phase consists of the designing process of user interface.
- d) Implementation phase, of which the design phase of the first year implementation is applied within this phase.
- e) Examination Phase, refers to the stage/ phase of which the examination towards system to user is done.

The research implementation flow chart is as follow:

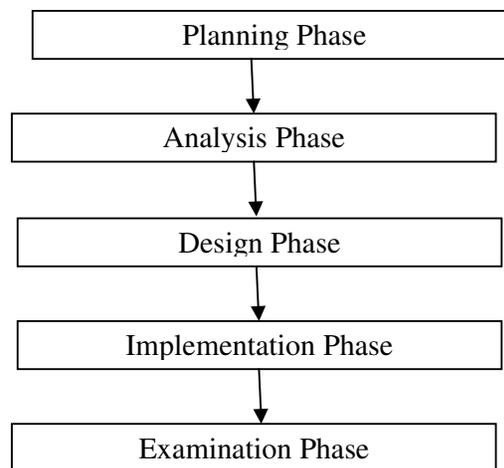


Figure 3.2 Implementation of Research Phases

4. RESEARCH RESULT

From the research had been done, these following achievements or results were generated, such as:

4.1 Data collection result: The collected data refers to the data which was in regard with culinary information, resulted products, and culinary data being required for website development.

In which the interview data being generated from the culinary owner/ restaurant owner, and restaurant manager, or the related parties provided an outlook that website would contain these following information:

- a) Information on foods store or culinary information in form of foods price, of which the collected data was foods price (it may be subject to such change at any time), foods menu at the restaurant, culinary information that provides take away/ Cash on Delivery (COD) service, information on culinary location, and information the restaurant owner.
- b) This website was targeted for the increase action from the visitor or user, and by the existence of this website, there would be more information available for the visitors, culinary lovers, culinary travellers which would enable them to buy foods directly by using mobile media, it could also enable the visitors or culinary travellers to find out the culinary spots along Margonda Raya street, enable the culinary travellers to know foods price and menus available at the restaurants.
- c) The expected visitors were all societies, the visitors from culinary travellers, and culinary lovers who starve for lots of information on food menus, food prices, and the location of every restaurant, whether it is all required by local society from Depok, the visitors or culinary lovers, then, this website was expected to help all restaurant owners in improving food quality and also assist the culinary lovers or culinary travellers to generate any information on products and its marketing by online.

5. Planning and Designing/ Modelling

In order to facilitate web development, the very first step must be taken was plan and design arrangement, such as:

5.1 Navigation Structure:

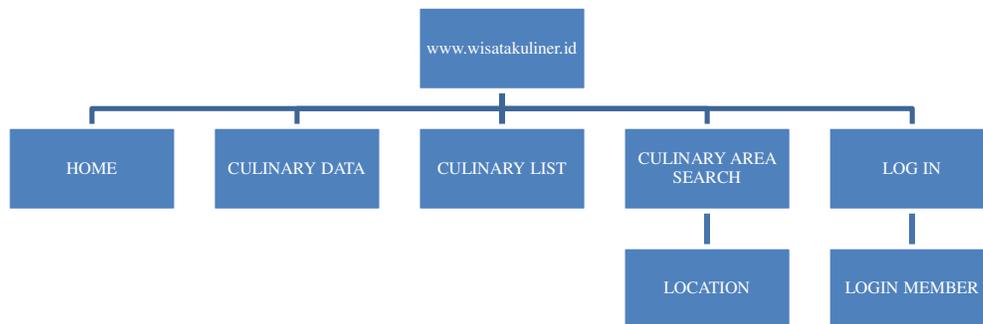


Figure 5.1 Programme Navigation Structure

On this writing, the navigation structure being used was combination/ mix navigation structure. Since there was an irregular branching as being presented by Figure 5.1.

Navigation Structure would present 5 pages which were planned to be built o this website, these pages would consist of HOME, CULINARY DATA, CULINARY LIST, CULINARY AREA SEARCH AND LOG IN.

1. HOME page will display the front page. This page connects the user with culinary search system and enables user to create new account.
2. LOG IN page, it will appear when log up button is activated, then registration page will be displayed. After finishing the registration phase, then website will go back to the Home page as it will guide the users how to search culinary information.
3. CULINARY DATA page, CULINARY LIST page, and CULINARY AREA SEARCH page, each of them contains information on the culinary tourism available in Depok.

6. Context Chart

Process modelling on this writing used context chart as being displayed on this below figure:

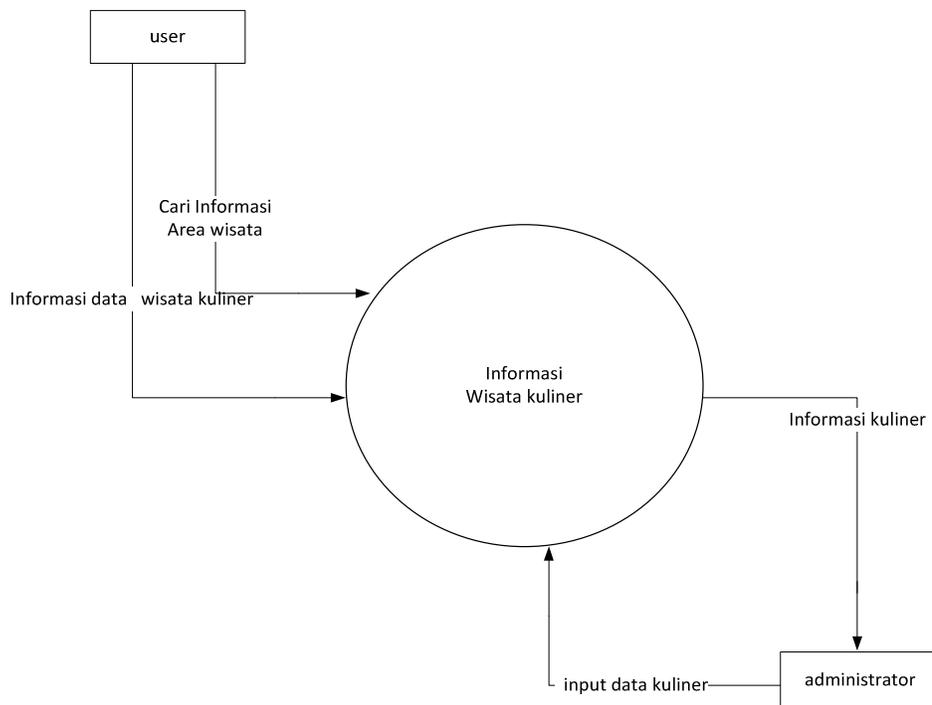


Figure 6.2 E- Culinary Context Chart

Context chart pictures the e-culinary system process. First, User will register/ log up on the website, and then the administrator will receive notification of new applicant. Administrator will provide the user with verification by the email which has been previously registered.

Once the user enters the verification code, then user will be required to complete personal data and email address. Once the user finishes inputting their data, the user may continue to the next page, of which the menu of Culinary Data, Culinary List and Culinary Area Search at Margonda Raya Stree, Depok are available.

The visitors who access www.wisatakulinerdepok.id will be pampered with any information about website, culinary data, culinary list and culinary spot search. Of which each page will guide the user upon how to use this culinary application.

7. Development

Once website planning and design had been well- developed, of which the result of this development was website development. Website development was in accordance with the navigation structure and process modelling, as it contains HOME, CULINARY DATA, CULINARY LIST, CULINARY AREA SEARCH and LOG IN. Figure 4.3 and Figure 4.4 show the interface of HOME page that contains the information on the latest culinary tourism and of course, news upon culinary tourism growth at Margonda Raya Street, Depok.



Figure 4.3 Interface of HOME Page



Figure 4.4 The Interface of HOME Page

Figure 4.5 is the interface of Member Login page, verification page and personal data page. During this process, user is required to input the data being provided by the system, this data will be stored in system. And if the user gets verification email, it means that this user may log in to the website to complete the personal data.

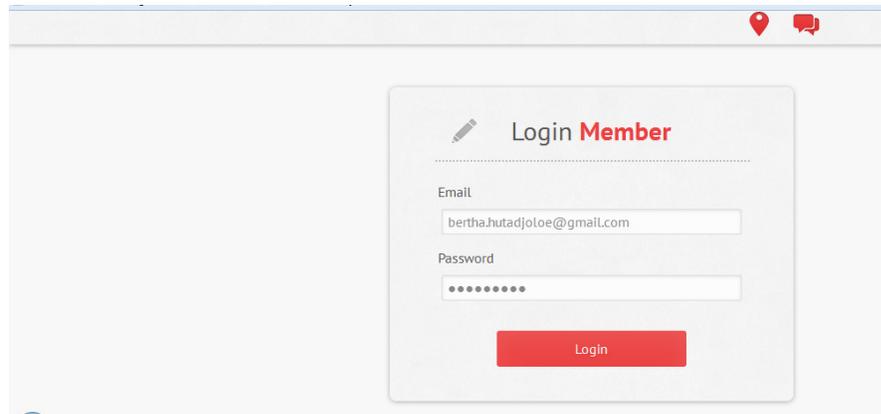


Figure 4.5 The interface of Member LOGIN page

Figure 4.6 on below is the tourism data Menu, this page displays any information about culinary details and culinary spot image.

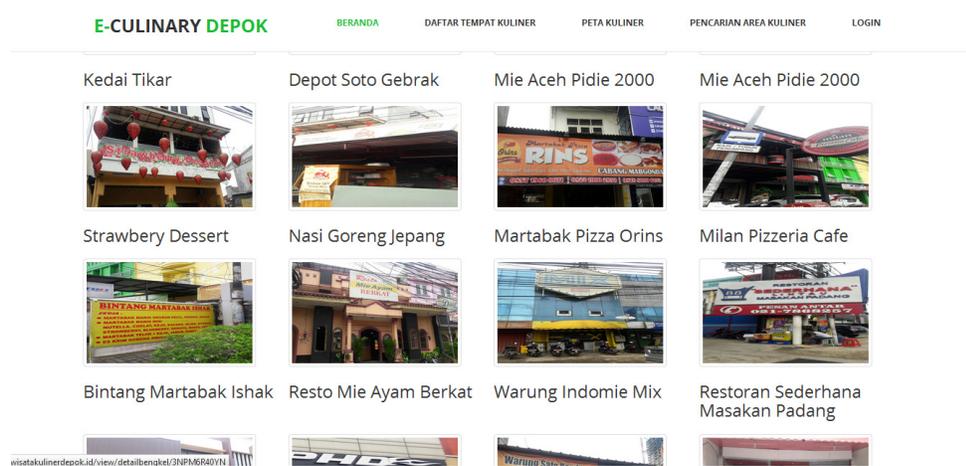


Figure 4.6 The Interface of Culinary Data

Figure 4.7 is CULINARY LIST Page, on this menu, there are culinary map location or area location and restaurant details containing its culinary name, culinary address, culinary types as can be seen from its food types and phone number data.

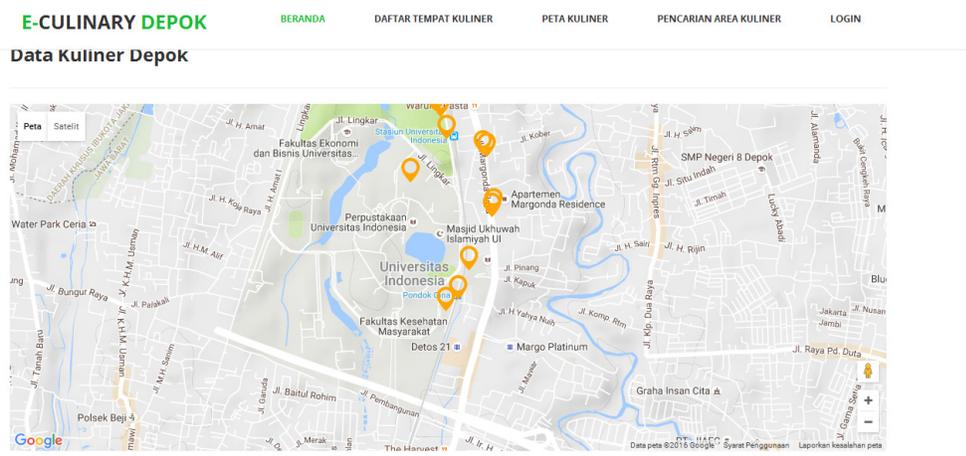


Figure 4.7 The Interface of CULINARY LIST Page

This Figure 4.8 below is the Culinary Search Engine Page. This menu offers the culinary search engine which is usually done through several ways according to its current location, address and information.

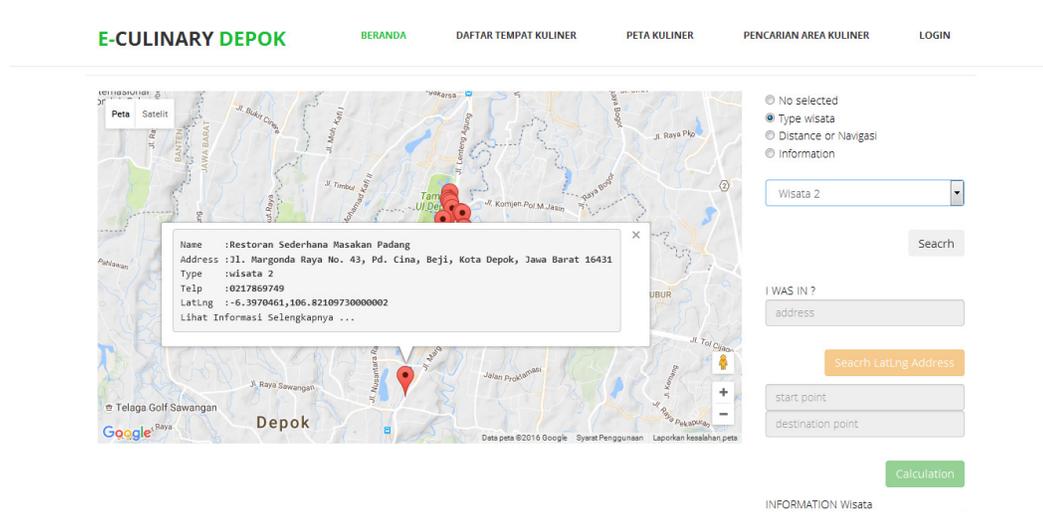


Figure 4.8 The Interface of Culinary Search Engine Page

8. CONCLUSIONS

- 8.1 This research has successfully developed an efficient system and technology, namely a website which can enable and facilitate the users, visitors or culinary travellers to access culinary search engine through web- and mobile- based systems as utilizing Global Positioning System (GPS) as the support system.
- 8.2 This research has successfully promoted culinary tourism through web- and mobile- based systems.
- 8.3 Analyzing customer satisfaction towards Depok City culinary potency. Thus it can bring Depok City as one of the culinary icons or trends in Indonesia.

9. Suggestion

- 9.1 Develop city assets in form of strategic culinary centres of Depok's traditional foods, so that it can make these spots as the tourism location for any visitors or tourists while strolling around or having vacation in Depok City and arrange the location lay out in order to look healthy and comfortable while spending time on this location.
- 9.2 In the future, this application development is expected for not only being used by Depok Culinary, but it should go further to the other cities.
- 9.3 This application is expected to be better developed, either from its interface aspect or design modelling aspect, as well as the improvement in the use of mobile- based GPS.

References

- [1] Ekawati, Tias 2009, *System Informasi Geografis Kota Depok Dengan Menggunakan Quantum Gis Dan Database Postgresql*, www.gunadarma.ac.id diakses pada tanggal 6 februari 2011
- [2] Hartono, 2009, *Geografi 3 Jelajah Bumi dan Alam Semesta*, <http://www.inigis.com>, di akses tanggal 20 desember 2010
- Hidayat, Andi, 2010, *jenis-jenis peta*, <http://andimanwno.wordpress.com/materi-kelas-xii/>, diakses tanggal 26 februari 2011
- [3] Jogianto H.M 1999, *Analisa Dan Perancangan Sistem Inforamasi*, Penerbit Andi Offset. Yogyakarta
- [4] Laudon, Kenneth C., Jane P.Laudon. 2007. *Management Information System: Managing The Digital Firm*. Diterjemahkan oleh: Chriswan Sungkon dan Machmudin Eka P. Jakarta:Salemba Empat.
- [5] Mangkutak, 2009, *Dasar Pengertian Pariwisata* <http://mangkutak.wordpress.com/>, diakses tanggal 26 februari 2011
- [6] Novianti.D.A, 2010 *Sistem Informasi Geografi Obyek Wisata Di Kabupaten Kudus*, Program Studi Sistem Informasi,Fakultas Teknik, Universitas Muria Kudus.
- [7] Oetomo Budi Sutedjo Dharma, S.Kom, MM, 2002 *Perancangan dan Pembangunan Sistem Informasi*, Penerbit: Andi, Yogyakarta
- [8] O'Brien, James A. 2005. *Pengantar Sistem Informasi*. Diterjemahkan oleh: Dewi Fitriyani, S. S, M.Si dan Deny Arnos Kwar, S. S, M.Hum. Jakarta:Salemba Empat.
- [9] Shadily Hasan. 2004. *Sistem Informasi, Konsep Dasar, Analisa Desain dan Implementasi* , Penerbit: GRAHA Ilmu, Yogyakarta
- [10] Sidik, Betha. 2006. *Pemrograman Web dengan PHP*.Bandung : Informatika “Population Census 2010 Provinces West Java”. BPS. Diakses 2012-02-29.
- [11] Wahyono Teguh, 2004, *Sistem Informasi, Konsep Dasar, Analisa Desain dan Implementasi* , Penerbit: GRAHA Ilmu, Yogyakarta.
- [12] Hendra Teguh, 2004, *Management Information System*, Jakarta
- [13] Moleong, Lexy J. 2004. *Metodologi Penelitian Kualitatif*. Bandung:Remaja Rosdakarya
- [14] McLeod Jr, Raymond., dan George P. Schell. 2008. *Management Information System*. Diterjemahkan oleh: Ali Akbar Yulianto dan Afia R. Fitriati. Jakarta:Salemba Empat.
- [15] Prasetyo, Hermi, 2006, *Pengantar Unified Modeling Language (UML)*, <http://harmiprasetyo.wordpress.com>, diakses pada tanggal 24 januari 2011
- [16] Susanti, N, 2009, *Buku Panduan Skripsi Sistem Informasi*, Fakultas Teknik Universitas Muria Kudus, Kudus Utomo, Suprastyo, 2009, *Pemanfaatan Mapserver Dalam Aplikasi System Informasi Geografi Kota Bogor Di Bidang Wisata Kuliner*,
- [17] www.gunadarma.ac.id/library/articles/graduate, di akses pada tanggal 5 februari 2011
- [18] harter, Denny, 2008, *Konsep Dasar Web Gis*, <http://ilmukomputer.org/wpcontent/uploads/2008/05/charter-webgis.pdf>, diakses pada tanggal 9 januari 2011.

- [19] Hartono, 2009, *Geografi 3 Jelajah Bumi dan Alam Semesta*, <http://www.inigis.com>, di akses tanggal 20 desember 2010
- Hidayat, Andi, 2010, *jenis-jenis peta*, <http://andimanwno.wordpress.com/materi-kelas-xii/>, diakses tanggal 26 februari 2011
- [20] Charter, Denny, 2008, *Konsep Dasar Web Gis*, <http://ilmukomputer.org/wpcontent/uploads/2008/05/charter-webgis.pdf>, diakses pada tanggal 9 januari 2011.

THE IMPACT OF PUBLIC SPENDING ON AGRICULTURAL GROWTH IN PAKISTAN (1972 - 2015)

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ABSTRACT:

This study aims to find out the impact of spending on public goods and agriculture value addition in Pakistan. To this end, time series data has been used for the period of 1972-2015, taken from World Development Indicator and State Bank of Pakistan Economic Survey. To check stationarity of the data Augmented Dickey Fuller test is used. Further to assess the said impact, Auto Regressive Distributed Lag (ARDL) model and Error Correction Model (ECM) has been used. Estimation shows a positive and statistically significant effect of public goods' spending on agriculture value addition in the long-run. Furthermore a positive effect of other major inputs on agriculture productivity is witnessed both in long and short-run. Study recommends government intervention for agricultural growth through spending on health, education and transport and communication. More investment on human capital in the form of training and technical education should be made.

Key Words: Public Spending, Agricultural Growth, ARDL, Pakistan.

JEL Classification:

1. Introduction

Different economic systems may provide different solutions to economic problems. The Fiscalists recognized and emphasize the role of the government in economy. Accordingly, spending on public goods¹, mainly education, health, transport and communication and subsidies is considered the responsibility of the government. Among the fiscal policy instruments, public expenditure is the most important policy instrument available to government for promoting economic growth and equitable distribution of wealth. Public spending contributes to the growth and play multi-dimensional role in the improvement of economy (Hsieh and Lai: 1994). Construction of roads not only facilitated the masses but also have implications for other sectors of the economy like agriculture and industry (Benin et al., 2009; Fan et al., 2009).

There is a growing body of knowledge that supports and links public expenditures to agriculture value added. Agriculture growth not only depends upon agriculture expenditure but also on non-farm

¹ Public goods refers to non-rivals and non-excludable goods, e.g. police and fire protection, highways, national defense, lighthouses, television and radio broadcasts, clean air, and so on (Varian, 1999).

expenditures like spending on various public goods i.e. health, education and infrastructure (Fan et al. 2009). Spending on public goods plays a positive role in agriculture GDP per capita growth rate (Armas et al., 2012). Sustained and effective growth of agriculture sector needs extensive investment which cannot be provided by the private sector alone. Furthermore, importance of agricultural sector in the growth of developing economies cannot be ignored due to its major share in those economies. Thus, assessing public spending and its effect on agriculture value added is crucial.

Agricultural growth is linked with spending on various heads in the economy. Mushtaq and Nadeem (2010) suggested that government should allocate more funds to agriculture research and extension sectors to ensure sustainable development in agriculture sector. Spending on agricultural research and development programs helps to introduce new technologies and high yielding varieties which ultimately affect the agricultural value added per worker. Similarly spending on extension services creates awareness about high yielding varieties of seeds and adoption of new technologies. Research and development expenditure has the largest effect on agriculture growth and productivity (Mogues et al 2012). Allocating public resources towards Research and Development has positive effect on agriculture growth (Edward Misch and Dodson 2010). Public spending on agriculture research and extension services uplift agriculture productivity (Fan et al 2004). Furthermore expenditure on agriculture research and extension services leads to more use of fertilizer (Elias 1985).

Expenditures on education helps develop and strengthens the skills of farmers in using modern technologies and finally increase the productivity of laborers. There is a positive and statistically significant effect of household heads' education and adoption of high yielding varieties of seeds (Lin 1990). Spending on infrastructure like roads and markets improve access of farmers to the urban markets that leads to raise the value of their production and getting more benefits.

Spending on public goods correlates with agriculture value addition. The average spending on public goods during 1995-2007 for Pakistan, Syria, Iran, and Kuwait were 1.33, 7.86, 12.48, and 15.32 as a percent of GDP respectively while average of agriculture growth for the same period were 4.03, 6.78, 4.10 and 6.57 as a percent of GDP respectively (Malaiyandi, 2010).

Agriculture is an important sector of Pakistan's economy by contributing 21 percent to GDP, 45 percent to the employment sector. Almost 60 percent of the rural population depends upon this sector for their livelihood (Economic Survey of Pakistan, 2015). Moreover, recent issue of food security demands for more investment in this sector.

There are considerable studies conducted on the nexus between public spending and growth [Elias, 1985; Fan, Omilola and Lambert, 2009; Malaiyandi, 2010; Mushtaq and Nadeem, 2010; Mogues et al 2012]. These studies analyzed the impact of spending on public goods on agriculture growth in different regions of the world. Some of these studies examined the impact of overall public agriculture expenditure on agriculture growth whereas some took different heads of public spending like agriculture subsidies, agriculture R&D, agriculture extension services, rural infrastructure, education, health on agriculture growth, total factor productivity growth and on private investment in agriculture sector.

Studies regarding Pakistan have also been conducted on public spending and growth related issues. Most of the studies have focused on partial effects of the components of public spending such as effects

of expenditures on education, effects of health on agricultural growth in Pakistan [Khan, 1997; Ali and Iqbal, 2003; Ali et al., 2008, Yasmeen et al. 2011]. Yasmeen et al. (2011) elucidated that education increase the productivity farmer in agricultural sector. Ali and Iqbal (2005) highlighted that public sector investment in agricultural increase the productivity and strengthen market for agricultural products. Unsustainable growth of agriculture in Pakistan is mainly due to the public policy. Governments have been very active in some areas of agriculture and very much inactive in some areas which were the wrong diagnosis by policy makers and furthermore there is an inadequate will and administrative capacity on behalf of governments to implement those policies. Some policies were not used due to the political issues even when those were considered desirable. Author blamed public policy for the large part of the low growth of Pakistan's agriculture. Study concluded that governments should play an active role instead of withdrawing from economy but to avoid market failure and minimize their own failures Khan (1997). The importance of education in agricultural productivity It is pointed out from the bird eye view of the previous studies that there is a research gap regarding, effects of overall public spending (Government spending on health, education, infrastructure and provision input for agriculture) on agricultural value addition per worker in the context of Pakistan. Large scale public expenditure is necessary to increase productivity in agricultural sector i.e. for research and development, extension services, markets and overall infrastructure rather than the use of inputs Ali et al (2008). Azhar (1991) highlighted that how agriculture yield is being affected by human capital. They argued that education effects yield in two ways: the allocative effect which deals with better allocation decision, adoption of new technology, while worker effect related to technical efficiency aspect of production. They found that education is highly effective on technical efficiency in case of new crops and supported study's hypothesis. An educated farmer is adjusted quickly to the technical change. They concluded that the elementary education is insufficient to assure a positive effect on agriculture yield, and at least primary and above level of education will enhance the productivity.

Armas et al (2012) recommended the reallocation of resources by government from subsidizing fertilizer to the provision of other public goods which have positive impact on the sector like extension services, research and development and irrigation system. Paper concluded that this reallocation of resources can positively affect the productivity and growth of the sector.

Mogues et al (2012) argued that agriculture investments have significant and multiple effects on health, through access to its own produced low prices food and higher level of income. They observed that research and development investment has the profound effect on the productivity and growth of the sector. They concluded that investment in public goods has two dimensional effects on private investment. It can raise the reward of private investment but at the same time it may have crowding out effect.

Olabisi, et al. (2012) argued that Government intervention reduce the negative impact of market failure in an economy. They found that public expenditure on agriculture and transportation significantly increases economic growth, while public expenditure on education negatively affects the economic growth. The negative effect of education is due to high unemployment rate, corruption and rapid falling of education standards, which needs to be investigated further. Public expenditure on water was found adversely related to growth because inequality in the distribution of water and corruption, in most areas public water

supply was not available. They suggested that public expenditure on health, agriculture and transportation should be encourage in order to promote more economic growth and there is a dire need to further explore this issue.

Reimers and Klasen (2011) concluded that education has bigger effect on agricultural output in the presence of rapid technological change, as it really helps farmers to adjust with new innovations and technology which will significantly increase the agriculture growth.

Armas, et al. (2010) examined that how public expenditures are going to influence growth of agriculture sector in Indonesia using time period 1976- 2006. They argued that the purpose for public sector in agriculture is to boost private sector activity, efficient allocation the resources and minimize the price distortion while stimulating inclusive growth. Study found that agriculture GDP per capita growth is being positively affected by agriculture expenditures. By splitting the spending on public goods into developing spending on agriculture, irrigation, fertilizers' subsidies they found that public spending on agriculture and irrigation positively affects the agriculture growth while fertilizer subsidies had negative impact on the agriculture growth. They suggested that as the agriculture sector modernize in Indonesia, it is much better if the public spending on subsidizing seeds and fertilizer seeds are reallocated to improving public spending on agriculture services and irrigation will enhance agriculture growth in the country.

Edmeades, et al. (2010) also found that public spending composition matters a lot and irrigation would have positive growth effects over the medium run and these results are robust over all empirical specification.

Baba et al. (2010) found that public investment in agriculture drive up the private sector investment in agriculture and thus concluded that there was a crowding in phenomenon instead of crowding out. Studies like Dhawan and Yadav (1995), Dhawan (1996), Saeed, et al. (2006), and Ahmad and Qayyum (2008) supported the results arrived at in this particular study.

Benin et al (2009) Study revealed that spending on agriculture, roads and health have positive returns while formal education has negative impact. Study recommended more efforts to provide agriculture-relevant knowledge and skills.

Sun et al (2009) studied the impact of public R&D expenditure on US agriculture productivity growth by using dual cost function for the state-by-year panel data set. Papers studied data from 1980 to 2004 for the 48 contiguous states of US. Study examined the role of extension services transportation network and human capital in the process of technology dissemination. Author concluded that higher level of local public goods, R&D spillins, extension services and transportation network decreases cost. Paper further concluded that agriculture productivity from all series of R&D spillins is positive.

Fan, et al. (2009) They found and argued that African countries need to increase their public spending on agriculture. Although some countries have increased but their overall expenditures in agriculture are lower than those of Asian countries where agriculture sector has been transformed through the green revolution strategies. They finally concluded that African countries confronting with a forthcoming challenge of recent surge in food prices requires more expenses on rural development and agriculture so as to escape from this danger and can ensure stable supply of foods to millions of people.

Govereh et al (2009) recommended more involvement of government for the effectiveness of agriculture

spending and for not only increasing the yield but also for equitable distribution and allocation of resources.

This study is an endeavor to bridge the aforementioned gap and it covers public spending i.e. expenditures on health, education, infrastructure (road length) to see its influences on agricultural value addition per worker in Pakistan. This study answers the question “Does spending on public goods matter for agriculture value addition in Pakistan?”. Hence, to the best of knowledge, this would be the first study of its nature to find out the impact of spending on public goods on agriculture value addition in Pakistan using time series data. The aforementioned studies are silent about the impact of spending on public goods on agriculture value added per worker in Pakistan. So the present study will bridge this gap

The aforementioned studies analyzed how spending on different public goods effect agriculture growth in different parts of the world. Some of them studied the impact of overall public expenditure in agriculture and their impact on agriculture growth whereas some studied the impact of different heads of public spending like agriculture subsidies, agriculture R&D, agriculture extension services, rural infrastructure, education and health on agriculture growth, total factor productivity growth and on private Investment in agriculture sector.

2. METHODOLOGY

2.1 THEORETICAL FRAMEWORK

The provision of the public goods and its effects on welfare or economic well-being of the society has always been under consideration and this question is vastly examined across the globe and lot of debate is going on this important issue (Fenn et al., 2002 & 2004). The paramount concern of provision of the public goods is the conceptual framework of market failure. Public spending carries its weight in this regard and is highly acknowledged to achieve well-being of the people through or in poverty reduction. It looks quite intuitive and logical that the government would spend where its effect may be highly significant and major part of the society reaps benefits of it. The decision to spend on public goods is debatable whether it is endogenous or exogenous (Ansari et al., 1997; Zhang and Fan 2004).

As far as this study concerns, the effects of public spending on agriculture value added per worker is under consideration. In this regard, to conceptualize decision making in agriculture production, immensely, existing literature draws our attention toward farm household models, use of agricultural technologies and the determinants of the agriculture investment (Singh et al., 1986; de Janvry et al., 1991; Feder et al., 1985 & Ervin and Ervin, 1985). Commonly, a cogent notion suggests that public as well as private capital is a complimentary factor in the production process. Ashipala and Haimbodi (2003) extracted that private spending is more effective rather than that of public spending. Therefore, public spending may cause hindering growth. Further, it comes out that public expenditure may not be productive. Devarjan et al. (1996) found that there could be low synergy between public spending and growth.

Twofold effects of the public spending on the agriculture value added per worker can be estimated: 1) direct effects where public spending influences factor productivity and 2) indirect effects, where government expenditures influence the use and amount of factors or factor accumulation. Indirect

approach further demonstrates that public expenditures on education, health, research and development for agriculture escalate towards improvements in human capital and the adoption of the new technology, which ultimately bring about burgeoning wellbeing in the rural sector and it enhances productivity of these factors.

Public spending on improving the rural infrastructure also leaves positive indelible effects on the agricultural wellbeing. Public spending on improving the transportation and extension in roads which links the rural market to developed markets or access to potential markets are the drivers which eventually enhance agricultural potential via reducing the transportation and transaction cost, integrating the markets and increasing farm gate prices due to perfect marketing information. It may have multiple effects which also cause an improvement in health, education and research and development (Benin et al, 2009).

Having above conceptual framework in view, this study seeks how spending on public goods are affecting per worker's value added of agriculture sector. In this study three kinds of public spending i.e., public spending on health, education while public spending on transport and communication (peroxide by road length in kilometers) are used to assess their impact on agriculture value added. Besides public spending there are many other variables that affect agriculture value added. Looking over the requirements of production, this study considered agriculture value added per worker as depended variable while the included explanatory variables were public expenditure on health sector, public expenditure on education sector, road length, import of pesticides, fertilizer off-take and labor force employed in agriculture sector and production of tractors.

2.2 Data and Description of Variables

The data has been taken from two major sources, World Development Indicator and Economic Survey of Pakistan for the period 1972 to 2015. Expenditures on education and agricultural value added per worker are taken from WDI, whereas, expenditures on health, Import of Pesticides, fertilizer off-take, production of tractors, labor force participating in agriculture and length of roads is taken from Economic survey different issues.

Table-1 Definition of the Variables

Name of Variables	Description	Unit
Agriculture value added per worker (AGVAD)	Used as dependent variable and is representing agriculture value added per worker (constant, 2005)	\$
Public expenditures on education (PEH)	Overall expenditures made by government in education sectors as a percentage of GDP during a year	Percentage
Public expenditures on health (PEED)	Overall expenditures made by government in health sector as a percentage of GDP during a year	Percentage
Agricultural labor force (LF)	Labor participating in agricultural sector	Thousands
Length of roads (RL)	Length of roads in Pakistan	(000) Kilometer

Imports of pesticides (PES)	Total import of pesticides in a year	Thousands tones
Fertilizer off-take (FER)	Fertilizers off-take in agriculture during a year	(000) Nutrient tones
Production of tractors (PT)	Total production of tractors in Pakistan	Thousand

3. ECONOMETRICS ANALYSIS

3.1 STATIONARITY RESULTS USING ADF TEST

Dealing with the time series data the estimation process is started by applying Augmented Dickey-Fuller (ADF) test. Results of ADF test is shown in table 5.1.

Table-2 Stationarity Results of Study Variables:

	Level of difference	ADF T Statistic	Critical value	Prob
AGVAD	I(1)	-7.60	-4.19*	0.000
PEH	I(1)	-4.55	-4.23*	0.004
PEED	I(0)	-10.52	-4.19*	0.000
RL	I(1)	-3.69	-3.52**	0.034
FER	I(0)	-4.33	-4.19	0.006
PES	I(0)	-3.99	-3.52**	0.016
LF	I(1)	-6.85	-4.19*	0.000
PT	I(1)	-6.10	-4.20*	0.000

*. And ** represent 1 % level of significance and **5 % level of significance respectively.

Above results of Augmented Dickey-Fuller test show that no variable is integrated of order 2 and all variables are stationary at first difference [I(1)] or stationary at level [I(0)] at 1 % and only 2 variables at 5 % level of significance. Agriculture value added per worker (dependent variable) is stationary at first difference [I(1)] at one percent level of significance. Public expenditure on health is stationary at first difference [I(1)] at 1% level of significance. Public spending at education is stationary at level [I(0)] at 1 % level of significance. Road length is stationary at first difference [I(1)] at 5 % level of significance. Fertilizer off-take is integrated of order one [I(1)] at 1 % level of significance. Import of pesticides is also stationary at level [I (0)] but the level of significance is 5 %. Another variable, labor force participating in agriculture sector is also stationary at first difference [I(1)] at 1 % level of significance. And finally production of tractor is stationary at first difference [I(1)] at 1 % level of

significance.

Above results of the Augmented Dickey-Fuller test show that no variable is integrated of order two [I(2)] at 5 % level of significance. These results further explain that dependent variable is integrated of order one while three of the explanatory variables are stationary at level and other are stationary at first difference. So these results motivate to use Auto Regressive Distributed Lag (ARDL) model which is the most suited model of co-integration for such type of data.

3.2 INVESTIGATION OF LONG-RUN RELATIONSHIP AND IT LONG RUN ESTIMATES

The results of Wald (F-statistics) are given in the following table

Table-3 F-Statistics for Bound Test

Equation	F-Calculated (P-Value)	F-statistics Critical values at 5% level ^ I(0)-----I(1)	Result
Fy(AGVAD/PEH, PEED,)	9.56(0.013)**	(4.1)------(5.29)	CO-INTEGRATION

** REPRESENT SIGNIFICANT LEVEL AT 5% LEVEL

^ CRITICAL VALUES FOR THE WALD TEST (F-STATISTICS) ARE TAKEN FROM PESARAN ET. AL.(2001) TABLE CI(III), CASE III

Above table shows that the value of F-cal is greater than the upper bound critical value which confirms the existence of long run relationship. After the confirmation of long run relationships the long run and short run parameters are estimated in next step.

By applying ARDL model, the regression line is estimated firstly for long run relationship between dependent and independent variables. Long run coefficients of the estimates are given in table 5.3. Furthermore short-run coefficients of the estimates are given in table 5.4 and their interpretations are given in section.

Table-3 Long Run Effects of Spending on Agriculture Growth

Dependent Variable= Agriculture Value Added Per Worker			
Regressors	Coefficient	T-Ratio	Probability
PEH	0.893	1.830	0.079
PEED	1.234	2.646	0.014
RL	0.0005	5.624	0.000
FER	0.0012	1.919	0.066
PES	0.0176	1.146	0.262
LF	0.339	1.929	0.065
PT	0.027	1.405	0.172
INT	-0.805	-0.491	0.627
TRND	-0.174	-2.067	0.049

Estimated results obtained from Auto Regressive Distributed Lag model (ARDL) indicate that public spending on health has significantly positive effect on agriculture value added per worker in the

long run. It shows that other things holding constant, as government increases her spending on health sector, it leaves positive effects on agriculture in long run. Intuitively, increase in health expenditures leaves indirect effects on agricultural value addition through total factor productivity growth. If government keeps more focus on health sector, it will throw positive effects on farmers' efficiency and their human capital which consequently leads to increase farm productivity in the long run. This positive effect of public health spending on agriculture commensurate with the finding of (Benin et al: 2009, Olabisi, Oloni and Funlayo: 2012). It can be evidently viewed from table 5.3.

Public spending on education is found with significantly positive effect on agriculture value added per worker. Educated farmer is more likely to use new varieties of seeds, fertilizer and technology than the illiterate farmer (Yasmeen, Abbasain and Hussain: 2011). Education plays a vital role and household head's education is found to reduce risk aversion. Educated farmers are less risk averse than the one with no education (Knight, Weir and Woldehanna 2003). Thus more spending on education leaves a positive effect on agriculture productivity both through rise in labor productivity and usage of new technologies in the sector.

Estimated results further reveal that proxy for infrastructure development which is road length has positive and highly significant effect on agriculture value added. Logically, road length escalates towards market integration, lowering transaction cost and access to education and R&D spillins which consequently provocative to bring higher agricultural performance in long run. These results entertain enormous support by existing literature (Sun et al: 2009, Fan, Omilola and Lambert: 2009, Ali et al: 2008, Ali and Iqbal : 2005, Olabisi, Oloni and Funlayo 2012, Benin et al: 2009).

Fertilizer off-take, import of pesticides and production of tractors are used in this model as capital. Fertilizer off-take and pesticides both are apparently affecting agricultural performance positively in long run. These results are matched with the findings of the (Yasmeen, Abbasain and Hussain: 2011, Zuberi: 1989) Further results reveal that production of tractors are having positive effects but statistically insignificant. This study takes tractor production as a proxy for usage of the tractors in agriculture that's why it may have insignificant effects because it does not apparently explain exactly how much tractors are being used in agricultural sector.

The coefficient of agriculture labor force participation has positive sign and highly statistically significant effect on agriculture value addition per worker. It means that the more people participate in farm labor market, and the higher productivity would be in long run. It holds further justification that basically agriculture is a labor endowed sector where manpower plays its role significantly.

On the whole, public expenditures hold positive effects on the performance of agriculture sector.

3.3 SHORT RUN ESTIMATES PUBLIC SPENDING AND AGRICULTURE GROWTH.

Short-run coefficients of the estimates are given in table 5.4.

Table-4 Short Run Effects of the Spending on Agriculture Growth

Dependent Variable= Agriculture Value Added Per Worker			
Regressor	Coefficient	T-Ratio	Probability
Dpeh	0.653	1.743	0.092
dPEED	0.903	2.846	0.008

dRL	-0.000	-1.652	0.110
dFER	0.009	1.849	0.075
dPES	0.013	1.132	0.267
dLF	0.110	0.995	0.328
dPT	0.020	1.404	0.171
dINT	-0.589	-0.476	0.638
dTRND	-0.127	-1.916	0.066
ecm(-1)	-0.687	-6.712	0.000

Interestingly, more or less, behavior of above mentioned variables has been found similar even in short run. Notably, public expenditures on health have positive association with agriculture performance. It is witness, evidently, there is slight difference in the coefficient of the public spending on health (see table 5.4). It explains that government expenditures on health have positive influences upon performance of the agricultural sector through increase in total factor productivity. Comparing this result with long run findings, there is just lower effects than that of long run.

Again spending on education sectors is holding positive and significant effect on agricultural performance, even, in short run. Thus even in the short run education is positively associated with agriculture value addition in this study.

Road length is found negatively affecting the agriculture performance but it is statistically insignificant. This insignificant result is quite logical because expenditures on road length have slow but positive effects and it increases agriculture performance in long run. But, in short run, it does not have significant effects because road length is a time consuming project, therefore, in short it holds insignificant impacts on agricultural performance.

Farm sectors' inputs in this study i.e. fertilizer off-take, import of pesticides and production of the tractors have again the same relationship as it has been experienced in long run. Thus Import of pesticides, fertilizer off-take and production of the tractors possess positive effect on agricultural performances even in short run.

Agricultural labor force participation is also found positive but statistically insignificant in short run. It can be interpreted as holding other things constant, the more people participate in agriculture activities the higher agricultural performance would be experienced.

Furthermore the coefficient of the ECM term is $-.68759$ and statistically significant which shows that 68.75% adjustment will take place within one year towards equilibrium.

Having held erudite discussion of influences of the public spending on the wellbeing of agriculture sector, results obtained from applying ARDL indicate that spending on public goods i.e. education, extension of roads and health leave positive effects on agriculture value addition in Pakistan. Similarly usage of inputs such as import of pesticides, production of tractors, fertilizer off-take and labor force participation in agriculture sector have also positive effect on agriculture value addition per worker. Further, these relationships are found almost same both in long and short run.

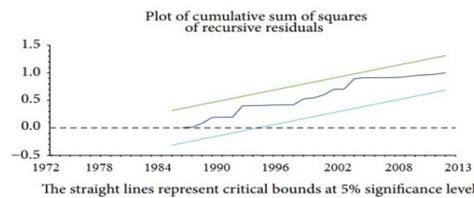
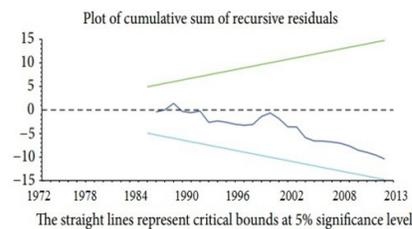
3.4. RESULTS OF DIAGNOSTIC TESTS

Final specification satisfies all the diagnostic including Lagrange multiplier test for serial correlation, Ramsey's RESET for functional form, Jarque–Bera test for normality and White test for heteroscedasticity. The plot of cumulative sum or recursive residuals (CUSUM) and cumulative sum of square recursive residual (CUSUMQ) confirms no evidence of mis-specification and structural instability for the estimation period of the model. Results of these tests and plotted residual are given in the following table-5 and figure1.

Table 5.5: Diagnostics for the Estimated Model

Test Statistics	LM Version (CHSQ)	Probability
Lagrange multiplier test for serial correlation	0.035	[0.851]
Ramsey's RESET for functional form	3.366	[0.021]
Jarque–Bera test for normality	1.410	[0.494]
White test for heteroscedasticity	0.520	[0.410]

Figure-1



CONCLUSION AND POLICY RECOMMENDATIONS

The role and volume of government expenditures is one of the most important issues discussed by economists. Fiscalists support this role of the governments in the subsequent economies due to the failure of the market economy in the provision of goods and services. Literature support the spending on public

goods and these spending are being considered as a positive driver of the economic growth (Armas et al: 2012, Dodson: 2007). Government should play an active role in the economy to avoid market failure (Khan: 1997).

Furthermore agriculture sector does not only depend upon the inputs used in agriculture sector but also by other sectors in the economy directly or indirectly (Fan, Omilola and Lambert: 2009). This study focused on the role of public goods' spending on agriculture value addition per worker using the time series data for the period 1972-2015.

This study assessed some major public goods spending (i.e spending on health, spending on education and a proxy of spending on transport and communication i.e. Road Length) and their impact on agriculture value addition per worker. Furthermore fertilizer off-take, import of pesticides, production of tractors and labor force employed in agriculture sector are treated here as control variables.

Using time series data from 1972 to 2013 on the above mentioned variables this study concludes that public spending on health has significantly positive effect on agriculture value added per worker both in long and short run. Public spending on education has also significantly positive effect on agriculture value added whereas road length is found to be having significantly positive effect on agriculture value addition. Similarly other inputs i.e. labor force participating in agriculture, fertilizer off-take, import of pesticides and production of tractors are also positively effecting agriculture value added per worker both in the long and short-run.

4. **RECOMMENDATIONS**

In light of the above findings and conclusions some recommendations are given as under
As public spending on health has significantly positive effect on agriculture value added per worker. This suggests more public spending on health sector and specifically in rural areas to improve health status of the rural farmers which will finally add to agriculture value added.

Public spending on education is positively affecting agriculture value added per worker. This suggests that government should spend more on education to spread awareness about new techniques in farming sector and improve human capital of labor associated with this sector.

Total road length which is taken as the proxy of public spending on transport and communication, has also significantly positive effect on agriculture value added in the long run. This study suggest high public spending in transport and communication which will reduce transportation cost, lead to technological spillins and favorable input and output prices for the farmers, and hence an incentive to produce more.

Labor force participating in agriculture sector has significantly positive effect on agriculture value added per worker in this study. The result recommends investment in human capital in the form of technical education and training so as to increase the productivity of the labor force.

Fertilizers off-take, import of pesticides and production of tractors have significantly positive effect on agriculture value added per worker in this study. This finding suggests an effective role by government in farm mechanization through subsidizing agriculture inputs specifically fertilizer off-take, import of pesticides and production of tractors.

References

- Ahmad, I., Qayyum, A., & Salam, A. (2008). Dynamic Modeling of Private Investment in Agricultural Sector of Pakistan [with Comments]. *The Pakistan Development Review*, 517-530.
- Alam, S. M., & Naqvi, M. H. (2003). *Pakistan Agriculture-2003*. Pakistan Economist. Karachi, Pakistan.
- Ali, A., Mushtaq, K., & Ashfaq, M. (2008). Total factor productivity (TFP) growth of agriculture in Pakistan: Trends in different time horizons. *Pakistan Journal of Agricultural Sciences*, 45.
- Armas, E. B., Osorio, C. G., & Moreno-Dodson, B. (2010). Agriculture public spending and growth: the example of Indonesia.
- Ashipala, J., & Haimbodi, N. (2003). The impact of public investment on economic growth in Namibia (No. 88). Namibian Economic Policy Research Unit.
- Benin, S., Mogue, T., Cudjoe, G., & Randriamamonjy, J. (2009). Public expenditures and agricultural productivity growth in Ghana. In *International Association of Agricultural Economists 2009 Conference* (pp. 16-22).
- Blanco Armas, E., Gomez, C., Moreno-Dodson, B., & Abriningrum, D. E. (2012). Agriculture Public Spending and Growth in Indonesia. *World Bank Policy Research Working Paper*, (5977).
- Chand, R. (2006). Emerging Trends and Issues in Public and Private Investments in Indian Agriculture. *Indian Agriculture in the New Millennium: Changing Perceptions And Development Policy*, 2, 337.
- Chaudhry, M. G., Sahibzada, S. A., & Salam, A. (1995). Agricultural Input Subsidies in Pakistan: Nature and Impact [with Comments]. *The Pakistan Development Review*, 34(4), 711-722.
- De Janvry, A., Fafchamps, M., & Sadoulet, E. (1991). Peasant household behaviour with missing markets: some paradoxes explained. *The Economic Journal*, 1400-1417.
- Devarajan, S., Swaroop, V., & Zou, H. F. (1996). The composition of public expenditure and economic growth. *Journal of monetary economics*, 37(2), 313-344.
- Dhawan, B. D., & Yadav, S. S. (1995). Private Fixed Capital Formation in Agriculture: Some Aspects of Indian Farmers' Investment Behaviour. *Economic and Political Weekly*, A103-A109.
- Dhawan, B. D. (1996). Relationship between public and private investments in Indian agriculture with special reference to public canals. *Indian Journal of Agricultural Economics*, 51(1), 209.
- Diakosavvas, D. (1990). Government Expenditure and Agricultural Performance in Developing Countries: An Empirical Evaluation. *Journal of Agricultural Economics*, 41(3), 381-389.
- Dong, X. Y. (2000). Public investment, social services and productivity of Chinese household farms. *The Journal of Development Studies*, 36(3), 100-122.
- Easterly, W., & Rebelo, S. (1993). Fiscal policy and economic growth. *Journal of monetary economics*, 32(3), 417-458.
- Edmeades, S., Misch, F., & Moreno-Dodson, B. (2010). Rural Public Expenditure and Agricultural Growth in Bolivia.

- Elías, V. J. (1985). Government expenditures on agriculture and agricultural growth in Latin America (Vol. 50). Intl Food Policy Res Inst.
- Enders, W. (2008). Applied econometric time series. John Wiley & Sons.
- Fan, S., Gulati, A., & Thorat, S. (2008). Investment, subsidies, and pro-poor growth in rural India. *Agricultural Economics*, 39(2), 163-170.
- Fan, S., Omilola, B., & Lambert, M. (2009). Public spending for agriculture in Africa: trends and composition. *Regional Strategic Analysis and Knowledge Support System*, 5.
- Fan, S., Zhang, L., & Zhang, X. (2004). Reforms, Investment, and Poverty in Rural China*. *Economic Development and Cultural Change*, 52(2), 395-421.
- Faruqee, R., & Carey, K. (1995). Reforming the Government's Role in Pakistan's Agriculture Sector. *The Pakistan Development Review*, 225-262.
- Feder, G., Just, R. E., & Zilberman, D. (1985). Adoption of agricultural innovations in developing countries: A survey. *Economic development and cultural change*, 255-298.
- Govere, J., Malawo, E., Lungu, T., Jayne, T., Chinyama, K., & Chilonda, P. (2009). Trends and spatial distribution of public agricultural spending in Zambia: Implications for agricultural productivity growth.
- Government of Pakistan, Islamabad: Ministry of Finance: Economic Survey of Pakistan (various Issues).
- Government of Pakistan, Islamabad: Pakistan Bureau of Statistics: Labour Force Survey (various publications).
- Greene, W. H., & Zhang, C. (1997). *Econometric analysis* (Vol. 3). Upper Saddle River, NJ: Prentice hall.
- Gujarati, D. N., & Porter, D. C. (1992). *Essentials of econometrics*. New York: McGraw-Hill.
- Government of Pakistan, State Bank of Pakistan: Handbook of Statistics on Pakistan Economy 2010.
- Knight, J., Weir, S., & Woldehanna, T. (2003). The role of education in facilitating risk-taking and innovation in agriculture. *The Journal of Development Studies*, 39(6), 1-22.
- Malaiyandi, S. (2010). A Database User Manual for SPEED: Statistics for Public Expenditure for Economic Development.
- Mogues, T. (2011). The bang for the birr: public expenditures and rural welfare in Ethiopia. *The Journal of Development Studies*, 47(5), 735-752.
- Mogues, T., Morris, M., Freinkman, L., Adubi, A., & Ehui, S. (2008). Agricultural public spending in Nigeria. International Food Policy Research Institute (IFPRI) Discussion Paper 00789
- Mogues, T., Yu, B., Fan, S., & McBride, L. (2012). The impacts of public investment in and for agriculture: Synthesis of the existing evidence. International Food Policy Research Institute (IFPRI) Discussion Paper 01217
- Mullen, J. (2007). Productivity growth and the returns from public investment in Australian broadacre agriculture. *Australian*

Journal of Agricultural and Resource Economics, 51(4), 359-384.

Mullen, J. D., & Cox, T. L. (1995). The Returns from Research In Australian Broadacre Agriculture*. Australian Journal of Agricultural Economics, 39(2), 105-128.

Reimers, M., & Klasen, S. (2011). Revisiting the role of education for Agricultural productivity, Courant Research Center (No. 90). Discussion paper.

Rosegrant, M. W., & Evenson, R. E. (1992). Agricultural productivity and sources of growth in South Asia. American Journal of Agricultural Economics, 74(3), 757-761.

Rosegrant, M. W., & Evenson, R. E. (1993). Agricultural Productivity Growth in Pakistan and India: A Comparative Analysis. The Pakistan Development Review, 32(4), pp-433.

Saeed, N., Hyder, K., Ali, A., & Ahmad, E. (2006). The Impact of Public Investment on Private Investment: A Disaggregated Analysis [with Comments]. The Pakistan Development Review, 639-663.

Statistical Appendix for SPEED (Statistics of Public Expenditure for Economic Development), 2010. International Food Policy Research Institute.

Sun, L., Ball, V. E., Fulginiti, L. E., & Plastina, A. S. (2009, April). Impact of local public goods on agricultural productivity growth in the US. In 2009 Annual Meeting, July 26-28, 2009, Milwaukee,

Varian, H. R. Intermediate Microeconomics: A Modern Approach, 1999.

Viqar, A., & Amjad, R. (1984). The Management of Pakistan Economy (1947-1982) Oxford University Press. Karachi, New York, Delhi.

Wisconsin (No. 49333). Agricultural and Applied Economics Association.

World Bank, World Development Indicators

Yasmeen, K., Abbasian, E., & Hussain, T. (2011). Impact of educated farmer on Agricultural Product. Journal of Public Administration and Governance, 1(2), Pages-158.

Zuberi, H. A. (1989). Production function, institutional credit and agricultural development in Pakistan. The Pakistan Development Review, 43-55.

AN ANALYSIS OF INFLOW OF TOURISTS AND FOREIGN EXCHANGE EARNING OF INDIA

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Abstract:-

India has many tourist attractions that have healing abilities and are capable of providing rewarding experiences of life. India has the Himalayan ranges in the north, a long coast line surrounded by sea in the south. In addition, India is rich in varied landscapes, enchanting historical sites and royal cities, clean beaches, serene mountain retreats, rich cultures and festivities to enjoy and rejuvenate. The main Objective of the study is to study the economic significance of foreign tourist's arrivals and foreign exchange earning in India.

Keywords: Tourists, Foreign Exchange Earning

INTRODUCTION:-

Tourism has been a major social phenomenon of the societies all along. It is motivated by the natural urge of every human being experience; adventure, education and entertainment .The motivation for tourism also include social, religious and business interests. The spread of educational has fostered a desire to know has become parts of the globe.

The importance of tourism as an instrument for economic development and employment

generation, particularly in remote and backward areas, has been well recognized the world over. It is the largest service industry globally in terms of gross revenue as well as foreign exchange earnings. Tourism can play an important and effective role in achieving the growth with equity objectives which we have set for ourselves.

DEFINISION OF TOURISM:-

According far as to **Hunziker and Krapf,**” Tourism is the sum of phenomena and relationship arising from the travel and stay of non-residence, in so far as they do not lead permanent residence and are connected with earning activity.

Mc **Intosh and Goldner** explain tourism as the sum of the phenomena and relationship arising from the interations of tourist, businesses, host governments and host communities in the ion process of attracting and hosting these tourists and other visitors.

In the option **L.J Lickorish,** Tourism embraces all moments of people outside their community for all purposes expect migration for regular daily work. The most frequent reasons for this movement is for holidays but it will also include, for example, attendance at conferences and movements on sporadic or infrequent business purpose.

STATEMENT OF THE PROBLEM:-

Tourism has revolutionized the economics of many countries of the world. It is seen as highly developed economic activity. It is very useful for all countries particularly the under developed ones. It stimulates employment and investment, modifies, economic structure and makes positive contributions towards balance of payments. It is emerged as a major industry of the Indian economy, contributing substantially to foreign exchange earnings and serving as potential generator opportunities, because India as a tourist destination exercises immense attraction from various angles, with its vast cultural and religious heritage and varied natural attractions. Therefore, the researcher made an attempt to study the economic significance of foreign tourist arrivals and foreign tourist arrivals and foreign exchange earning in India.

OBJECTIVES OF THE STUDY:-

1. The main aim of this study is assessing the economic significance of foreign tourist's arrivals and foreign exchange earning in India.
2. Tourist and foreign exchange.

METHODOLOGY:-

This study is based on secondary data .The data relating to this report has been collected from Indian Tourism Statistics 2014.

FINDINGS:-

The FTAs from USA during 2012, 2013 and 2014 were the highest with the percentage share of, 15.81%, 15.81% and 14.57% respectively.

The top 10 countries for FTAs in India during 2014 are USA, Bangladesh, UK, Sri Lanka, Russian Fed. Canada, Malaysia, France, Australia and Germany.

For 6 countries, namely USA, UK, Canada, Australia, China (Main) and Singapore, December was the peak month.

The arrivals during the two quarters of January-March and October-December comprised (58.9%) of the total arrivals in 2014.

The mode of travel was predominantly air for all regions accounting for more than 86.1% of share in 2014.

The details of Nationality –wise FTAs at major airports of India in 2014 are given in during 2014.

Percentage of arrivals not reporting their gender was quite high in 2001 and 2002 but in gradually decreased from 2005 and in 2008 it was noticeably low at 0.1.

On the other hand, females outnumbered the males in FTAs in India from Ukraine (50.1%). UAE (50.8%), Vietnam (51.6%), Argentina (53.8%), Mauritius (54.7%), Myanmar (54.7%), Thailand (55.9%), Russian Fed. (57.2%) and Kazakhstan (60.3%) during 2014.

According to age-groups during 2014 are given in it may be seen that the proportion of FTAs in India for the age group 25-34 years has been the highest from East Asia, West Asia, Africa, Eastern Europe and Central and South America whereas for Australasia, South Asia and South East it was the age –group 35-44 years.

The share of FTAs from the top 15 countries during the year 2014 was 71.97% as compared to 70.72%, in 2013.

The highest number of tourists arrived in the 4th quarter of the year .i.e. .October to December (31.7%), followed by Jan-March (25.7%).

TABLE-1 FOREIGN TOURIST ARRIVALS (FTAs) IN INDIA, 1981-2014

Year	FTAs in India	Annual Growth
1981	1279210	2.0
1982	1288162	0.7
1983	1304976	1.3
1984	1193752	-8.5
1985	1259384	5.5
1986	1451076	15.2
1987	1484290	2.3
1988	1590661	7.2
1989	1736093	9.1
1990	1707158	-1.7
1991	1677508	-1.7
1992	1867651	11.3
1993	1764830	-5.5
1994	1886433	6.9
1995	2123683	12.6
1996	287860	7.7
1997	2374094	3.8
1998	2358629	-0.7
1999	2481928	5.2
2000	2649378	6.7

2001	2537282	-4.2
2002	2384364	-6.0
2003	2726214	14.3
2004	3457477	26.8
2005	3918610	13.3
2006	4447167	13.5
2007	5081504	14.3
2008	528603	4.0
2009	5167699	-2.2
2010	5775692	11.8
2011	6309222	9.2
2012	6577745	4.3
2013	6967601	5.9
2014	7679099	10.2

Source: India Tourism Statistics, 2014.

In above a table foreign Tourist arrivals FTAs High level growth rate in 2004 26.8 percentage in India. In low level growth rate -0.7 percentage in the year 1998. In both are same level annual growths rates -1.7 in the years 1990, 1991. In above them very low level in the FTA 0.7 percentage annual growth rate in the year 1982.

TABLE-2 FTAs IN INDIA FROM DIFFRENT REGIONS

FTAs in India	No. Of Arrivals						Proportion to the Total	
	2012	2013	2014	2012	2013	2014	2013/12	2014/13
Western Europe	1853306	18558613	1860629	28.17	26.6	24.23	0.2	0.3
North	1295968	1340531	1387468	19.70	19.2	18.07	3.4	3.5

America					4			
South Asia	1171499	1215035	16948.5	17.81	17.4	22.07	3.7	39.5
			7		4			
South East Asia	540914	630054	685805	8.22	9.04	8.93	16.5	8.8
East Asia	535622	547305	546792	8.14	7.85	7.12	2.2	-0.1
West Asia	290996	343113	413678	4.42	4.92	5.39	17.9	20.6
Eastern Europe	312686	405083	422278	4.75	5.81	5.50	29.5	4.2
Africa	261428	275271	280754	3.97	3.95	3.66	5.3	2.0
Australasia	244511	263574	286294	3.72	3.78	3.73	7.8	8.6
Central South	63699	68436	69926	0.97	0.98	0.91	7.4	2.2
Not Classified	7356	23333	30667	0.11	0.33	0.40	217.2	31.4
Total FTAs in India	6577745	6967601	7679099	100.00	100	100	5.9	10.2

Source: India Tourism Statistics, 2014.

In above table foreign tourist arrivals (FTAs) in No of arrivals Rate high level rate 7679099 in the year 2014. in both are same value 100 percentage 2012,2013,2014. in low level proportion 5.9 percentage in the year 2013/12.in above finding difference region in Tourism.

TABLE-3 SEASONALITY IN FOREIGN TOURIST ARRIVALS IN INDIA

. Month Foreign Tourist Growth rate in FTAs

	2012	2013	2014	2013/12	2014/13	2012	2013	2014
January	681002	720321	757786	5.8	5.2	10.35	10.34	9.87

February	681193	688569	755678	1.1	9.7	10.36	9.88	9.84
March	606456	639530	690441	5.5	8.0	9.22	9.18	8.99
April	447581	450580	535321	0.7	18.8	6.80	6.47	6.97
May	374476	417453	465043	11.5	11.4	5.69	5.99	6.06
June	433390	451223	502028	4.1	11.3	6.59	6.48	6.54
July	485808	506427	568871	4.2	12.3	7.39	7.27	7.40
August	445632	486338	575750	9.1	18.4	6.77	6.98	7.50
September	411562	453561	50912	10.2	12.3	6.26	6.51	6.63
October	556488	598095	66898	7.5	11.8	8.46	8.58	8.70
November	701185	733923	765497	4.7	4.3	10.66	10.53	9.97
December	752972	821581	885144	9.1	7.7	11.45	11.79	11.53
Total	6577745	6967601	7679099	5.9	10.2	100	100	100

Source: India Tourism Statistics, 2014

In above a table seasonally foreign tourist in India High level Growth rate in total 7679099. in middle in the value 100 percentage in the year 2012,2013,2014. Last in low value 5.9 in the year 2013/14.last in low level growth rate in FTAs 5.9 in the year 2013/12.

TABLE-4 MODE OF TRAVEL OF FTAS IN INDIA

Year	Arrivals	%Distribution		
		by mode of Travel	Sea	Land
		Air		
1996	2287860	98.5	0.1	1.4

1997	2374094	98.5	0.0	1.5
1998	2358629	98.5	0.0	1.5
1999	2481928	98.4	0.0	1.6
2000	2649378	98.5	0.0	1.5
2001	2537282	87.1	0.9	12.0
2002	2384364	81.9	0.6	17.5
2003	2726214	83.1	0.5	16.4
2004	3457477	85.6	0.5	13.9
2005	3918610	86.5	0.4	13.1
2006	4447167	87.1	0.6	12.3
2007	5081504	88.4	0.6	11.0
2008	5282603	89.1	0.7	10.2
2009	5167699	89.8	1.0	9.2
2010	5775692	91.8	0.7	7.5
2011	6309222	92.0	0.8	7.2
2012	6577745	91.7	0.7	7.6
2013	6967601	91.0	0.5	8.5
2014	7679099	86.1	0.4	13

Source: India Tourism Statistics, 2014

In above a table mode of travel in high level distribution in Air 98.5 percentage in the year 1998. In low level in the air distribution 81.9 percentage in the year 2002. Next in high level growth value in sea 0.9 percentage In the year 2001. In low level in the 0.1 percentage in the year 1996. High level in mode of travel in land 17.5 percentage in the year 2002. Finding them both or same value in Air 98.5 in mode of travel.

TABLE-5 FOREIGN EXCHANGE EARNINGS FROM TOURISM IN INDIA

Year	FEEs in terms		FEEs in US	
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	Core	% Change over previous year	terms US million	% Change over previous year
1991	4318	-	1861	-
1992	5951	37.8	2126	14.2
1993	6611	11.1	2124	-0.1
1994	7129	7.8	2272	7.0
1995	8430	18.2	2583	13.7
1996	10046	19.2	2832	9.6
1997	10511	4.6	2889	2.0
1998	12150	15.6	2948	2.0
1999	12951	6.6	3009	2.1
2000	15626	20.6	3460	15.0
2001	15083	-3.5	3198	-7.6
2002	15064	-0.1	3103	-3.0
2003	20729	37.6	4463	43.8
2004	27944	34.8	6170	38.2
2005	33123	18.5	7493	21.4
2006	39025	17.8	8634	15.2
2007	44360	13.7	10729	24.3
2008	51294	15.6	11832	10.3
2009	53700	4.5	11136	-3.7
2010	64889	20.8	14193	27.5
2011	77591	19.6	16564	16.7
2012	94487	21.8	17737	7.1
2013	107671	14.0	18445	4.0
2014	123320	14.5	20236	9.7

Source: India Tourism Statistics, 2014

In above a table Foreign exchange earning in high level value in 123320 in the year 2014. in low level in the value 4318 in the year 1991. percentage change over previous year high value in 37.8 percentage in the year 1992. in low level in the value -0.1. Next level In the Foreign Exchange Earning (FEE) in terms us million very high level in the value 20236 in the year 2014. in low level in the value 1861 million in the year 1991. in next level percentage in the Previous year high value 43.8 percentage in the year 2003. in low level in -0.1 percentage in the year 1993. in low level value 1.4 in the year 1996. Foreign exchange earning zero level interest 1991 FEE terms in Tourism.

TABLE -6 FOREIGN TOURIST ARRIVALS AND FOREIGN EARNING EXCHANGE

Year	FTA	FEE	Growth Rate
1991	-1.7	-	-
1992	11.3	14.2	1.25
1993	-5.5	-0.1	-5.6
1994	6.9	7.0	1.01
1995	12.6	13.7	1.08
1996	7.7	9.6	1.24
1997	3.8	2.0	1.8
1998	-0.7	2.0	1.3
1999	5.2	2.1	2.47
2000	6.7	15.0	2.23
2001	-4.2	-7.6	-11.8
2002	-6.0	-3.0	-9
2003	14.3	43.8	3.06
2004	26.8	38.2	1.42
2005	13.3	21.4	1.60
2006	13.5	15.2	1.12

2007	14.3	24.3	1.69
2008	4.0	10.3	2.57
2009	-2.2	-3.7	-5.9
2010	11.8	27.5	2.33
2011	9.2	16.7	1.81
2012	4.3	7.1	1.65
2013	5.9	4.0	1.47
2014	10.2	9.7	1.05

Source: India Tourism Statistics, 2014

In above a table Foreign tourist arrivals and foreign tourist earning in Foreign tourist arrivals in high level in the value 11.8 percentage in the year 2010.in low level in the value -0.7 percentage in the year 1998. in next Foreign exchange earning in high level growth rate 43.8 percentage in the year 2003. in low level in value zero level in the year 1991. Foreign tourist arrivals and foreign exchange earning in mixed annual growth rate in high value 3.06 percentage in the year 2003. in low level in zero level in the year 1991In above finding FTA &FEE 1991zero level in 1991.

CONCLUSION:-

In above a conclusion in the Foreign Tourist Arrivals (FTAs) in 1981 in annual growth rate in highest then 26.8 percentage in the year 2004, very low growth rate -8.5 percentages in the year in1984. The Foreign Exchange Earnings (FEE) in highest value in 43.8 percentages in the year 2003.very low value -0.1 percentages in the year 1993. Foreign Tourist Arrivals (FTAs) and foreign exchange earnings (FEE) and different value in high value growth rate in 3.06 in the year 2003, and very low growth rate zero level in value in the year 1991 in the study in the above a conclusion in the study.

REFERENCES:

1. Tourism Highlights, **United National World Tourism Organization** Report 2015.
2. **Aparna Raj**,(2002) Tourist Behavioral Psychological Perspective, *Kanishka Publishers* and Distributors, New Delhi.
3. **Sinha P.C** (2003) Tourism issues and strategies, *An mol Publications* Pvt, Ltd, New Delhi

4. Website: www.India Tourism Statistics



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