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Highlights

Causal Relationship

Working Capital Management

Corporate Social Disclosure

Corporate Governance Evidence

Discovering Thoughts, Inventing Future

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Interdependencies between Corporate Social Disclosure and Corporate Governance: Evidence from Tunisian Companies

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These corporate governance quality are the percentage of independent directors to total number of directors on the board, the existence of a institutional ownership, the existence of dominant personalities (CEO / Chairman duality), and the percentage of ownership concentration. By means of a weighted qualified environment disclosure guide for measuring voluntary disclosure, the results designate that the existence of independent directors is significantly and positively related to the extent of voluntary environment disclosure, while the percentage Ownership concentration on the board is negatively related to the extent of voluntary disclosure.

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Keywords: corporate environmental disclosure, corporate governance, voluntary disclosure, corporate social responsibility (csr).

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INTERDEPENDENCIESBETWEENCORPORATESOCIALDISCLOSUREANDCORPORATEGOVERNANCEEVIDENCEFROMTUNISIANCOMPANIES

Strictly as per the compliance and regulations of:

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I. Introduction

Corporate social responsibility (CSR) becomes a goal more serious for economic agents due to a new focus to all appearances of business activities and their dependencies with stakeholders.

According to Garriga and Melé (2004) corporate social activities are more than simple occur profitable results because through these activities companies can deploy good relationships with stakeholders (Freeman, 1984), and indirectly generate value for shareholders. Indeed, the companies' attitude towards communication related to social responsibility activities seem to be able to maintain and to support a better relationship with stakeholders in general.

CSR is a concept with an increasingly currency around the globe. It is usual to overlap with similar concepts such as corporate sustainability, sustainable development and corporate responsibility.

In addition, CSR has a wide range of potential significance: it can be considered as the method of integrating economic, social and environmental objectives of private sector activities.

Thus, this mutation announces expanded growth of the corporate governance concept, which begins to cover some forms usually considered part of the corporate social responsibility. CSR is a difficult concept to define, as already indicated in 1973, when he was stated that "the term is clear , it means something , but not always the same thing to everyone" (Carroll, 1999), this feature seems to be related to the participation of many stakeholders with a range of different needs often opposed (McWilliams and Siegel, 2001). However, there is some agreement that CSR covers at least the deontology's voluntary attention, social and environmental implications of business (Carroll, 1999; McWilliams and Siegel, 2001; Whetten et al., 2002). As a reflection of this, McWilliams et al. (2006) define CSR as "conditions where the company goes beyond the harmony and engages in voluntary actions seem to defend the common good, beyond the interests of the company and what is required by law".

It is difficult, from a conventional and conceptual point of view, to distinguish the differences between the judgment of a company to engage in CSR activities and the decision on the why, how and when to report on these activities to stakeholders. The choice of wide theoretical framework for the researcher approaches is the issue of CSR on profitable terms or moral point of view (Cetindamar and Husoy, 2007). The moral conceptions discover that these activities should be encouraged because they are the "right thing" to do. Economic theory shows that these activities should be encouraged to the extent that they generate wealth for shareholders through increasing the gain. Virtually all theoretical approaches support the implication that it is not enough to take part in an action of CSR, then it is essential to provide information on the measures taken. A matter of significant dissimilarity between the theories relate to what measures should be used, and must be prevented.

For the survival of the company, it must win the support and approval of its stakeholders, whether they be major players (those who are without whose of the support the company cannot move at all, including buyers, traders or providers of labor and wealth) or auxiliary stakeholders (who are members but indirectly

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in a position to influence significantly the success of the company, including regulators and the media) (Clarkson, 1995).

CSR activities and the consequent communication are part of the essential ongoing communication process essential in order to incorporate and maintain this support (Gray et al. 1995). Under this general heading, researchers have developed different theoretical developments based on the stakeholder theory (Clarkson, 1995; Maignan and Ralston, 2002) and legitimating (Campbell, 2000) to analyze both CSR activities and disclosure.

The paper is organised as follows. In the next section we briefly describe various CSR conceptualizations are on offer in the literature. We then discuss the explanatory theories environment disclosure, focusing on stakeholder theory. Then, we review evidence supporting the existence of diversity in corporate governance environmental disclosure practices. Next, the fifth section examines previous literature on corporate governance and voluntary disclosure and the research hypotheses.

Finally our hypotheses are developed and the methodology is explained. Results and analysis are presented followed by implications and conclusions.

II. Traditional Corporate Social Responsibility Conceptualizations

Before examining the relationship between corporate governance, social responsibility, business ethics, we begin first by setting them separately. Corporate governance is a term for the application of the reliability of the accounts (Demb and Neubauer, 1992). In modern societies, companies have many Shareholders who do not play a role in business administration. Thus, the actual economic activities of the companies are connected with the general economy of the world. Indeed, the managers in business management have to be more than in the past guarantors. Because of this condition, regulators such as the OECD have triggered requirements for companies that prefer codes of corporate governance.

In terms of modern management strategy, the genesis of the concept of social responsibility has emerged in the 1950s (Carroll, 1999). Avoid cultural and linguistic debates, social responsibility can be determined as voluntary efforts by companies to ensure accountability to rule out or at least simplify the bad impact of their activities on stakeholders (Post et al., 1996). Identically, Gjolberg (2009) states that in modern society, companies have offered more autonomy, but they also aim to play social roles, such as mitigating climate changes and to defend human rights.

In reviewing the above definitions, we can suggest that corporate governance, social responsibility and business ethics concepts have some common characteristics and that these three terms are correlated. Requirements of corporate governance that managers make their companies more efficient, reliable and responsible; requirements of the CSR maintain society with their activities and businesses ethics set the ethical standards for employees. The business ethics can support the leader to make his /her company more responsible and intelligible. Similarly, when a company prefers codes of corporate governance, it must also meet the needs of its stakeholders. As a matter of fact, the rules of corporate governance include principles related to the ethics of business and social responsibility. However, some researchers (Heath and Norman, 2004) assume a similar theory of CSR that cannot be reproduced without the corporate governance. In any case, it is clear concluding that these three concepts are related and they are required by companies' shareholders and stakeholders (Scott, 2007).

Explanations of corporate governance have been discussed widely in the literature (Shleifer and Vishny, 1997; Bradley et al., 1999). For the needs of this research, corporate governance is explained as to encourage fairness corporate, listening and relevance though its responsibilities to stakeholders. Thus, this study focuses on how corporate governance can support to encourage corporate social responsibility through increased environmental data using voluntary reporting. Indeed, this information should be of higher quality, more detailed and more comprehensive than those used in the traditional annual report on paper or the environment, health and safety report. However, this exploratory study showed that this was not the case and that, in Tunisia, at least, good corporate governance with respect to social information in a voluntary reporting is significant way to go.

Increasing the effect of environmental reporting companies (Triple Bottom Line reports or reports on environmental, health and safety) was strongly correlated to the recognition of the fact that the best corporate governance requires an analysis of the impact a company has on the community and the environment. This information is often published on an annual basis and is retrospective and are often updated, so it is essential that companies use in voluntary disclosures and separate reports to ensure that stakeholders are clearly informed of the current importance of environmental issues.

On the one hand, the annual management report was printed the usual environment and key by which the undertaking was only information communicated to the public, it has gained a lot of awareness of researchers (Niskala and Pretes, 1995; Fayers, 1998). On the other hand, many companies today have their independent reports and volunteers that are easily accessible on the web, it is a very effective mean of receiving and disseminating information (Schwatz, 2000; Ashbaugh et al., 1999; Trites, 1999; Petravick and Gillett, 1998). These self-reports are increasingly used to provide updated information on the behavior of companies, market conditions, future directions and financial conditions, including, it turns out that they are used to meet needs and expectations of the community on issues of corporate social and environmental responsibilities (Jones et al., 1998).

Although, Budeanu and Thidell (2006) find that despite their communication initiatives of environmental information, the Romanian companies are willing to join with Western practices, Ienciu et al. (2011) examine the quality of environmental information voluntarily disclosed by listed companies over Romanian Hungarian companies for the period 2006-2008, noted that the multitude of environmental information submitted by the Romanian companies is unreliable and irrelevant. The study maintains that the legitimacy theory is the most important to explain and define the environmental reporting within the Romanian companies because companies are prospecting in the aspects that will create a clear effect image and a good place in society.

Regarding the dependencies between the features of corporate governance and the level of voluntary disclosure, a series of studies was presented. Based on this assumption, Rao et al. (2012) analyzed using a quantitative study of the relationship between environmental reporting and corporate governance characteristics of Australian companies in 2008. They consider the annual reports of 100 companies listed on the Australian Stock Exchange of Australia. The result of the Research shows a significant positive relationship between the quality of environmental reporting and the proportion of independent directors and women on the board.

Sanchez et al. (2011) studied the behavior of disclosure of Spanish companies in relation to a voluntary classification of strategic information to capture the factors that determine these practices. The results reveal that companies with the President of the Board are the same person as the Chief Executive Officer and, in addition, where there is a lower amount meeting, they communicate a greater amount of strategic information on their websites.

The research conducted by Ho and Wong in 2001 examines the relationship between the compositions of the Corporate Governance (the proportion of independent directors, the presence of the audit committee, the existence of controlling shareholders, and the ratio of family members) and the level of voluntary reports in the Hong Kong Stock Exchange listed entities. The study finds that the existence of the audit committee affects positively the level of voluntary reports. The study prepared by Gul and Leung (2004) focuses mainly on the Hong Kong market, examining the relationship between the compositions of the management Board and the voluntary disclosure of information for 385 entities on the basis of the regression analysis. The results show that the dual role of Executive Manager (General Manager is also the Chairman of the Board) is associated with less voluntary reports.

Haniffa and Cooke (2002) study the importance of different cultural traits or characteristics of corporate governance for the voluntary disclosure in Malaysia Stock listed companies. The following variables were examined in the study: the board structure, the dual role, the position of Chairman of the Board, the existence of managers who are part of the board of directors of other companies, the existence of chairmen in the board of managers in other companies. The working hypotheses were tested using of regression analysis. The results found that a non-executive position for the Chairman influences the level of voluntary reporting, including environmental reporting.

III. Corporate Disclosure of Environment: Theory and Evidence

The research on social and environmental communication explained that there are many mutation in the conceptual perspectives have been adopted (Deegan, 2002), the absence of a single idea framework for studying the correlations necessary (Belkaoui and Karpik, 1989), the lack of any explicit assumption of global social and environmental responsibility that encompasses the done analysis (Roberts, 1992) and the current probability of properly established theories (Gray et al., 2001). However, three major research trends have dominated the light on the practices of social and environmental disclosure. There are the stakeholder theory, the theory of legitimacy and the theory of political economy. Legitimacy and stakeholder theories have their origins from the theory of political economy (Deegan, 2002). All these theories are related to the concept of the existence of a social agreement between the company and the company, which company is responsible and due to all of its stakeholders (Gray et al., 1996). Indeed, it has been developed these overlapped and additional theories rather than competing as such (Gray et al., 1995). In addition, the signaling theory was exposed as a possible interpretation of the voluntary disclosure practices of that environmental disclosure which is an important category.

Identical, corporate governance is not based on accepted theoretical basis or a common rule (Parum, 2005). Corporate governance has been developed and investigated using different theoretical models such as the agency theory, stakeholder theory, and legitimacy theory. In analyzing the literature of corporate governance, however, it can be distinguished as the agency theory and stakeholder theory are the predominant theories. Stakeholders theory is broader than the agency theory view as it develops the concept of capital to include all stakeholders rather than just shareholders parties. A different theoretical analysis surrounding an even wider than the two theories was the stakeholder-agency perspective theory, considered by Hill and Jones (1992). The incorporation of the stakeholder concept with agency theory developed the principal-agent paradigm of financial economics.

The essential distinction between these theories is the view from which they are discussed and appreciated.

Stakeholder theory has been extensively discussed in the accounting literature by providing powerful explanation for the behavior of social and environmental disclosure and corporate governance instruments of companies. The stakeholder theory involves exploration and recognition of the relationship between business practice and the impact on stakeholders (Ansoff, 1965). Indeed, “the continuity of the company requires support of the stakeholders and their acceptance must be requested and the activities of the close corporation for approval. The most important players over the company must adapt”(Gray et al., 1995). According to Gray et al. (1996), the company has greatly stakeholders, therefore, should be responsable of all stakeholders, turning to the expanded range of responsibilities proved to business decision makers. Thus, the most important of the stakeholders in the organization, the more attention will be made to direct and lead this dependence. Govern such a relationship can be done by providing more information through voluntary social and environmental information, to gain the support and acceptance of these stakeholders.

The stakeholder theory appeared in the scope of discussing these as a backup of the social responsibility of the company and the discourse that leaders must have honest responsibilities to other parts passionate, not only to its shareholders (Hendry, 2001). These affected parties are stakeholders who have a goal or cooperation in society and which are a significant catalyst for the company's success or failure. Relied on stakeholder theory, a set of stakeholders are involved in the organization and each of them deserve some return for their participation (Crowther and Jatana, 2005).Freeman (1984) have made a great effort to design basis or foundation for the development of stakeholder theory in the 1980s.

Some attempts have been made as to the clarification of stakeholders. Freeman (1984) defines a stakeholder as "any group or individual who can influence or be influenced by the goals of the company." Hill and Jones (1992) explain the stakeholders as "maker who has a legal right about the company." This legitimacy is beyond dispute the existence of an exchange relationship. Gray et al. (1996) presents a stakeholder as "any human body that can be conducted by, or may itself influence the activities of the company in question."

These explanations have basic limits of what constitutes an issue. An organization is therefore likely to have many stakeholders such as shareholders, customers, suppliers, employees, creditors, competitors, public interest groups, local communities, government agencies, stock markets the industry organizations, national and international society and the general public. Each stakeholder can be considered as providing the firm with critical resources and in exchange each expects its interests and expectations are met (Hill and Jones, 1992).

Best privilege of stakeholder theory provides a method to act with multiple parts conflicts of interest. He argued that the satisfaction of demands of different stakeholders is accomplished by using the instructions about theory (Freeman, 1984). The stakeholder theory has recommended a new approach in the scope of the study of social enterprise liability by claiming that the needs of shareholders cannot be achieved except satisfying the requirements of other stakeholders (Foster and Jonker, 2005; Jamali, 2008). However, stakeholder theory provides necessary social systems to assess business activities and environmental reporting (Snider et al., 2003). The stakeholder theory has two distinct categories (Gray et al., 1996; Deegan, 2000). The first idea is ethical or branch Directive (which is normative) and the second concept relates to the business sector (which is descriptive).

The concept of responsibility developed by Gray et al. (1996) makes the assumption of a two-way dependency between the management of a company and stakeholders. The Application of accountability requires the development of a system of organizing information activities. Hence, the need for more information to be published consciously social and environmental performance to prevent stakeholders on the extent to which managers were occupied responsibility (Gray et al., 1991) is included by company’s essential governance disclosure and reliability. Depending on the model of capitulation accounts, the argument is that the principal can promote or ignore the information prepared by the agent, which nevertheless still required providing an account to fill the principles of good practices of corporate governance (Gray et al., 1991).

The ability and the strength of stakeholders to influence corporate management is discussed as a function of the degree of control over essential to the company) of stakeholder’s means. Power, in this sense, indicates the willingness to use resources to accomplish an event or to ensure a desired result (Ullmann, 1985. For example, the UK Code of Corporate Governance (2010) corporate governance allows shareholders the legitimate right to vote, which directs business strategy and thus defend their investments. Another important idea of power in the research work of environmental responsibility is the political force that governments-and other stakeholders using their assets to government pressure - create legislation, laws, or bring legal action against companies or who adopt new legislation or regulations or a court action against a company. A stakeholder group led legitimacy if it has a legal status in society or the legitimate demands of the society. The emergency feature includes both the notion of emotional time-the pressing need on the part of its stakeholder requests to provide immediate concentration and the concept of criticality-consciousness on the part of the actor that his assertions are mandatory and very serious (Mitchell et al., 1997).

IV. Diversity in Corporate Governance Environmental Disclosure Practices

This article analyzes the dependence between corporate governance and environmental and social disclosure. The study assumes that it is necessary to examine the relationship between a company and its stakeholders, as defined by the compositions of corporate governance in developing environmental policy of an organization. Systems of corporate governance require impact on the presentation of the environment by approaching all stakeholders. However, the company governance is considered as a key mechanism in determining the disclosure required to meet the information needs of different stakeholders, as is the board of directors directs the disclosure in annual reports (Gibbins et al., 1999; Gul and Leung, 2004; Haniffa and Cooke, 2005).

The theory of stakeholders-agency assumes that the business continuity and success is connected to achieve both economic growth (profit maximization) and non-economic (corporate social and environmental performance) objectives meeting the needs of the company's stakeholders and meeting their expectations (Pirsch et al., 2007). According to this vision, corporate environmental disclosure is considered a technique by which stakeholders have come to obtain support and approval of the business continuity (Cormier et al., 2005; Gray et al., 1995) and to deflect the opposition and critical stakeholders (Gray et al., 1996) and to forgive the responsibility (Deegan, 2002). Indeed, corporate communication environmental policy represents a wish to meet the various stakeholders and society in general (Gray et al., 1995; Guthrie and Parker, 1989). With a view to successfully implement this strategy, the amount of the environment, such information must be sufficient and quality. Companies disclose voluntarily information regarding environmental practice about their activities as a solution to prove the global creation of value and represent accountable to stakeholders and society in general (Velamuri and Freeman, 2006).

Similarly, corporate governance has been treated as an important accountability mechanism (Aguilera et al., 2006). However, the board acts as a relationship between the company and its stakeholders. However, the board of directors and other governance arrangements firms are considered an important source of responsibility.

Reliability, being a catalyst for accountability is an important quality index of the level of corporate governance in the business world (Ho and Wong, 2001). Gul and Leung (2004) argue that corporate performance is directly related to good corporate governance. Resonating modes of governance, established and managed in the interests of stakeholders, would be perfectly publish quality information, which increases the reliability of the company and directors' liability. In this context, corporate governance is considered as effectively with the rights and responsibilities of each stakeholder group organization (Ho and Wong, 2001).

Similarly, Demb and Neubauer (1992) stated that "corporate governance is the means by which companies take into account the demands and the expectations stakeholders." Monks and Minow (1995) states that "It is the relationship between the participants determining success and performance of the companies." While, Tricker (1994) notes that "corporate governance deals with issues such as Board of dependence with top management and relations with shareholders and others motivated the affairs of the corporation , including accounts receivable , bankers debt analysts, auditors and corporate governance". According to this view, the structure of governance is a principal-agent situation a relationship model of the team, and critical governance become guarantee, planning, collaboration and the elimination of conflicts in order to optimize , rather than just checking and sharing value creation in order to support the commitment of all stakeholders (Kochan and Rubinstein, 2000).

A prototype of passionate stakeholders in corporate governance is examined by Turnbull (1997). Pressing the stakeholder theory-agency, he noted that: (1) the objective of the company is to generate wealth or gain to its stakeholders, (2) optimizing the increase in total wealth by the company is the responsibility of directors and officers, (3) the solution to achieve the objective of the company is defending the integration of the Board by stakeholders seriously and give them a direct voice in governance and expertise, (4) the identification of both conventional and explicit contractual relations in business, (5) and finally the control of the company is divided among various stakeholders through various meetings to eliminate conflicts of interest and thus agency costs. By analogy to this development, some authors propose stakeholder engagement or the existence of various stakeholders on board to protect the interests of corporate stakeholders

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and ensure that their needs are taken into account in the strategy of the firm (Freeman and Evan, 1990; Jones and Goldberg, 1982). The focus on stakeholders of the company recognition simulates both the quantity and quality of voluntary disclosures (Boesso and Kumar, 2007). Thus, corporate governance interested in how external stakeholders control management companies (Monks and Minow, 1995) and, therefore, to reform disclosure of the company.

V. Role Corporate Governance in the Voluntary Environment Disclosure: Developing the Hypotheses

Analyzing the of previous research literature, we can see that voluntary environmental and social disclosure practices are a complex behavior that can be explained by various factors. In addition to specific factor to the company, this study examines several characteristics of corporate governance and ownership composition as determinants explaining of environmental and social voluntary disclosure. Based on previous studies, this article will focus primarily on discernible and identifiable corporate governance characteristics that explain the extent to which companies are disclosing environmental and social information, and quality of this information.

Accordingly, we examine previous studies to analyze this, we find that corporate governance systems are studied and classified into the following three groups: (a) the specific board: independence board, the effect of duality, size board of directors, board meetings, directors' skills and experience including education, the influence of the community; (b) board committees features: the existence of the corporate social responsibility, or committee responsible, oversight committee independence, the independence of the remuneration committee, nomination committee independence; and (c) composition of property: concentration property, institutional property.

The key objective of the review of this parameter is the meeting, yet different corporate governance additional systems run as control of the application of management to engage in satisfaction stakeholder interest which, in turn, could influence the disclosure decision. These governance mechanisms taken together oriented emphasis on environmental and social issues and how the role of a company and its stakeholders are determined in a society. This, in round, is disseminated in corporate environmental disclosure practices. We choose some variables measuring the characteristics of corporate governance. From these variables, testable hypotheses are studied.

The following assumptions represent our personal perspective on the relationship between the variable measuring environmental disclosure and each independent variable. Indeed, we develop the following theoretical frameworks:

a) Independent Directors and Disclosure

The quality of environmental reporting is positively affected by the proportion of independent non -executive directors on the board. The OECD guidelines and all of corporate governance code, respectively, confirm the existence of two types of directors in the board; executive directors and non-executive directors, the goal it is to check or to plan management strategies. Important leaders are committed to the company with a direct role in the strategy, however, the non-executive managers do not work directly in the strategy of the company, with a role of vigilance fair and independent on how the company is headed. From the perspective of agency theory, Solomon (2007) argues that the existence of independent non-executive managers within the council board should be involved in reducing persistent conflicts of interests persistent between shareholders and management of the company, because their role is to monitor independently the business activity on increasing the objectivity, independence within the board, which leads to the minimization of agency costs.

In this context, the board must ensure an average number of independent members to present independent solutions in order to reduce the potential conflict of interest. As independent managers should meet the needs of stakeholders, it is expected that they have more power over the dissemination of the environment performance and transparency related information (Haniffa and Cooke, 2002). However, researches in this field also suggest a negative vision addressing the existence of independent non-executive managers: in the case of an extended board, non-executive managers are considered powerless arbitrary element within the structure. Adherents of this theory suggest that the market in which the company has the capability exists encourage the management of a company to move correctly, in fact, maintain shareholder expectations (Solomon, 2007). Different Studies confirm results related to the correlation between the number or percentage of independent non-executive managers and the level of voluntary disclosure. On the one hand, Akhtaruddin et al., (2009), Donnelly and Mulcahy (2008), Jianguo and Huafang (2007), Kelton and Yang (2008) are all research demonstrating the existence of a positive dependence between number of non-executive and independent managers and the degree of information communication, based on empirical data approaches, in the other hand, Barako et al., (2006) find a negative association between the level of voluntary disclosure and the ratio of non-executive directors.

The independent directors resulting in a group of quality expertise encouraged the institutional level that decides companies do not retain the value of adequate information (Ho and Wong, 2001). Autonomous and competent specialists will always strengthen the reliability and their role as effective vigilance to improve their reputation of evaluation systems. In a state governed serious environment focused on improving the relevance, companies are looking further their reputation for performance and success (Patelli and Prencipe, 2007) and to appoint independent directors, who will perform their role to recommend, monitor and steer effectively. We formulate the following hypotheses:

H1: There is a positive complementary relationship between independent directors and the extent of voluntary disclosure.

b) Board Size

The work of previous research confirms that board size explains the performance and value thereof (Xie et al., 2001), since a large board size affects the decisions of more experienced investors. A more efficient board, acting characterizes a more information system and a more increased level of voluntary disclosure at the same time, environmental disclosure quantity. However, there is research has shown that there is no dependency between the size of the board and the quality of voluntary information communication (Halme and Huse, 1997, Cheng and Courtenay, 2004). In our point of view, we believe that the disclosure of environmental reports may be related to the size of the board.

In the field of environmental disclosure, Kassinis and Vafeas (2002) examined the hypothesis which characteristics of corporate governance have an impact when companies change the environmental laws. They studied four particularities of corporate governance: board size, board composition, outside directors and inside the property. These researchers suggest that the two boards with many members and those who know far fewer members lead to less environmental offenses, empirically, they find that boards with fewer members are more successful in terms of having less environmental offenses. They confirm this by referring to Goodstein, Gautam and Boeker (1994), who found that large board ability to defend the free exchange of ideas and opportunistic CEO can enjoy them.

Kassinis and Vafeas (2002) examine the characteristics of the board of directors in an exceptional manner. They are investigating whether the board of directors who formed an industrial alliance with the company explaining solidarity, in effect, provides the poor pollution performance. In addition, these outside directors are more likely to side with management, they accept poor environmental performance. They find a statistically significant dependence between the environment and the pursuit number of peers who sit on the board. External missions are determined as the number of other boards that directors are members. They confirm that the reputation of outside directors is an important instruction in the future recommended composition of the board. Thus, based on the group improves the members of the board expertise.

Assuming a prohibited practice may discourage a member of the board reputation and therefore should be avoided. They notice a statistically significant correlation opposite between the number of mandates and environmental litigation (more board memberships less discord).

In addition to the features of government, studies on the Spanish context states that the conflict of interests between minority and majority shareholders (Shleifer and Vishny, 1997) only exists at a more significant level of dominant ownership concentration compared to Anglo-Saxon countries (De Miguel et al., 2004). Our empirical analysis is conducted in an institutional context where the minority shareholders against the law and the appointment of independent directors said. This creates a medium strong robustness as majority shareholders appoint independent directors to fulfill their role of efficient control, support dependencies between corporate governance and disclosure of information. Consequently, as a result of strong concentration of ownership property and a dominant shareholder, we suggest positive correlations between governance and publication, which explains higher levels of voluntary disclosure in companies with a higher percentage of independent directors.

The work of Jensen (1983) deserves limited number of acting tips in the control of the CEO, which limits the possibility of taking ineffective strategies. In fact, previous empirical results show a negative relationship between the size and enterprise value (Yermack, 1996). Cheng and Courtenay (2006) report the absence of a significant relationship between size of the board and the voluntary publication of a sample of Singapore companies. Indeed, the correlation between the company and the size of the board of directors as well as the ability for large companies to still be under pressure from stakeholders to provide information determines that greater guidance are bringing to disclose more (Denis and Sarin, 1999).

The size of the board, as an effective corporate governance system, was a concept of a theoretical discussion. According to the agency theory, an expanded board greater control forces and, in fact, is considered as an effective governance mean of the effectiveness management control (John and Senbet, 1998; Zahra and Pearce, 1989). Extended board is choosing to have a greater presence of experienced independent directors (Welford, 2007; Xie et al., 2003) and, therefore, it is more able to reduce management opportunism by deflecting the concentration of social enterprise and environmental responsibilities (Sun et al., 2010). According to the vision of stakeholders, however, it is supported that large companies increase the diversity of the composition of the board. Based on the theoretical arguments and empirical studies we have the following hypothesis:

H2: There is a positive relationship between the quantity of corporate environmental disclosure and board size.

c) Role Duality

It is properly founded the involvement of duality, where the CEO officer is the head of the board, can identify the autonomy of the Board and limit its performance as that governing instrument (Adams et al., 2005; Millstein, 1992). Agency theory advocates for the separation of management and control, however, allowed thinking that the two positions of CEO and Chairman should be split to provide essential obstacles and limitations on management performance (Fama and Jensen, 1983). The effect of duality can reduce sucked board since the CEO gifted to enjoy the meetings of the board and choose programs and board of directors (Haniffa and Cooke, 2002). It can greatly significant hinder in the Work of board control, discipline and pay of executives and the CEO admit to choose opportunistic practices following its authority in the board (Barako et al., 2006).

By bringing the two roles together it becomes difficult for a board to change an incompetent CEO accomplish (Shivdasani and Zenner, 2004).

Haniffa and Cooke (2002), Barako et al.(2006) did not observe significant correlation between the two variables. However, Forker (1992) documented a negative dependence of the effect of duality and disclosure identically found by Gul and Leung (2004) and Huafang and Jianguo (2007). Based on the above findings, differentiation of roles of CEO and chairman is the board are more likely to be the acting in supervise performance management, ensuring a high degree of reliability and, therefore, simplification information asymmetry between management and stakeholders (Gul and Leung, 2004; Rupley et al., 2011). Indeed, company's duality concentration should be less complementary to full disclosure and high quality. Finally, the following hypotheses are proposed:

H3: There is a negative relationship between the quantity of corporate environmental disclosure and role duality.

d) Institutional Ownership

Many groups have pressure on corporate governance. One of these groups we find shareholders, particularly institutional investors, they are engaged in the recreation of an important role. In the academic view, the situation of institutional investors in corporate governance is extremely problematical. As of this point of view, institutional investors disclose a different method of influential corporate governance which could have direction in excess of firm management. Since they can either significantly change firm management or organize interests of shareholders' groups. Of course, in literatures about corporate governance, the ownership center is referred to as a significant instrument to have power over agency's problems and to progress investors' interest sustaining (Shleifer and Vishny, 1997). However, such meeting point may have negative impacts as well, e.g. admission to secret information may result in information asymmetry between shareholders and minor shareholders.

As a result of their advantage from economic recompense and variability, institutional investors can tenacity agency problems.

In addition, it should be noted that institutional shareholders are acting investors who have strategic and some long-term targets investments apart from short-term financial efficiencies (Anderson et al., 2003; Monks and Minow, 1995; Welford, 2007).

Thus, they can consider environmental issues as an important solution to increase long-term value (Halme and Huse, 1997; Prado-Lorenzo et al., 2009; Welford, 2007). In the same context, with stakeholder theory, institutional investors are "seeking more reliability and responsibility based increasingly large portion of their exams finance corporate governance" (Welford, 2007). The work of Emerson et al., (2005) confirm that long-term investors give importance to criteria such as the ability to grow of the environment, the climate change, the environmental liabilities and the right to use the environment in their appreciation of investments. Based on theoretical arguments and empirical studies, we have the following hypothesis:

H4: There is a positive relationship between the quantity of corporate environmental disclosure and institutional ownership.

e) Ownership Concentration

The agency theory assumes that the agency problems resulting from the separation of ownership and verification (Jensen and Meckling, 1976) are more serious objections when ownership is dispersed when they are closely held (Fama and Jensen, 1983). To reduce the attraction of the resulting dispersion of ownership conflicts, administrators may be required to broadcast an autonomous manner of more information, as minority shareholders give more confidence to such reporting explaining business practices (Brammer and Pavelin, 2008). Indeed, voluntary publication can be enjoyed as a technique whereby the officers prove that they are acting in the expectations and demands of the owners (Craswell and Taylor, 1992). In situations of ownership distributed, shareholders have little direct power over managers and they are unable effectively to examine the management which increases the problem of information asymmetry (Brammer and Pavelin, 2006). These practices, which bring an adverse effect of the reaction of investors and the leaders, are an incentive for a company to disclose environmental information to shareholders (Brammer and Pavelin, 2006; Ullmann, 1985).

Research examining the relationship between ownership concentration and companies environmental communication are not numerous, but homogeneous. The concentration property was statistically evaluated negatively and independent with environmental information in the annual management reports as announced by Brammer and Pavelin (2006) on the amount of disclosure and Pavelin and Brammer (2008) and Cormier et al. (2005) about the quality of this disclosure. Both Reverte (2009) and Prado-Lorenzo et al., (2009) found concentration of ownership have a negative correlation to the company's revelation social responsibility, although the latter showed low dependency. Based on the agency theory, we formulate our fourth hypothesis as follows:

H5: Ownership concentration has a negative impact on the level of corporate governance disclosure.

VI. Methods

a) *Sample*

This study is an empirical examination of how the characteristics of corporate governance can analyze the degree of environmental reporting for a sample of 23 companies listed on the Stock Exchange Securities Value of Tunis. Variables were collected from annual reports and other business relationships with the reports using content analysis and are presented in table 1.

Our sample consists of non-financial listed companies in Tunisia. Specifically, we examined the annual reports of these companies which are published on their websites on Tustex, and for a period ranging from 2003 to 2011 order to construct an index of disclosure for each year. The total number of observation is 184. The choice of this period is motivated by the availability of those reports in the Council Financial Market (CFM) during the collection period.

b) *Dependent variables: quantity of voluntary environmental disclosure*

To examine the method by which the environmental performance or environmental information is communicated between (2003-2011) by Tunisian companies listed at Tunis Stock Exchange Securities in the first, second and third level (Environmental Reporting) we composed an index publication (PI) on all of the following information:

$$\mathbf{EnvRepPI} = \frac{\sum_{i=1}^{n} \mathbf{p_i}}{\mathbf{m}}$$

Where,

n: number of element disclosed, n=3

m: number of possible elements to disclose, m=3

pi: group of elements disclosed

- [p1] Non-financial information concerning the environmental objectives, the management, the policy and other appearances that can broadcast environment performance in non-financial information. This measure can procreate a value "1" if the company disseminates this information or category "0" if the companies no account information.
- [p2] Performance indicators have a significant impact on the environment (water, air, soil). These indicators are defined by the Global Reporting Initiative, and other organizations. The indicator is "0" if the company does not disclose such information,"1" if the company reports communicate these indicators, although these indicators are not associated with the indicators set out in international guidelines and recommendations.
- [p3] Financial indicators (investments and acquisitions of environmental assets, costs, provisions).

These indicators expose in monetary terms the behavior of firms regarding environmental reporting. Values can be "0" if the company does not advertise this information or "1" if the company indicates such information.

This way of quantifying environmental information allows the incorporation of all kinds of information in single figure comparable companies and is not very subjective and based, as it is not a review qualitative analysis. According to researchers is not always the same with the point of view of the investor in terms of environmental reporting importance and transparency.

Thus, our publication EnvRep Index (PI) is calculated as follows:

Method of Calculation Envrep Publication Index (PI)

N° company	Company name	p_1	p_2	p_3	PI
from 1 to 23					

c) *Control Variables*

Measures of control variables in our study are corporate specific to Tunisian companies. The peculiarities of the company are mainly considered as significant determinants of corporate environmental publishing. They are considered mediators variable and must be recognized by academic researchers (Cowen et al., 1987; Roberts, 1992; Ullmann, 1985). Many empirical studies have investigated the relationship between firm characteristics and environmental publication in companies annual reports. Their empirical results confirmed that before the company characteristics significantly undo fluctuation in environmental reporting practices.

i. *Size*

Company size was mainly associated with the business environment post back behavior. Important companies in terms of size that can accept additional costs of providing environmental disclosure have the ability to use templates and clearly qualified with skills and of developing information systems for disseminate full information (Buzby, 1975; Monteiro and Aibar-Guzman, 2010).

ii. *Profitability*

The financial performance of companies is one of the specific impacts of CSR communication (Lucyanda and Siagian, 2012). Economic performance is a challenging feature to disclose CSR activities in the high level of suppleness. The high degree of profitability, superior CSR disclosure as they are concerned in developing hollow of CSR disclosure how they design their profitability less profitable company (Gamerschlag et al., 2011; Hatta and Daryono, 2012).

Profitability is generally considered as a key for social and environmental disclosure. However, the future financial performance depends on environmental disclosure. Probable clarification for a positive correlation is that the firm has the flexibility to engage and communicate large environmental responsibility activities to stakeholders (Heinze, 1976).

iii. *Leverage*

Very strong leverage can lead companies in a dangerous situation, so when the debt is growing enterprises are obviously under the influence of creditors or financial institutions. Generally, companies must retain some leverage (debt) ratio. If the debt ratio exceeds the normal threshold, chances are that companies will be highly controlled by stakeholders especially by banks, creditors and investors. Consequently, companies are required to disclose more information to the community and those stakeholders in order to ensure that they do not alter the normal covenant debt- conditions of the debt.

The work of previous research addressing the relationship between indebtedness and communication environment are not convincing and consistent. While some studies have confirmed a significant positive correlation between leverage and environmental dissemination (Clarkson et al., 2008; Naser et al., 2006; Parsa and Kouhy, 2008), other studies have found a significant negative relationship (Belkaoui and Karpik, 1989; Pavelin and Brammer, 2006; Zainudin and Cooper, 2009; Cormier et al., 2011; Cormier and Magnan, 2003).

d) Operational and Measurement of Study Variables

The following table summarizes a summary of the operational determination or measurement of each of the dependent variables, independent variables and control variables, with their origins and data collection. The dependent variables, corporate environmental disclosure quantity and quality are obtained by analyzing the content of the annual reports.

	Variables	Abbreviation	Measurement	Data Source	Sign
Dependent Variables	Corporate Environment disclosure	Score	$\mathbf{EnvRepPI} = \frac{\sum_{i=1}^{n} p_i}{m}$	Calculated from annual reports	
Independents Variables	Independent directors	IND	Percentage of independent directors on the board : number of external members/ total number of board members	Calculated from annual reports	(+)
	Board Size	BS	Number of board members	Calculated from annual reports	(+)
	Duality	DUAL	Equal to 1 in the presence of the combined functions of CEO and Chairman of the Board and 0 if not	Calculated from annual reports	(-)
	Institutional Ownership	INST	Percentage held by institutional investors	Information provided by annual reports	
	Ownership Structure	Own-Con	Percentage of total shares held by blockholders or shareholders in excess of 5%	Information provided by annual reports	
Control Variables	Size	Size	Natural logarithm of total assets	Information from financial statement	(+)
	Profitability	ROE	Net income/ Total equity.	Information from financial statement	(+/-)
	Leverage	DEBT	Total debt/ total assets.	Information from financial statement	(+/-)

e) Model Specification

In this study, the method used is panel data because we have data for 23 companies and 8 years, which gives us 168 observations. The variables of this study can be classified into three types: dependent variable, independent variables and control variables.

Data were composed either from the annual reports of the companies. The main statistical technique used in this study is panel data analysis (generalized least square method). Generalized least square method is used since the sample data are not normally distributed and the data have, either, heteroskedasticity problem, autocorrelation problem or both. Therefore use of the generalized least square method will defeat all these problems.

The econometric model is written as follows:

$$SCORE_{it} = \beta_0 = \beta_1 \mathrm{IND}it + \beta_2 \mathrm{BS}_{it} + \beta_3 \mathrm{DUAL}_{it} + \beta_4 \mathrm{INST}_{it} + \beta_5 \mathrm{Own\text{-}Con}_{it} + \beta_6 \mathrm{SIZE}_{it} + \beta_7 \mathrm{ROE}_{it} + \beta_8 \mathrm{DEBT}_{it} + e_{it}$$

Where:

eit: error term. The indices i and t correspond to the company and the period of the study.

VII. Presentation and Discussion of Results

Software modeling and data analysis, STATA 11 is used to make, first, statistics exams including descriptive statistics, Pearson and Spearman dependences and Ordinary Least Squares (OLS) multiple regression tests. Then, GLS regression is used primarily to test the hypotheses of the research and to ensure the reliability of the main OLS regression results. Finally, the sensitivity analysis in Based on ordinary least squares (OLS) together with the robust standard error is performed to check the sensitivity and, therefore, the robustness of the main regression analysis.

The data are consolidated over time or eight years examined 2003-2011 inclusive. Panel data are better able to absorb and measure effects that are just downright not visible in pure transverse or pure time series data.

a) Descriptive Analysis

Descriptive statistics are tested for each corporate governance systems and firms specificities. The results of the descriptive statistics are shown in Table 2.

Table 2 : Descriptive Statistics of Corporate Governance Mechanisms

Variable	Mean	SD	Max	Min
IND	0.092	0.134	0.633	0
BS	9.352	1.761	12	4
DUAL	0.272	-	-	-
INST	0.210	0.184	0.685	0
Own-Con	0.626	0.054	1	0.05
SIZE	18.341	0.958	23.713	12.589
ROE	0.047	0.042	0.201	-0.136
DEBT	0.406	0.292	1.468	0.064

Table 2 presents the descriptive statistics of the different corporate governance systems discussed in the explanation of changes in the amount of corporate environmental communication practices. The independence of the average tip is 9.2 %, which indicates that almost one tenth of directors are non-independent executive. The presence of independent is considered low compared with international standards and codes of good practice. The mean role duality is 0.727, this proportion is also very high for both international recommendations that influence the environmental disclosure practices negatively. However, the average size of the board is 9.35, revealing that the large size of the board has been a traditional practice in Tunisian firms over time. Analyzing property structure, it can be observed that the average concentration of ownership and institutional ownership are not close enough (62.6 and 21 respectively), reflecting the fact that institutional ownership is not the main and the dominant form of control blocks as the ownership concentration among a majority shareholder, which reinforces the idea that most Tunisian listed firms are family corporate.

Table 2 also analyzes the descriptive statistics of the different corporate characteristics to be controlled. One can observe that the sample firms are about large size (an average of 18.341 between minimum of 12.589 and a maximum 23.713). However, the majority of the sample companies are in debt. There seems to be a wide variation between the minimum values among the society and maximum attributes. This result is expected due to the consideration of a wide range of companies of different sizes, degrees of environmental sensitivity and different levels of profitability, debt, as well as various positions on the list.

b) Correlation Analysis

Correlation coefficients of Pearson expose dependence of each of the whole company amount of environmental information to all corporate governance and the corporate characteristics integrated in our study. The significant association was found with a confidence level of 95%. Results show that at this level of environmental disclosure information, it is important association between total environmental information quantity and the majority of the corporate governance specific, including board independence, role of duality, board size, concentration of ownership and institutional ownership.

Concerning the most information from of environmental publication, it is also significant positive relationship between board independence and the disclosure quantity of each environmental issue related to environmental policy changes, products, environmental auditing and sustainability. There is a negative significant correlation between the role of duality and the quantity information of each broadcast categories. Board size is significantly and positively associated with disclosure quantity of each environmental policy.

Results exhibit a significant positive identically dependence between total environmental disclosure amount information and companies specificity, including firm size, and leverage. No significant relationship was found between total environmental disclosure information quantity and each performance measure.

c) Examination of Multicollinearity

Multicollinearity assumes the subsistence of a linear dependence between two or more variables. Thus, if there is an ideal linear relationship between the explanatory variables, the assessments for a regression model can be only calculated. The possible existence of multicollinearity is checked on the basis of the correlation matrix including all the independent and control variables. Together Pearson and Spearman rank correlation matrices argue that the correlation coefficients do not exceed 0.8, the limit or cut correlation percentage often advised by previous studies, after which multicollinearity may exist.

In an exclusive way the coefficient of correlation between the two independent variables, measuring the ownership structure, more particularly, there is little multicollinearity between ownership concentration and institutional ownership, where Pearson and Spearman coefficients dependency are 0.898 and 0.841 correspondingly. We confirm this result given that institutional ownership is considered important and dominant from of control blocks. Furthermore, as such multicollinearity is simply somewhat higher than the ideal limit, results signify that multicollinearity is improbable to be a powerful problem.

The likely existence of multicollinearity is also considered by the explanation of the variance inflation factor (VIF). Table 3 analyzes the variance inflation factor (VIF) and tolerance coefficients of each illustrative variable. The table illustrates that the maximum VIF is 5.53, in addition, the smallest tolerance coefficient is 0.18. Finally, the results of VIF and tolerance coefficients discover that there is no intolerable degree of multicollinearity between the variables in our study dealing with Tunisian firms , ensures that there is no require to worry about the correlation between the illustrative variables.

Table 3 : Variance Inflation Factor (VIF) of Corporate Governance Mechanisms and Corporate Characteristics

Variable	VIF	Tolerance 1/VIF
IND	2.95	0.33
BS	1.83	0.54
DUAL	2.74	0.36
INST	4.10	0.24
Own-Con	5.53	0.18
SIZE	2.87	0.34
ROE	1.91	0.52
DEBT	2.04	0.49

d) Regression Analysis

Multiple regression examination by Ordinary Least Squares (OLS) longitudinal panel regression with robust standard error is engaged to test the developed research hypotheses. Such multivariate study suppose to analyses the association between corporate environmental disclosure quantity and every of the diverse corporate governance systems following controlling for Tunisian corporate characteristics.

Thus, Generalized Least Squares (GLS) regression is executed to additional test the study hypotheses and to verify the consistency of the main OLS regression results. GLS acquires into consideration that the variances of the observations might be unequal and/or there might be a certain degree of relationship among the observations.

i. *OLS Regression Analysis*

Empirical results of the Ordinary Least Squares (OLS) regression of corporate governance on environmental disclosure quantity are exposed in Table 4.

Table 4 : OLS Longitudinal Panel Regression with Robust Standard Error

Variable	DivEnv	
	Coeff.	p-value
Intercept	4.38	0.341
IND	0.28**	0.06
BS	-0.31**	0.054
DUAL	-10.76***	0.001
INST	0.52	0.001
Own-Con	-0.21	0.003
SIZE	5.31*	0.089
ROE	-0.84	0.617
DEBT	0.92*	0.081
Adjusted R^2 (%)	18.36	

IND: Independent Directors, BS: Board Size, DUAL: Duality, INST: Institutional Ownership, Own-Con: Ownership concentration, SIZE: measure of Size, ROE: Profitability, DEBT: Leverage

$***p \leq 0.01$, $**p \leq 0.05$, and $*p \leq 0.10$.

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Table 4 analyses the results of Ordinary Least Squares (OLS) longitudinal panel regression with robust standard error of corporate governance on environmental disclosure quantity.

Correlation coefficients of the EnvDis variable with the control variables show a statistically significant correlation with board size, ownership concentration, duality, % independent directors and % ownership concentration. These results are consistent with the descriptive analysis in Table 4, supporting the relationship between voluntary disclosure, board composition and ownership structure. In this context, we find that, the results show a significant positive association between total environmental disclosure information and each independent directors ($p \leq 0.1$) and institutional investors ($p \leq 0.05$). Results also indicate a strong significant negative association of total environmental disclosure information with each of board independence ($p \leq 0.05$), role of duality ($p \leq 0.01$) and ownership concentration ($p \leq 0.05$). The adjusted R square of the model is 18.36% which indicates that 18.36% of the changes in total environmental disclosure information are explained by changes in its examined determinants.

Results also expose an important positive relationship between total environmental revelation quantity and corporate specifics including company leverage ($p \leq 0.1$), while, there is a negative relationship with profitability but it is not significant. Nevertheless, the insignificant relationship of size to publication quantity is confirmed for most of the disclosure categories.

ii. *GLS Regression Analysis*

Generalized Least Squares (GLS) longitudinal panel regression with robust standard error is approved out to additional test the study hypotheses and to confirm the dependability of the main OLS regression results.

The robust standard error choice is practical in order to adjust the GLS parametric test to fit with non-parametric data, as exposed by the descriptive statistics representing that the study's data are not normally distributed. The results of the Generalized Least Squares (GLS) regression of corporate governance on environmental disclosure quantity are shown in Table 5.

Table 5 : GLS Longitudinal Panel Regression with Robust Standard Error of Corporate Governance on Environmental Disclosure

Variable	DivEnv	
	Coeff.	p-value
Intercept	2.76	0.519
IND	-0.08^{***}	0.001
BS	-0.83	0.164
DUAL	-13.58^{***}	0.000
INST	0.39	0.942
Own-Con	-3.29	0.000
SIZE	9.56^{***}	0.001
ROE	2.79^{**}	0.09
DEBT	1.21^{***}	0.000
Adjusted R^2 (%)	24.59	

IND: Independent Directors, BS: Board Size, DUAL: Duality, INST: Institutional Ownership, Own-Con: Ownership concentration, SIZE: measure of Size, ROE: Profitability, DEBT: Leverage

****p ≤ 0.01, **p ≤ 0.05, and *p ≤ 0.10.*

Table 5 offered the results of Generalized Least Squares (GLS) longitudinal panel regression with robust standard error of corporate governance on environmental disclosure quantity. Results illustrate an important negative relationship between total environmental disclosure quantity and each of independent directors ($p \leq 0.01$), role duality ($p \leq 0.01$) and ownership concentration ($p \leq 0.01$). However, no significant association is found between total environmental disclosure quantity and each of board size and institutional ownership. The adjusted R Squared of the model is 24.59% indicating that 24.59% of the changes in total environmental disclosure quantity are explained by the opportunities in its analyzed determinants.

Results also reveal an important positive association between total environmental disclosure quantity and corporate characteristics including company size ($p \leq 0.01$), profitability ($p \leq 0.10$), and leverage ($p \leq 0.01$).

These results signify that developing a strategic environmental disclosure that encourage transparency and powerful governance mechanisms reinforces the complementarities between both supervising mechanisms, make up for the potential motivation for majority shareholders to withhold pertinent information to minority shareholders. However, results also suggest that other governance mechanisms should be strengthen to improve check over the agency relationship. Accordingly, doubling up the responsibilities of chairman and executive director is seen to significantly reduce the level of voluntary environmental disclosure information, establish potential conflicts with the role of independent directors.

VIII. Summary and Conclusions

In this study the relations between corporate governance and corporate environment disclosure were examined. The examination also provides evidences to reconcile the competing theories about the incentives of environmental performance and disclosure.

Four hypotheses were analyzed to make association between voluntary disclosure, corporate governance, and stakeholder and legitimacy theories.

Results also revealed a significant association between environmental disclosures quantity and most corporate governance instruments. Particularly, elevated environmental disclosure quantity is dependent with minor percentage of independent non-executive directors on the board, separation of the dual role of CEO and chairman. However, regression study for the duality variable propose the need to modify the current recommendations on certain governance measures such as the concentration of Chair and CEO responsibilities that not only involve transparency but may also intervene with the role of independent directors.

The econometric examination isolates the effect of corporate governance ownership on voluntary environment disclosure. We find that the role of independent directors is not impaired and that their presence is significantly correlated with higher levels of voluntary environment disclosure. Our results highlight the relevance of guaranteeing independence among board members in order to guide the concern of minority and majority shareholders around more accountability and transparency so as to decrease the information asymmetries that occur in an open corporation.

There are some limitations to this study. First, we have not focused on environment disclosure quality but quantity. Though several previous studies have concerted on mutually (Cheng and Courtenay, 2006), we have not assessed quality in order to reduce subjectivity in the index computation. In addition, sample size is restricted, since the empirical results are based on a single country and in one eight year. Nevertheless, due to the difficult nature of the data collection to build the disclosure index, most previous literature is also typify by a small sample sizes.

References Références Referencias

1. Adams, R.B., Almeida, H. and Ferreira, D. (2005), "Powerful CEOs and Their Impact on Corporate Performance", *Review of Financial Studies*, 18 (4): 1403-1432.
2. Aguilera, R.V., Williams, C.A., Conley, J.M. and Rupp, D.E. (2006), "Corporate Governance and Social Responsibility: A Comparative Analysis Of The UK And The US", *Corporate Governance: An International Review*, 14 (3): 147-158.
3. and Voluntary Disclosure", *The International Journal Of Accounting*, 41(3): 262- 289.
4. Anderson, R.C., Mansi, S.A. and Reeb D.M. (2003), "Founding Family Ownership and The Agency Cost Of Debt", *Journal of Financial Economics*, 68 (2): 263-285.
5. Ansoff, I. (1965), *Corporate Strategy*, New York, NY: McGraw Hill.
6. Barako, D.G., Hancock, P. and Izan, H.Y. (2006), "Factors Influencing Voluntary Corporate Disclosure By Kenyan Companies", *Corporate Governance*, 14 (2): 107-125.
7. Belkaoui, A. and Karpik, P. (1989), "Determinants Of The Corporate Decision to Disclose Social Information", *Accounting, Auditing and Accountability Journal*, 2 (1): 36-51.
8. Boesso, G. and Kumar, K. (2007), "Drivers Of Corporate Voluntary Disclosure: A Framework And Empirical Evidence From Italy And The United States", *Accounting, Auditing and Accountability Journal*, 20 (2): 269-296.
9. Bradbury, M.E. (1999), "The Incentives for Voluntary Audit Committee Formation", *Journal of Accounting and Public Policy*, 9 (1): 19-36.
10. Brammer, S. and Pavelin, S. (2006), "Voluntary Environmental Disclosures By Large UK Companies", *Journal of Business Finance and Accounting*, 33 (7/8): 1168-1188.
11. Brammer, S. and Pavelin, S. (2008), "Factors Influencing The Quality of Corporate Environmental Disclosure", *Business Strategy and The Environment*, 17 (2): 120-136.
12. Buzby, S.L. (1975), "Company Size, Listed Versus Unlisted Stocks, And The Extent of Financial Disclosure", *Journal of Accounting Research*, 13 (1): 16-37.
13. Campbell, D. (2000), "Legitimacy Theory or Managerial Reality Construction? Corporate Social Disclosure in Marks and Spencer Plc Corporate Reports, 1969- 1997", *Accounting Forum*, 24 (1): 80-100.
14. Chen, C.J.P. and Jaggi, B. (2004), "Association Between Independent Non-Executive Directors, Family Control and Financial Disclosures In Hong Kong", *Journal of Accounting and Public Policy*, 19 (4/5): 285-310.
15. Cheng, E.C.M. and Courtenay, S.M. (2006), "Board Composition, Regulatory Regime and Voluntary Disclosure", *The International Journal of Accounting, 41 (3): 262-289.*
16. Clarkson, P.M., Kao, J.L. and Richardson, G.D. (1994), "The Voluntary Inclusion of Forecasts in the MD and A Section of Annual Reports: A Voluntary Disclosure Perspective", *Contemporary Accounting Research*, 11 (1): 423-450.
17. Clarkson, P.M., Li, Y., Richardson, G.D. and Vasvari, F.P. (2008), "Revisiting the Relation Between Environmental Performance and Environmental Disclosure: An Empirical Analysis", *Accounting, Organizations and Society*, 33 (4/5): 302-327.
18. Cormier, D. and Magnan, M. (2003), "Environmental Reporting Management: A European Perspective", *Journal of Accounting and Public Policy,* 22 (1): 43-62.
19. Cormier, D., Ledoux, M. and Magnan, M. (2011), "The Informational Contribution of Social and Environmental Disclosures for Investors", *Management Decision*, 49 (8): 1276-1304.

20. Cormier, D., Magnan, M. and Velthoven, B.V. (2005), "Environmental Disclosure Quality In Large German Companies: Economic Incentives, Public Pressures or Institutional Conditions?", *European Accounting Review, 14 (1): 3-39.*
21. Craswell, A.T. and Taylor, S.L. (1992), "Discretionary Disclosure of Reserves by Oil And Gas Companies: An Economic Analysis", *Journal of Business Finance and Accounting*, 19 (2): 295-308.
22. Creswell, J.W. (2005), Qualitative Inquiry and Research Design: Choosing Among Five Traditions, Thousand Oaks, California: *SAGE Publications, Inc.*
23. Deegan, C., Rankin, M. and Tobin, J. (2002), "An Examination of The Corporate Social and Environmental Disclosures Of BHP From 1983-1997: A Test of Legitimacy Theory", *Accounting, Auditing and Accountability Journal*, 15 (3): 312- 343.
24. Deegan, C., Rankin, M. and Voght, P. (2000), "Firms' Disclosure Reactions to Major Social Incidents: Australian Evidence", *Accounting Forum*, 24 (1): 101-130.
25. Demb, A. and Neubauer, F.F. (1992), "The Corporate Board: Confronting the Paradoxes", *Long Range Planning*, 25 (3): 9-20.
26. Emerson, J., Little, T. and Kron, J. (2005), The Prudent Trustee: The Evolution of The Long-Term Investor, Washington, DC: Generation Foundation and The Rose Foundation for Communities and The Environment.
27. Fama, E.F. and Jensen, M.C. (1983), "Separation of Ownership and Control", *Journal of Law and Economics*, 26 (2): 301-325.
28. Forker, J.J. (1992), "Corporate Governance and Disclosure Quality", *Accounting and Business Research*, 22 (86): 111-124.
29. Foster D. and Jonker J. (2005), "Stakeholder Relationship: The Dialogue of Engagement", *Corporate Governance*, 5 (5): 51-57.
30. Freeman, R.E. (1984), Strategic Management: A Stakeholder Approach, Boston, MA: Pitman.
31. Freeman, R.E. and Evan, W.M. (1990), "Corporate Governance: A Stakeholder Interpretation", *Journal of Behavioral Economics*, 19 (4): 337-359.
32. Gibbins, M., Richardson, A. and Waterhouse, J. (1990), "The Management Of Corporate Financial Disclosures: Opportunism, Ritualism, Policies and Processes", *Journal of Accounting Research*, 28 (1): 121-143.
33. Goodstein, J., Gautum, K. and Boeker, W. (1994), "The Effect of Board Size and Diversity on Strategic Change", *Strategic Management Journal*, 15 (3): 241-250.
34. Gray, R. and Collison, D. (2002) "Can't See The Wood For The Trees, Can't See The Trees for The Numbers? Accounting Education, Sustainability and the Public Interest", *Critical Perspectives on Accounting*, 13 (5/6): 797-836.
35. Gray, R., Javad, M., Power, D.M. and Sinclair, C.D. (2001), "Social and Environmental Disclosure and Corporate Characteristics: A Research Note And Extension", *Journal of Business Finance and Accounting*, 28 (3/4): 327-356.
36. Gray, R., Kouhy, R. and Lavers, S. (1995a), "Corporate Social and Environmental Reporting: A Review of The Literature and A Longitudinal Study Of UK Disclosure", *Accounting, Auditing and Accountability Journal*, 8 (2): 47-77.
37. Gray, R., Owen, D.L. and Adams, C. (1996), *Accounting and Accountability: Changes and Challenges In Corporate and Social Reporting*, London: Prentice-Hall Europe.
38. Gul, F.A. and Leung, S. (2004), "Board Leadership, Outside Directors' Expertise and Voluntary Corporate Disclosures", *Journal of Accounting and Public Policy*, 23 (5): 351-379.
39. Guthrie, J.E. and Parker, L.D. (1989), "Corporate Social Reporting: A Rebuttal of Legitimacy Theory", *Accounting and Business Research*, 9(76): 343-352.
40. Halme, M. and Huse, M. (1997), "The Influence Of Corporate Governance, Industry and Country Factors On Environmental Reporting", *Scandinavian Journal of Management*, 13 (2):137-157.
41. Haniffa, R.M., and Cooke, T.E. (2005), "The Impact of Culture and Governance On Corporate Social Reporting", *Journal of Accounting and Public Policy*, 24 (5): 391- 430.
42. Heath, J. and Norman, W. (2004), "Stakeholder Theory, Corporate Governance and Public Management: What Can The History Of State-Run Enterprises Teach Us In The Post-Enron era?", *Journal of Business Ethics*, 53 (3): 247-265.
43. Heinze, D.C. (1976), "Financial Correlates of A Social Involvement Measure", *Akron Business and Economic Review*, 7 (1): 48-51.
44. Hendry, J. (2001), "Missing The Target: Normative Stakeholder Theory and The Corporate Governance Debate", *Business Ethics Quarterly*, 11 (1): 159-176.
45. Hill, C.W. and Jones, T.M. (1992), "Stakeholder-Agency Theory", *Journal of Management Studies*, 29 (2): 131-154.
46. Ho, S.S.M. and Wong, K.S. (2001), "A Study of The Relationship Between Corporate Governance Structure and The Extent of Voluntary Disclosure", *Journal of International Accounting, Auditing and Taxation*, 10 (2): 139-156.
47. Huafang, X. and Jianguo, Y. (2007), "Ownership Structure, Board Composition and Corporate Voluntary Disclosure: Evidence from Listed Companies In China", *Managerial Auditing Journal*, 22 (6): 604-619.
48. Huafang, X. and Jianguo, Y. (2007), "Ownership Structure, Board Composition and Corporate Voluntary Disclosure: Evidence from Listed

Companies In China", *Managerial Auditing Journal*, 22 (6): 604-619.
49. Jamali D. (2008), "A Stakeholder Approach to Corporate Social Responsibility: A Fresh Perspective into Theory and Practice", *Journal of Business Ethics*, 82 (1): 213- 231.
50. Jensen, M.C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems", *Journal of Finance*, 48 (3): 831-880.
51. Jensen, M.C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems", *Journal of Finance*, 48 (3): 831-880.
52. Jensen, M.C. and Meckling, W.H. (1976), "Theory of The Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics*, 3 (4): 305-360.
53. Jensen, M.C. and Murphy, K.J. (1990), "Performance Pay and Top-Management Incentives", *Journal of Political Economy*, 98 (2): 225-264.
54. John, K. and Senbet, L.W. (1998), "Corporate Governance And Board Effectiveness", *Journal of Banking and Finance*, 22 (4): 371-403.
55. Kassinis, G. and Vafeas, N. (2002), "Corporate Boards and Outside Stakeholders As Determinants Of Environmental Litigation", *Strategic Management Journal*, 23 (5): 399-415.
56. Kochan, T.A. and Rubinstein, S.A. (2000), "Toward A Stakeholder Theory of the Firm: The Saturn Partnership", *Organization Science*, 11(4): 367-386.
57. Millstein, I. (1992), The Limits of Corporate Power: Existing Constraints on The Exercise of Corporate Discretion, *New York: Macmillan.*
58. Monks, R.A.G. and Minow, N. (1995), *Corporate Governance*, Cambridge, MA: Blackwell Business.
59. Naser, K., Al-Hussaini, A., Al-Kwari, D. and Nuseibeh, R. (2006), "Determinants of Corporate Social Disclosure in Developing Countries: The Case of Qatar", *Advances in International Accounting*, 19: 1-23.
60. Parsa, S. and Kouhy, R. (2008), "Social Reporting By Companies Listed on The Alternative Investment Market", *Journal of Business Ethics*, 79(3): 345-360.
61. Parum, E. (2005), "Does Disclosure On Corporate Governance Lead To Openness and Transparency In How Companies Are Managed?", *Corporate Governance: An International Review*, 13 (5): 702-709.
62. Patelli, L. and Prencipe, A. (2007), "The Relationship Between Voluntary Disclosure and Independent Directors In The Presence Of A Dominant Shareholder", *European Accounting Review*, 16 (1): 5-33.
63. Pirsch, J., Gupta, S. and Grau, S.L. (2007), "A Framework for Understanding Corporate Social Responsibility Programs As A Continuum: An Exploratory Study" *Journal of Business Ethics*, 70 (2): 125-140.
64. Post, C., Rahman, N. and Rubow, E. (2011), "Green Governance: Boards of Directors' Composition and Environmental Corporate Social Responsibility", *Business and Society*, 50 (1): 189-223.
65. Prado-Lorenzo, J-M., Gallego-Alvarez, I. and Garcia-Sanchez, I.M. (2009), "Stakeholder Engagement and Corporate Social Responsibility Reporting: The Ownership Structure Effect", *Corporate Social Responsibility and Environmental Management*, 16 (2): 94-107.
66. Ullmann, A. (1985), "Data In Search Of A Theory: A Critical Examination of The Relationship among Social Performance, Social Disclosure, and Economic Performance", *Academy of Management Review*, 10 (3): 540-577.
67. Reverte, C. (2009), "Determinants of Corporate Social Responsibility Disclosure Ratings by Spanish Listed Firms", *Journal of Business Ethics*, 88 (2): 351-366.
68. Rupley, K.H., Brown, D. and Marshall, S. (2011), *Multi-Stakeholder Governance: Impact on Environmental Disclosure*, Working Paper, Portland State University, USA.
69. Shivdasani, A. and Zenner, M. (2004), "Best Practices In Corporate Governance: What Two Decades Of Research Reveals", *Journal of Applied Corporate Finance*, 16 (2/3): 29-41.
70. Snider, J. Hill, R.P. and Martin, D. (2003), "Corporate Social Responsibility in the 21st Century: A View from The World's Most Successful Firms", *Journal of Business Ethics*, 48 (2): 175-187.
71. Solomon, A. (2000), "Could Corporate Environmental Reporting Shadow Financial Reporting", *Accounting Forum*, 24 (1): 30-55.
72. Sun, N., Salama, A., Hussainey, K. and Habbash, M. (2010), "Corporate Environmental Disclosure, Corporate Governance and Earnings Management", *Managerial Auditing Journal*, 25 (7): 679-700.
73. Turnbull, S. (1997), "Corporate Governance: Its Scope, Concerns and Theories", *Corporate Governance: An International Review*, 5 (4): 180-205.
74. Ullmann, A. (1985), "Data In Search of A Theory: A Critical Examination of the Relationship Among Social Performance, Social Disclosure, and Economic Performance", *Academy of Management Review*, 10 (3): 540-577.
75. Welford, R. (2007), "Corporate Governance and Corporate Social Responsibility: Issues for Asia", *Corporate Social Responsibility and Environmental Management*, 14 (1): 42-51.
76. Yermack, D. (1996), "Higher Market Valuation of Companies With A Small Board of Directors", *Journal of Financial Economies*, 40 (2): 185-221.
77. Zahra, S.A. and Pearce II, J.A. (1989), "Board of Directors And Corporate Financial Performance: A Review And Integrative Model", *Journal of Management*, 15 (2): 291-334.

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The Causal Relationship between Exports and Economic Growth in Jordan

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Abstract- This study aims to examine the causal relationship between economic growth and exports in Jordan using the Granger methodology in order to determine the direction of the relationship between the two variables during the period 2000- 2012.

The study found that there is a causal relationship going from the economic growth to Export, and not vice versa. Based on the outcome of causality tests, the changes in the economic growth help explain the changes that occur in the Export.

Keywords: *exports, economic growth, the causal relationship, gdp, granger, jordan.*

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THECAUSALRELATIONSHIPBETWEENEXPORTSANDECONOMICGROWTHINJORDAN

Strictly as per the compliance and regulations of:

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Ruba Abu Shihab [α], Thikraiat Soufan [σ] & Shatha Abdul-Khaliq [ρ]

Abstract- This study aims to examine the causal relationship between economic growth and exports in Jordan using the Granger methodology in order to determine the direction of the relationship between the two variables during the period 2000-2012.

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I. Introduction

Economic growth is one of the most important determinants of economic welfare. The relationship between exports and economic growth is a frequent topic of discussion, when economists try to explain the different levels of economic growth between countries. Exports of goods and services represent one of the most important sources of foreign exchange income that ease the pressure on the balance of payments and create employment opportunities.

The argument concerning the role of exports as one of the main deterministic factors of economic growth is not new. It goes back to the classical economic theories by Adam Smith and David Ricardo, who argued that international trade plays an important role in economic growth. The neoclassical approach emphasizes the importance of competitive advantages in international trade. Each country maximizes its welfare through the activities which are the most efficient regarding resource and production factors scarcity in of economy. In this case, the benefits of the trade are static and trade liberation and openness can't lead to increase in long run growth rate, but it influences income level.

Over the past years, an increasingly larger role granted to exports in rising domestic demand, the growth of exports increases technological innovation covers the domestic and foreign demand and also increases the inflows of foreign exchange, which could lead to greater capacity utilization and economic growth.

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The study is carried out to examine the relationship between exports and growth in a small developing Economy, Jordan. To achieve this, the study is structured into 3 sections: section (1) deals with the literature review; section (2) discusses methodology and data; while analysis of results, conclusion and recommendations are presented in section (3).

a) Previous studies

Several studies address the importance of exports on economic growth. The findings of these studies indicate that exports have a statistically significant positive impact on economic growth. We can summarize some of these studies that have addressed the issue of causality between exports and economic growth as follows:

Kalaitzi (2013) examined the relationship between exports and economic growth in the United Arab Emirates over the period 1980-2010. The study applied the two-step Engle-Granger cointegration test and the Johansen cointegration technique in order to confirm or not the existence of a long-run relationship between the variables. Moreover, this study applied a Vector Autoregression Model in order to construct the Impulse Response Function and the Granger causality test to examine the causality between exports and economic growth. The findings of this study confirmed the existence of a long-run relationship between manufactured exports, primary exports and economic growth. In addition, the Granger causality test showed unidirectional causality between manufactured exports and economic growth. Thus, further increase in the degree of export diversification from oil could accelerate economic growth in UAE.

Ahdi, and others (2013) investigated the dynamic causal link between exports and economic growth using both linear and nonlinear Granger causality tests. The study used annual South African data on real exports and real gross domestic product from 1911-2011. The linear Granger causality result showed no evidence of significant causality between exports and GDP. Accordingly the study turned to the nonlinear methods to evaluate Granger causality between exports and GDP. It used both Hiemstra and Jones (1994) and Diks and Panchenko (2005) nonlinear Granger causality tests. For the Hiemstra and Jones (1994) test, it found a unidirectional causality from GDP to exports. However, using the Diks and Panchenko

(2005) test, the study found evidence of significant bidirectional causality.

Kim and Lin (2009) examined the impact of export composition on economic growth, indicated that not all exports contribute equally to economic growth. In particular, many developing countries depend on exports of primary products, which are subject to excessive price fluctuations. In most cases, this category of exports had negligible impact on economic growth, while manufactured exports had a positive and significant effect on economic growth.

Abu al-Foul (2006) investigated the export-led growth hypothesis in Jordan over the period 1976–1997. The empirical results indicated a unidirectional causation from exports to output. These findings supported the export-oriented growth strategy pursued by Jordan. In promoting faster economic growth, such government institutions as Free Zones Corporations, Jordan Investment Board and Jordan Export Development Corporation should continue pursuing their mission in attracting foreign investments and boosting exports.

Abou-Stait (2005) examined the export-led growth (ELG) hypothesis for Egypt, using historical data from 1977 to 2003. The paper employed a variety of analytical tools, including cointegration analysis, Granger Causality tests, and unit root tests, coupled with vector auto regression (VAR) and impulse response function (IRF) analyses. The paper set three hypotheses for testing the ELG hypothesis for Egypt, (i) whether GDP, exports and imports are cointegrated, (ii) whether exports Granger cause growth, (iii) whether exports Granger cause investment. The paper failed to reject the first two hypotheses, while it failed to accept that exports Granger causes investment.

Awokuse (2003) re-examined the export-led growth (ELG) hypothesis for Canada by testing for Granger causality from exports to national output growth using vector error correction models (VECM) and the augmented vector autoregressive (VAR) methodology developed in Toda and Yamamoto (1995). The empirical results suggested that a long-run steady state exists among the model's six variables and that Granger causal flow is unidirectional from real exports to real GDP.

Crespo, Cuaresma and Worz (2003) argued that exports of manufacturing products are less sensitive to the cyclical changes in the international market compare to exports of raw and intermediate goods. Hence, countries that depend on the exportation of manufactured products were less affected by the cyclical changes in the world economy. Indeed, a major problem facing most developing countries was the heavy dependency on the export of raw materials. Changes in the world economy affected its demand for primary products, which then affected the economic performance of less developed countries.

Burridge and Sinclair (2002) investigated the causal links between trade, economic growth and inward foreign direct investment (FDI) in China at the aggregate level. The integration and cointegration properties of quarterly data analyzed. Long-run relationships between growth, exports, imports and FDI are identified in a cointegration framework, the study found bidirectional causality between economic growth, FDI and exports. Economic development, exports and FDI appeared to be mutually reinforcing under the open-door policy.

Shan and Sun (1998) tested the export-led growth hypothesis using quarterly time series data for Australia by constructing a vector autoregression (VAR) model. The Granger no-causality procedure developed by Toda and Yamamoto was applied to test the causality link between tested real export growth and real manufacturing output growth. Two principle results emerged. First, no evidence was found for the export-led growth hypothesis in Australia; second, when applying a longer lag structure, the study found evidence of a one-way Granger causality running from manufacturing growth to exports growth.

Shan and Tian (1998) tested export-led growth hypothesis using monthly time series data for Shanghai and the Granger no-causality procedure developed by Toda and Yamamoto (1995) in a vector autoregresion (VAR) model. This paper built on the existing literature in three distinct ways. This paper was the first study of the export-led growth hypothesis which employs a regional dataset (Shanghai). Second, the paper followed Riezman et al. (1996) in controlling for the growth of imports to avoid a spurious causality result; and finally, the use of the methodology by Toda and Yamamoto was expected to improve the standard F-statistics in the causality test process. The research found one-way Granger causality running from GDP to exports Sharma and Dhakal (1994) investigated the causal relationship between exports and output growth in 30 developing countries over the period from 1960 to 1988 in a multivariate framework. The study indented a feedback causal relationship between exports and output growth in five countries, export growth caused output growth in another six countries; output growth caused export growth in a further eight countries; and no causal relationship was observed between export growth and output growth in the remaining 11 countries. It also found that in 15 countries the foreign exchange caused export growth, and that in 12 countries world output caused export growth.

Ghartey (1993) tested Causal relationships between exports and economic growth for Taiwan, US and Japan. The method of Hsiao (1979) was employed in finding the direction of causation. Wald and likelihood ratio tests confirmed that exports growth in the US, and a feedback causal relationship existed in Japan.

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Khan and NAJAM (1993) examined the relationship between exports and economic growth for a variety of countries. They examined the relationship between these two variables in a simultaneous equation framework and used 3SLS technique. They found not only a strong positive association between exports performance and economic growth but more than 90 per cent of the contribution of exports to economic growth was indirect in nature.

Fosu (1990) examined the extent to which export growth affects the rate of economic growth in less developed African countries as a subgroup, GDP growth of 28 less developed African countries was analyzed using a pooled cross-sectional time-series estimation of 1960–1970 and 1970–1980 as an average annual growth rates. Based upon the usual augmented production function that includes labor, capital formation, and exports, export growth was observed to exert a positive and significant impact on economic growth. While this export effect is somewhat smaller than that for non-African less developed countries, the difference was not statistically significant.

Chow (1987) investigated the causal relationship between export growth and industrial development in eight Newly Industrializing Countries (NICs). Results of causality test showed that for most of the NICs, there is a strong causality between the growth of exports and industrial development. These findings supported the export-led growth strategy in that expansion in exports not only promote the growth of national income but also lead to structural transformation of the developing countries.

b) Exports in Jordan

Jordan has witnessed a drastic jump in exports recently due to its continuous effort in trade liberalization and its on-going engagement in free trade practices. The volume of exports in 2012 reached 4749 million JD after having been 1080 million JD in 2000.

The extraordinary performance of exports in recent years has been primarily due to the partnership and free trade agreements signed with various countries. The geographic distribution of domestic exports reveals that Arab countries remain the major destination for Jordanian exports More than half of all Jordanian exports to Arab countries go to Iraq and Saudi Arabia. The Medical, pharmaceutical and vegetable products are the main exported items to the Arab countries as show in Figure 1.

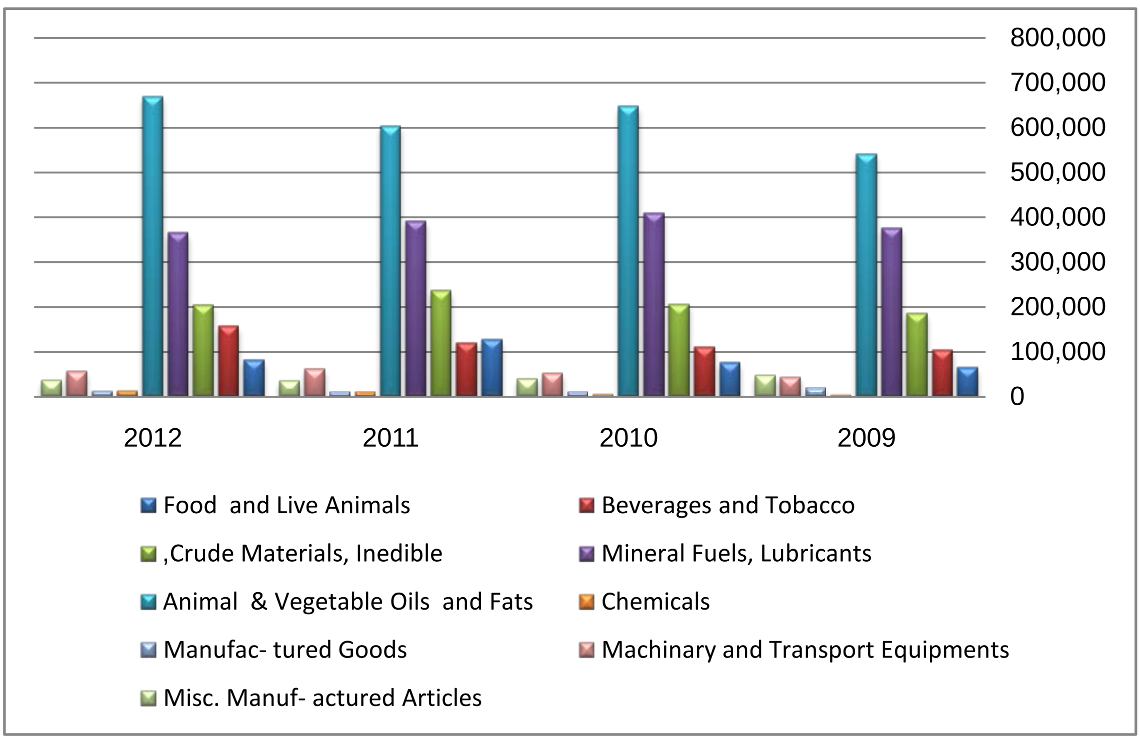

Figure 1 : Domestic Exports To Arab Countries According To S.I.T.C.

On the other hand, exports to the US were ranked the highest growing from 44 million JD in 2000 to 788 million JD in 2012 .because In 2009, Jordan and the United States secured their business relation by a new trade agreement which was fully implemented on January 1, 2010; it allows products to enter USA market duty-free if manufactured in Jordan .In addition, India is considered one of the major importers of Jordanian crude phosphate, potash and fertilizers. Exports to India have increased recently from 172 million JD in 2000 to 510 million JD in 2012. shaw figure (2).

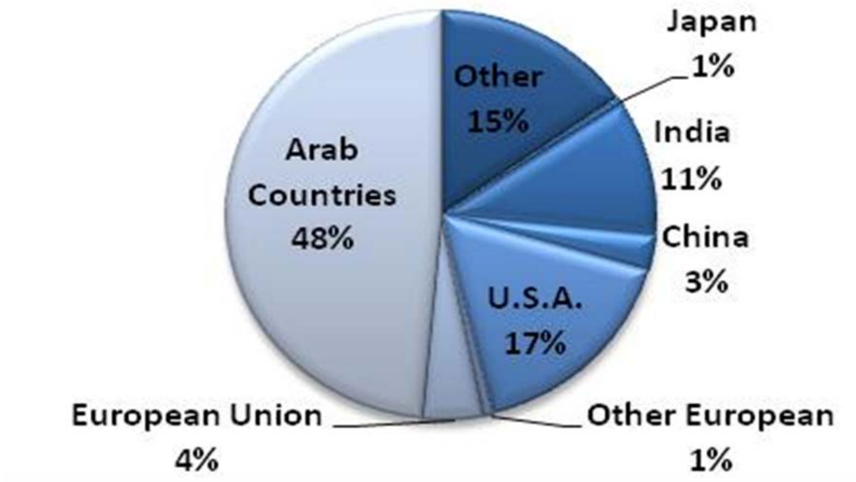

Figure 2 : Geographic Distribution of Jordan Exports 2012

II. Data and Methodology

a) Data

The data used for this study are basically time series data for Jordan covering the period 2000- 2012. The two economic variables included in this study are the Exports of goods and services and the change in Real Gross Domestic Product at Market Prices (GDP) is an indicator to measure economic growth. Data were sourced from The Central Bank of Jordan and The Department of Statistics.

b) Method

In this paper, the statistical properties of both economic growth and Export were investigated, using the unit root test. Causality among variables, using Granger causality test, was utilized to determine the directional causality between variables. Then, a long-term relationship was estimated, using Johansen cointegration test.

c) The Unit Root Test

Macroeconomic time series data are generally characterized by a stochastic trend which can be removed by differencing. Some variables are stationary on levels, others become stationary after one differentiation, and some may become stationary by more than one differentiation. To test for the stationary of the variables, the Augmented Dickey-Fuller (ADF) technique was utilized. The ADF equation was performed for the case when it includes intercept only in addition to the case when it includes both intercept and time trend.

The results indicate that both variables, the EX and the GR, are not stationary on their levels. In other words, they have a unit root. Then, we repeated the unit root test for the first difference for both variables. The results point out that the EX and GR became stationary after the first difference .Since the computed values (in absolute value) are greater than the critical values (in absolute value) at a 1% level of significance, the null hypothesis of the unit root or non stationary variable can be rejected. (Shaw table (1))

Table 1 : Augmented Dickey-Fuller test

Variable			Level	First difference	Second difference
	Critical values 1%	Critical values %5	ADF	ADF	ADF
GR	-4.2	-3.2	-2.9	-6.5	-9.5
EX	-4.2	-3.2	-0.15	-4.5	-4.1

d) Granger Causality Test

The Granger causality test was developed by Granger and according to him, a variable (in this case export) is said to Granger cause another variable (GR) if past and present values of export help to predict GR.

A simple Granger causality test involving two variables, exports and GR is written as:

$$GR_t = \sum_{i=2}^{n} aiEX_{t-i} + \sum_{j=1}^{n} B_j GR_{t-j} + U_{1t}.$$

$$EX_t = \sum_{i=2}^{n} \eta_i EX_{t-i} + \sum_{j=1}^{n} \delta_j GR_{t-j} + U_{2t}$$

Testing null hypothesis: H0: α= 0: j=1......p, this hypothesis mean that export does not Granger cause economic growth against the alternative hypothesis H1:

α ≠ 0: j=1......p, this hypothesis mean that export does Granger cause GR.

Similarly, testing H0:   = 0: j=1...... p, this hypothesis means that economic growth does not Granger cause exports against H1:   ≠ 0: j=1...... p, this hypothesis means that GR does Granger cause EX. If none of the null hypotheses is rejected, it means we accept the claims that export does not Granger cause GR and economic growth also does not Granger cause exports. This indicates that the two variables are independent of each other. If the first hypothesis is rejected, it shows that exports Granger causes economic growth. Rejection of the second hypothesis means that the causality runs from GR to exports. If all hypotheses are rejected, there is bi-directional causality between exports and economic growth.

The below table show that there is a causal relationship between Export and growth rate but in one direction so that changes in the economic growth have effects on Export and not vice versa, where tests showed causal there was no effect of changes in Export on economic growth.

Table 2 : Granger Causality Test

Prob.	F-Statistic	Obs	Null Hypothesis:
0.7797	0.08308	12	EX does not Granger Cause GR
0.1190	2.96889		GR does not Granger Cause EX

This means that an increase or a decrease in economic growth can affect and causes the Export at 15% significant level. On the other hand, Export does not seem to Granger Cause economic growth. This suggests that information about Export in past periods cannot explain the behavior of economic growth in the present time.

e) Descriptive Analysis of The Variables of the Study

Table (3) shows descriptive statistics for the variables of the study, the table shows that the variable GR does not far from the normal distribution using the test (Jarque-Bera), and to accept the null hypothesis that the data follow a normal distribution. As shown us from the results of the sprain values and through review of mean and median values, we find its close, so this indicating the absence of sharp fluctuations in the fluctuation of the economic growth data. In the other hand the Export is not normal distribution using the test Jarque-Bera.

Table 3 : Descriptive Analysis

BD	GR	
2956.734	0.118829	Mean
2929.310	0.103168	Median
4805.873	0.285375	Maximum
1080.817	0.060864	Minimum
1326.113	0.063658	Std. Dev.
0.060692	1.503601	Skewness
1.610606	4.619877	Kurtosis
1.053623	6.319771	Jarque-Bera
0.590485	0.042431	Probability
13	13	Observations

III. Conclusion

This paper has examined the role of export in the economic growth process in Jordan using causality tests for data over the period 2000 to 2012.

Granger causality was applied to test the causal relationship between Export and economic growth. The results show that there is evidence of uni-directional causality between export and economic growth in Jordan and the direction of causality runs strictly from economic growth to exports. In conclusion, this study provided support for growth-led export in case of Jordan. Thus effort should be direct towards policies that will enhance economic growth such as import substitution industrialization, in order to impact more on exports.

References Références Referencias

1. Abou-Stait, F. (2005), Are exports the engine of Economic Growth? An application of Cointegration and Causality Analysis for Egypt 1997-2003, African Development Bank, Economic Research working paper series, No. 76.
2. Abu Al- Foul, B. (2004), Testing the export-led growth hypothesis: Evidence from Jordan, Applied Economics Letters, No. 11, pp. 393-396.
3. Ahdi N. Ajmi & Goodness C. Aye & Mehmet Balcilar & Rangan Gupta,(2013). Causality between Exports and Economic Growth in South Africa: Evidence from Linear and Nonlinear Tests, Working Papers 201339, University of Pretoria, Department of Economics.
4. Alimi, S. R. and Muse, B. O. (2013) “Export - Led Growth or Growth – Driven Exports? Evidence from Nigeria”. British Journal of Economics, Management and Trade. Vol. 3, no. 2, pp. 89-100.
5. Awokuse TO. (2003).Is the Export-led growth hypothesis valid for Canada? Canadian Journal of Economics.; 36 (1):126-36.
6. Chow, P.C.Y. (1987), “Causality between export growth and industrial development: Empirical evidence from the NICs, Journal of Development Economics, vol. 26.

7. Crespo-Cuaresma, J. and J. Wörz (2003) On Export Composition and Growth, University of Vienna, Department of Economics, Vienna, Austria; and Vienna Institute for International Economic Studies (WIIW), Vienna, Austria; available at: http://www.w-iiw.ac.at/pdf/crespo_woerz_etsg_2003.pdf. Liu, X., P. Burridge, and P.J.N. Sinclair. 2002. Relationships Between Economic Growth, Foreign Direct Investment and Trade: Evidence From China. Applied Economics 34.
8. Dalkir, M. (2004) ,A New Approach to Causality in The Frequency Domain, Economic Bulletin, Vol. 3.
9. Engle, R.E. and W.J. Granger (1987), Cointegration and Error-Correction: Representation, Estimation, and Testing", Econometrica, Vol. 55, No., pp 251 – 76.
10. Fosu A. (1990). Exports and Economic Growth: The African Case. World Development vol. 18, 31-35.
11. Ghartey. E. E. (1993). Casual Relationship between Exports and Economic Growth: Some Empirical Evidence in Taiwan, Japan and the US, Applied-Economics. (9).
12. Kalaitzi. A. (2013). Exports and Economic Growth in the United Arab Emirates. Submitted to: RIBM Doctoral Symposium. Manchester Metropolitan University Business School.
13. Khan, Ashfaque H and Najam Saqib (1993), Exports and Economic Growth: The Pakistan Experience, International Economic Journal, 7 (3), 53-64
14. Kim, D. H. and Lin, S. C. (2009), Trade and Growth at Different Stages of Economic Development, Journal of Development Studies, Vol. 45, No. 8, pp. 1211–1224.
15. Obalade.L and Arora.N.(2012). A DESCRIPTIVE OVERVIEW OF THE IMPORT and EXPORT ENVIRONMENT IN JORDAN. Academic Research International. Vol. 3, No. 1, July.
16. Shan, J. and F. Sun (1998), "On the export – led growth hypothesis: the econometric evidence from China, Applied Economics, 30, 1055-65.
17. Sharma, S. C. & Dhakal, D. (1994). Causal Analysis between Exports and Economic Growth in Developing Countries. Applied Economics, 26.

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Economics of Catfish Production in Akwa Ibom State, Nigeria

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Abstract- The study examined the economics of catfish production in Akwa Ibom State, Nigeria. Data for the study were obtained from 120 catfish farmers in Akwa Ibom State using multi-stage sampling procedure, and analyzed using descriptive statistics and budgeting technique. Results show that 36.7% of the respondents were aged between 41-50 years with 85.8% being married and 80% having formal education. The costs and returns analysis indicates that the fixed cost constituted 65.37% of the total cost of production while the variable cost constituted 34.63%. The total cost of catfish production was N37, 845,240.00; the total revenue was N56, 385,000.00 and the net income was N18, 539,760.00 indicating that catfish production was profitable in the study area. Findings also reveal that high cost of feeds, high cost of pond construction and lack of capital/finance were the most severe constraints to catfish farming in Akwa Ibom State, Nigeria. It is recommended that prices of feeds and access to feeds be regulated by the State Government in order to reduce the problems of high cost of feeds/inadequate supply of feeds to catfish farmers in the State.

Keywords: *economics, catfish, production, akwa ibom state.*

GJMBR-B Classification : *JEL Code: O49, P49*

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I. Introduction

Nigeria is predominantly an agrarian country, where the greatest percentage of the population is engaged in farming, and Nigerian Agriculture contributes about one-third of the Gross Domestic Product (GDP) of the nation (Amao et al, 2009). The average contribution of the fishery sector to the agricultural GDP of Nigeria rose from 2.6% in 1980 to 3.7% in 1990, and was estimated at about 4% for the year 1994. The fishery sub-sector provides full-time employment to over 12 million people, which constitutes about 3% of the active population of the nation; another 11 million people indirectly earn their livelihoods from activities related to fisheries (Food and Agriculture, FAO, 1999). Fish farming generates employment directly and indirectly in terms of people employed in the production of fishing output and other allied businesses (Olagunjun et al, 2007). Fish is the most important animal protein food available in the tropics (Ali et al, 2008). It provides about 40% of the dietary intake of animal protein of the average Nigerian (Federal Department of Fisheries, FDF, 1997). Apart from human consumption, fish is important for anima l feed, a source of raw materials in allied industries and a source of employment for many Nigerians (Esu et al, 2009).

The most commonly cultured species of fish in Nigeria include catfish, tilapia and carp (Olagunju et al, 2007). However, many fish farmers in Nigeria focus on catfish because it adapts well to culture environment, can easily be retailed live and it attracts premium price. Catfish are suitable for stocking in ponds and they tolerate low dissolved oxygen better than other common species in the country. Besides, catfish has wide acceptability as food in Nigeria. Despite these considerably high potentials, local fish production has failed to meet the country's domestic demand (FAO, 1995). This has led to the existence of a demand-supply gap of at least 0.7 million metric tones in Nigeria. Increased catfish production in the country, according to FAO (1998), can help reduce this worrisome demand-supply fish gap in the nation. Ugwumba and Chukwuji (2010) posited that greater improvement in catfish production can be achieved with a proper analysis that will lead to knowledge of the level of profitability of catfish farming and constraints to production. This study therefore examined the economics of catfish production in Akwa Ibom State, Nigeria. Specially, the objectives were to examine the socio-economic characteristics of catfish farmers in the State, determine the profitability of catfish production and ascertain the constraints of catfish farming in the study area.

II. Methodology

The study was conducted in Akwa Ibom State. The State lies between latitude 4°31" and 5°31" North and longitude 7°35" and 8°35" East; occupies a total land area of 7, 254, 935 km2 and has an estimated population of 3, 920, 208 (National Population Commission, NPC, 2006). Multi-stage sampling procedure was used to select the sample for the study. The first stage was a random selection of four zones out of the six Agricultural Development Project (ADP) zones in Akwa Ibom State, Nigeria. The second stage involved the random selection of three villages in each of the selected ADP zone. The third stage was the purposive selection of ten catfish farmers who were registered with the Akwa Ibom State Agricultural Development Project (AKADEP) in each of the selected villages, resulting in a total sample size of 120

Data collection was through primary sources using a validated questionnaire. Data for the study were

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obtained from November 2010 to April 2011- the period of active fishing and marketing activities in the State. Analysis of data was done using descriptive statistics (such as frequency counts, percentages, means and ranks) and the budgeting technique. The budgeting technique employed was the net farm income. The difference between the Gross Revenue (GR) and the Total Cost (TC) gives the Net Revenue (NR). Net farm income is expressed as:

NFI = GR – TC

Where:

NFI = Net farm income

TC = (TVC + TFC) = Px. X

GR = Gross Revenue = Py. Y

Py = Unit price of output

Y = Quantity of output

Px = Unit price of input

X = Quantity/Quality of input

TC = Total Cost (N)

TFC = Total Fixed Cost (N)

TVC = Total Variable Cost (N)

In order to ascertain the constraints to catfish farming faced by the respondents, 14 major constraints were identified through focus group discussions (FGDs), interviews and literature search. Respondents were requested to indicate the severity of each constraint item. This was done with the aid a 3-point Likert-type scale, with nominal values assigned to the points in the scale as follows: Not a Constraint = 0, Mild Constraint = 1, and Severe Constraint = 2. A mean score was computed for each constraint item, and the mean score was used to rank the constraints in order of severity.

III. Results and Discussion

Socio-economic characteristics: Table 1 shows the socio-economic characteristics of catfish farmers in Akwa Ibom State, Nigeria. The Table reveals that 72.0% of the respondents were males while 20.8% were females. The findings agree with Esu et al (2009) who reported that fish production is dominated by males in Akwa Ibom State. About 35.8% of the respondents were within the age range of 31-40 years while those within the age range of 61-70 years constituted 0.8% of the respondents. The mean age of the respondents was 42 years implying that catfish production is a livelihood activity dominated by youths in the study area. About 25.0% of the respondents had primary education while 17.5% had acquired tertiary education. The Table reveals that majority (80.0%) of the respondents were functionally literate. Over eighty five percent of the respondents (85.8%) were married while only 0.8% were divorced/separated. Asa et al (2012) noted that marriage is a highly cherished social value among fish farmers in Akwa Ibom State and this finding corroborates that. About 45.0% of the respondents lived in household sizes of 4-6 persons while 2.5% of them lived in household sizes of 10-12 persons. The average household size of the respondents comprised of five persons. This suggests a relatively low household size among the respondents. Over fifty five percent (55.8%) of the respondents had 1-3 years of catfish farming experience while 5.8% had 10-12 years of fishing experience. The average years of experience in catfish farming by the respondents was four years. This is low, and may be attributed to the fact that commercial catfish production is a relatively new idea in the study area.

Majority of the respondents (64.2%) used concrete pond as their management system while 10.8% used both earthen and concrete ponds. The findings agree with Asa et al (2012) which stated that majority of fish farmers in Akwa Ibom State use concrete ponds for fish production. About 46.7% of the respondents depend on hired labour for their catfish production activities while 11.7% rely on family labour.

Table 1 : Socio-Economic Characteristic of Respondents

Variable	Category	Frequency	Percentage
Sex	Male	95	79.2
	Female	25	20.8
Age	21 – 30 years	14	11.7
	31 – 40 years	43	35.8
	41 – 50 years	44	36.7
	51 – 60 years	18	15.0
	61 – 70 years	1	0.8
Educational status	No formal education	24	20.0
	Primary education	30	25.0
	Secondary education	45	37.0
	Tertiary education	21	17.5
Marital status	Single	13	10.8
	Married	103	85.8
	Divorced/Separated	1	0.8
	Widowed	4	2.5

Household size	1 – 3 person(s)	28	23.5
	4 – 6 persons	54	45.0
	7 – 9 persons	35	29.2
	10 – 12 persons	3	2.5
Fishing experience	1 – 3 year(s)	67	55.8
	4 – 6 years	38	31.7
	7 – 9 years	8	6.7
	10 – 12 years	7	5.8
Management system	Earthern pond	30	25.0
	Concrete pond	77	64.2
	Both earthern and concrete pond	13	10.8
Type of labour	Family labour	14	11.7
	Hired labour	56	46.7
	Both family and hired labour	50	41.7

Profitability of catfish farming in Akwa Ibom State: The profitability of catfish production, ascertained using costs and returns analysis, is shown in Table 2. The Table reveals that fixed cost constituted 65.37% of the total cost of catfish production while the variable cost constituted 34.63%. The costs of concrete pond construction (27.99%), buildings/structures (19.77%), earthern pond construction (16.66%), and land (11.75%) were major fixed costs incurred by the respondents while the costs of management/staff salaries (25.12%) and feeds (24.60%) constituted the major variable costs. The total quantity of catfish sold by the respondents in the production period (2010/2011) was 62,650 and the average price per catfish at market prices in 2011 was N900.00. Table 2 indicates that the total cost of catfish production was N37, 845,240.00 and the total revenue of N56, 385,000.00 was realized from sales of catfish, making a net income of N18, 539,760.00. The costs and results analysis showed that catfish production is profitable in the study area. The findings agree with Asa et al (2012) who reported that fish production is profitable in Akwa Ibom State, Nigeria. Ohen and Abang (2009) also reported that catfish farming is profitable in Rivers State, Nigeria. Rivers State and Akwa Ibom State are in the same Niger Delta Region of Nigeria.

Table 2 : Costs and Returns of Catfish Production Akwa Ibom State

Item	Total cost for the production period (₦)	Average cost (₦)	Percentage
A. Fixed cost			
Land (ha)*	2, 907, 000. 00	24, 225.00	11.75
Water	1, 054, 050.00	8, 783.75	4.26
Concrete pond construction	6, 924, 000.00	57, 700. 00	27.99
Earthern pond construction	4, 121, 300.00	34, 344.16	16.66
Insurance/tax	1, 265, 650.00	10, 547.08	5.12
Facilities	1, 719, 000.00	14, 325.00	6.95
Wheel barrow	1, 857, 900.00	15, 482.50	7.51
Buildings/structures	4, 892, 000.00	40, 766.67	19.77
Total Fixed Cost (TFC)	24, 740, 900.00	206, 174.17	100
B. Variable Cost			
Labour (mandays)	205, 900.00	1, 715.83	1.57
Transportation	665, 900.00	5, 549.17	5.08
Feed (kg)	3, 224, 100.00	26, 867.50	24.60
Fingerlings (kg)	2, 098, 000.00	17, 485.00	16.01
Cost of water	708, 200.00	5, 901.67	5.40
Management/staff salaries	3, 291, 500.00	27, 429.17	25.12
Storage	1, 126, 000.00	9, 383.33	8.59
Medication	1, 254, 300.00	10, 452.50	9.57
Maintenance	530, 240.00	4, 418.67	4.05
Total Variable Cost (TVC)	1 3, 104, 340.00	109, 202.83	100
Total Cost = TFC + TVC	37, 845, 240.00	315, 377.00	
C. Total Revenue (T			
Sales of catfish	56, 385, 000.00	469, 875.00	
D. Net farm income (NFI)			
NFI = TR – (TFC + TVC)	18, 539, 760.00	154, 498.00	

*Note: * = Cost of land is not depreciated as it is leased for only one production period; N = Naira (the Nigerian currency) and 1.00 Nigerian Naira is equal to 0.00609942 US Dollar as at April, 2014.*

Constraints to catfish farming in Akwa Ibom State: Table 3 shows the constraints to catfish production in the study area. The Table reveals that the most severe constraints to catfish farming in the State were: high cost of feeds (=1.52), high cost of pond construction (=1.73), lack of capital/finance (=1.62), erratic electric power supply (=1.58), and inadequate feeds supply (=1.52). The findings corroborate Ohen and Abang (2009) who reported that high cost of feeds is a major constraint to catfish farming in Nigeria. Ugwumba and Chukwuji (2010) posited that the importation of most commercial feeds into the country and the problems associated with importation and distribution could be the main reasons for the hike in feeds prices in the country. Catfish farming requires a huge capital outlay especially for pond construction, according to Ohen and Abang (2009), and the findings of the study agree with this position. Kudi et al (2008) reported that lack of capital is a major problem encountered in fish production in Nigeria, and the findings of this study agree with Kudi et al (2008). Erratic electric power supply is common in most states in Nigeria and this problem affects the rate of water supply to fish ponds in the study area. Hence, it is considered a major constraint to catfish production by the respondents since water is an important input in fish farming. Inadequate feeds supply, according to Assiah (1997), is a major problem of fish farming. The findings of this study corroborate Assiah (1997). The least severe constraints to catfish production in the study area, on the other hand, as revealed in Table 3 were: poor/unorganized market structure for catfish (=0.57), diseases (=0.51) and poor extension services on catfish production (=0.33).

Table 3 : Constraints to Catfish Farming in Akwa Ibom State, Nigeria

Constraint	Mean	Rank*
1. Lack of capital/finance	1.62	3
2. High cost of feeds	1.82	1
3. Diseases	0.51	13
4. Mortality of fish	0.73	11
5. Inadequate water supply	0.98	9
6. Inadequate feeds supply	1.52	5
7. Lack of quality fingerlings	1.03	8
8. High cost of transportation	1.25	6
9. High cost of pond construction	1.73	2
10. High cost of labour	0.82	10
11. Erratic electric power supply	1.58	4
12. Lack of modern technologies	1.21	7
13. Poor extension services on catfish Production	0.33	14
14. Poor/unorganized market structure for catfish	0.57	12

Note: = Rank 1 is considered the most severe constraint to catfish production while rank 14 is the least severe constraint

IV. Conclusion and Recommendations

The total revenue realized from total cost of catfish production in Akwa Ibom State, Nigeria of N37,845, 200.00 was N56,385,000.00, making a net income of N18,537,760.00. Catfish farming in the study area was therefore profitable. It is recommended that prices of feeds and access to feeds by catfish farmers be regulated by the State Government in order to ameliorate the problems of high cost of feeds/inadequate supply of feeds to catfish farmers in the State. The Government of Akwa Ibom State, Nigeria should also subsidize the cost of feeds in the State in order to reduce the cost of catfish production. This will encourage more farmers in the State to be engaged in commercial catfish production. Catfish farmers should be encouraged to form viable co-operatives to help them easily access low interest loans from the Government, banks and other development agencies in the State who prefer giving such loans/assistance to co-operatives/associations of farmers instead of individual farmers.

References Références Referencias

1. Ali, E. A., H. I. M. Gaya and T. N. Jampada (2008) Economic analysis of fresh fish marketing in Maidugri Gamboru Market and Kachallari Alau Dam Landing Site of Northeastern Nigeria, J. Agric. Soc. Sci., 4: 23-26.
2. Amao, J. O., Awoyeni, T. T., Omonona, B. T. and Falusi, A. O. (2009) Determinants of poverty among fish farming households in Osun State, Nigeria, International Journal of Agricultural Economics and Rural Development, 2 (2): 14-25.
3. Asa, U. A., C. A. Uwem and U. N. Ukpog (2012) Economics of fish farming in Akwa Ibom State, Nigeria, Agricultural Economics and Extension Research Studies, 1 (2): 77-81.
4. Assiah, V. O. (1997) Small Scale Fresh Water Fish Farming, Agromisa Press, Netherlands. pp 1-3.

5. Esu, B. B., Asa, U. A. and Iniedu, M. O. (2009) Costs and returns of fish production using earthern ponds in Akwa Ibom State, Nigeria, Nigerian Journal of Agriculture, Food and Environment, 5(2-4): 26-29.
6. FAO (Food and Agriculture organization) 1995 The State of World: Fishery and Agriculture. Fisheries Department, Rome.
a) ……………. 1998 The State of Artisanal Fisheries in West Africa in 1997.
b) ……………. 1999 The State of Food and Agriculture, Rome: FAO.
7. FDF (Federal Department of Fisheries) 1997 Fishery Statistics, FDF, Abuja, Nigeria.
8. Kudi, T. M., Bako, F. P. and Atala, T. K. (2008) Economics of fish production in Kaduna State, Nigeria, ARPN Journal of Agricultural and Biological Science, 3 (5 and 6): 17-21.
9. NPC (National Population Commission) 2006 Population Census of the Federal Republic of Nigeria. Analytical Report at the National Population Commission, Abuja, Nigeria.
10. Ohen, S. B. and S. O. Abang (2009) Economics of catfish farming in Rivers State, Nigeria, Academic Journal of Plant Sciences, 2(1): 56-59.
11. Olagunju, F. I., I. O. Adesiyan and A. A. Ezekiel (2007) Economic viability of catfish production in Oyo State, Nigeria, J. Hum. Ecol., 21(2): 121-124.
12. Ugwumba, C. O. A. and C. O. Chukwuji (2010) The economics of catfish production in Anambra State, Nigeria: A Profit Function approach, J. Agric. Soc. Sci., 6: 105-109.

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Relative Performance of Bangladesh Export Processing Zones (BEPZs) and the Reasons for the Difference in their Performance

By Md. Iftekharul Islam Bhuiya, Emran Ahmed & Shabuz Mahmud
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Abstract- The Export processing zone (EPZ) has been playing a vital role in Bangladesh economy after 1990 although for the first time it was established in the year 1983. In Bangladesh, it has contributed very effectively in the economy in terms of the foreign direct investment (FDI), export and employment for the last ten years especially in Bangladesh's Export-Processing Zones (BEPZs). This study intends to explore the EPZ's performance and its benefits in Bangladesh economy in terms of employment, investment and volume of export in details. It attempts to examine eight BEPZs performance in terms of their size, location, and infrastructure and find out why foreign investors are interested to get involved in BEPZs. This study focuses on the performance of the BEPZs between 1983 and 2012. Data (authentic secondary source) were being collected from the Bangladesh Export Processing Zone (BEPZA) official website.

Keywords: EPZs performance; investment, export volume, employment and BEPZs performance.

GJMBR-B Classification : *JEL Code: P49*

RELATIVEPERFORMANCEOFBANGLADESHEXPORTPROCESSINGZONESBEPZSANDTHEREASONSFORTHEDIFFERENCEINTHEIRPERFORMANCE

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I. Introduction

After 1990, the private sector in Bangladesh boomed with growing exports, employment, and investment encouraged by the government's liberalization of trade. In Bangladesh, EPZ was not established until after 1980 that the government began to develop EPZs. Export Processing Zones were established in developing countries after 1960. However, in last two decades, the export-processing zones have been important for Bangladesh in terms of investment, exports and employment growth. EPZs are an important attraction for potential investors, who require that the host country have a well-organized policy mechanism, with good incentives, such as tax-free status and strong security (Kenkesu, 2003a).

EPZs are an essential part of Bangladesh's economic strategy and Bangladesh now has eight EPZs. In 1983 the first EPZ was established in Chittagong, this was followed in 1993 by a second in Dhaka and by 2005 there were eight EPZs altogether. Export-processing zones provide crucial advantages for both host countries and foreign investors. The host Country gets benefits like investment, exports and employment. On the other hand; foreign investors are able to take advantage of cheap labour, incentives and others facilities.

Objectives of the Study

i. To analyze the relative performance of Bangladesh Export Processing Zones (BEPZs).
ii. To identify the reasons for the difference in their (BEPZs) performance.

II. Literature Review

An Export processing zone (EPZ) is one of many trade policy instruments that can be used to attract foreign direct investment (FDI) to a host country. FDI may benefit the host country by increasing foreign exchange earnings, employment growth, technology transfer, and modern management skills for example. In addition, EPZs aim to promote non-traditional exports from the host country. An EPZ is a category of Special Economic Zones (SEZs), which is an area where the government provides facilities and incentives to attract foreign investors. Types of SEZs include free industrial zones (FIZs), free trade zones (FTZs), and EPZs. These all are similar but there are some differences. The idea of EPZs developed from the older concepts of industrial parks and free trade areas that appeared in the late 1950s and early 1960s (Madani, 1999). Export processing originally meant that the zone sold its products on international markets but over the time host country governments have softened the rules and regulations. So that now some proportion of EPZ products are allowed to be sold in host country domestic market (ILO, 2008).

The export processing zone is the enclave where so many things come together to influence of EPZs efficiency like government incentives in these areas, it's size and position that convenient to operate these zones smoothly. The infrastructures, training, education and university, these each element stimulate EPZs acts very smoothly and that brings EPZs success (Madani, 1999). EPZs require good transport links, which includes easy access to roads, railways, air and seaports (Tantri, 2011). Without proper road access, railway, air and seaport these zones cannot be lucrative for foreign investors (Magnus, et al 2000).

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The export processing zone is seen by many countries as the dynamic bullet to change country's economy. Its positive effects are expected to include modern management systems, changes in the country's exports, employment, investment and technology. EPZs have been shown to be one of the vital instruments in developing a country's economy over the last few decades (OECD, 2007; ILO, 2011; UNCTAD, 2009; WEPZA, 2012; World Bank, year).

When Bangladesh experienced severe economic problems after independence, EPZs played an important role in response to employment, exports and investment; particularly after 1990 (OECD, 2007, BEPZA, 2008-09). In China these zones have changed the technology sectors according to WEPZA report. WEPZA report 2012 said that in China most of the achievements came from EPZs especially success in technology transfer, unemployment decrease and investment increase in last decade (WEPZA, 2012). Similar benefits were achieved in South Korea, Taiwan, Vietnam, and Malaysia (World Bank 2009). By contrast some African EPZs achieved little, especially in technology sectors but in employment and exports improved (World Bank 2009). In Malaysia in the 1970s, the annual growth was around 13.3 percent, EPZs contributed to this by increasing export earnings, employment and foreign direct investment (Furby 2005).

Basic objectives of EPZs are the encouragement of non-traditional manufacturing exports because of increased multinational company inward investment. More precisely, this FDI should lead to employment, production and exports from EPZs. There are also hoped to be important demonstration effects, which should help to develop domestic industry's international competitiveness (Furby, 2005). Another crucial effect is the knowledge spill over effect, which should lead local factories raising production efficiency by adopting methods and technology used by MNCs in the EPZ.

Another form of indirect effect from the EPZs is backward linkages. These will occur when EPZs companies buy inputs from companies in the host country (Furby, 2005). These effects help the country to produce their own raw materials, design their machinery and gain critical tactic to get higher output. If the host country government allows the sale of EPZs company products on the domestic markets, this can act as a forward linkage. For example in Mexico, 20-40% EPZs Company output can be sold in the domestic market. Similarly, in the Dominican Republic 20% EPZs Company output can be sold on the domestic market (Tantri, 2011). The sale of EPZ production in the domestic market produces more competition which promotes efficiency. Local firms are forced to make higher quality products and meet stricter delivery routines to be competitive with MNC (James, 2009).

III. Methodology of this Research

This research is based on an interpretive philosophy. This research uses data from the Bangladesh Export Processing Zone Authority (BEPZA). This research is using the data from the BEPZA website is because the BEPZA is the authority for any EPZ related issues. Therefore, among various available data sources in Bangladesh, BEPZA data could be considered the most reliable in relation to EPZs. The particular BEPZA data that have been used include annual employment, investment and export data (BEPZA, 2012a).

The Research design has three dimensions explanatory, exploratory, and descriptive (Saunders et al, 2003). This research has followed the explanatory and descriptive approaches. Bangladesh export processing zone facilities are designed to attract FDI in order to improve economic performance (Islam and Mukdatir 2011). Therefore, this study analyses how successful the EPZs are in terms of investment, employment, exports. It may be termed a comparative study (Saunders et al, 2009), because the research has evaluated the relative performance of the eight Bangladesh BEPZs and seen whether this related to factors such as location, size, infrastructure and incentives.

There are primary data available from previous studies. Results of those analyses are represented in this paper to find an overall idea about the EPZ expansion in Bangladesh. Annual reports of organisations were useful sources in case of some collected information. This paper tries thoroughly to present the positive and negative relationships between various progress indicators such as-

1. Amount of investments (foreign, local and hybrid)
2. Export volume
3. Number of workers

While evaluating the above indicators, this paper has also tried to explore more indicators through analysis previous studies and the current facilities within the zones.

IV. BEPZs Performance Analysis

a) Analysis: Investment

For the EPZs to generate output, employment and exports they must attract investment to the country. So analyzing investment in the EPZs is one to measure their performance. In 2000-1 total Bangladesh investment was $2691mn and total investment in BEPZAs was $48.41mn, only 2% of overall national investment. Within of five years in 2005-6 total

Bangladesh investment was $3204mn and total investment BEPZAs was $112.9mn 4% of the total , so the importance of BEPZ investment seems to be growing.

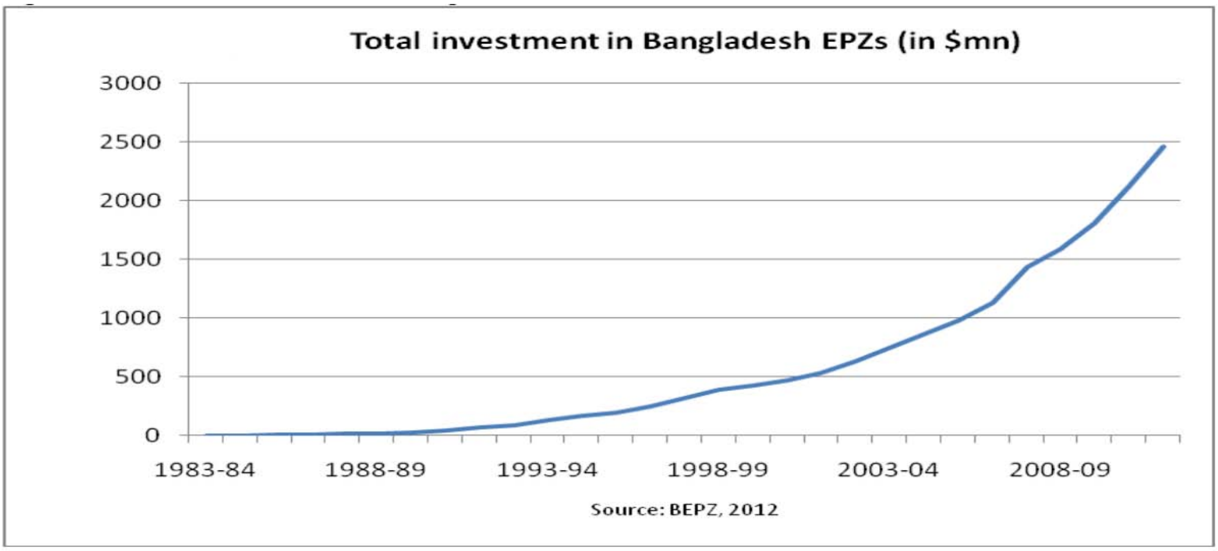


Figure 1 : Total Investment in Bangladesh EPZs

The figure above shows the total changes in investment in BEPZs. To get more accurate figure, this study adjusted the cumulative yearly investment figure with the respective yearly rate of inflation. Over the year, it is seen a positive improvement in the cumulative investment amount. Moreover, through increasing the number of Export Processing Zones, BEPZA has been attracting more and more investors in the area. Even after the inflation adjustment, that means considering the whole figure into present condition, it is prevalent that the trend went sharply upward from 2000. After a moderate start in the 1980s total investment in BEPZs has grown very fast after 1990. This rising investment is the result of increasing investment in individual BEPZs and an increasing number of BEPZs. The rising trend of investment, even in the difficult recent economic climate, indicates the attractiveness of BEPZs including government incentives.

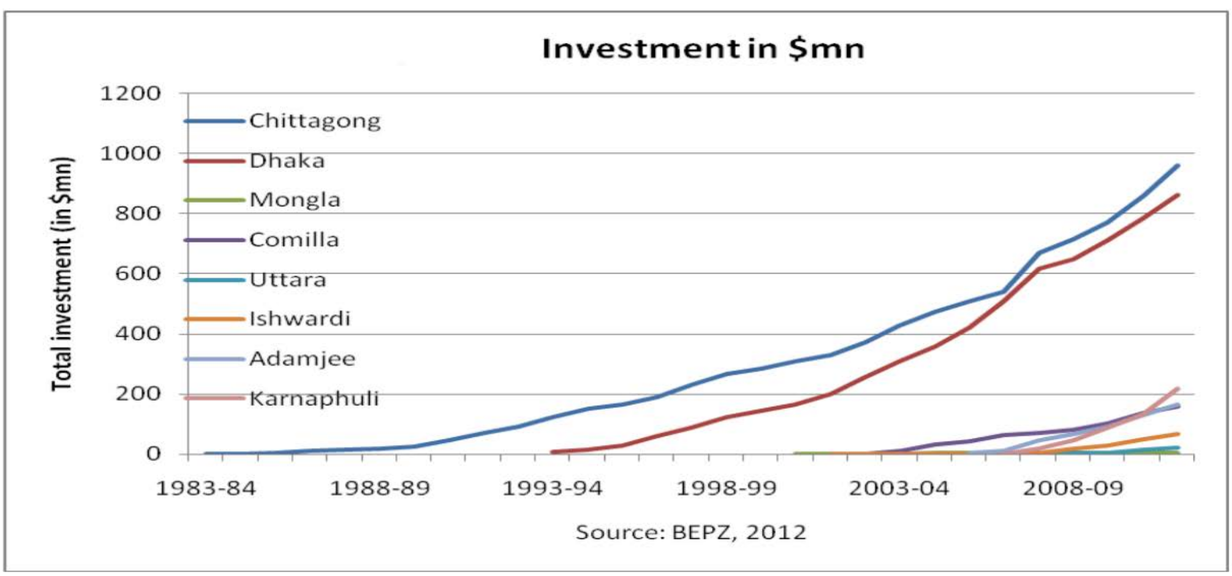


Figure 2 : Investment in Separate BEPZs

Although Chittagong and Dhaka receive most of the investment in BEPZs, with the development of the other BEPZ their share of investment is falling. So in 2011-12 Chittagong and Dhaka received 74.2% of investment in BEPZs. Among newly established BEPZs Comilla, Adamjee and Karnaphuli have succeeded in attracting significant investment, comparable with that in Chittagong and Dhaka in their early years. Ishwardi, Uttara and Mongla have been noticeably less successful as destinations for investment.

Table 1 : Annual Rate of Change in Investments in Bepzs

	Chittagong	Dhaka	Mongla	Comilla	Uttara	Ishwardi	Adamjee	Karnaphuli
1983 - 88	2.898							
1987 - 91	11.76							
1992 - 95	23.584	15.49						
1996 - 01	28.11	27.322	0.05					
2002 - 07	42.29	61.776	0.566	12.262	0.516	0.162	5.84	1.91
2008 - 12	73.08	61.08	-0.025	21.2425	4.9525	16.375	29.71	49.2175

Source: BEPZA, 2012

Table 1 is showing the annual rate of change in investment over specific periods. Table 1 again confirms the importance of Chittagong in the BEPZs, in every period it attracted more investments. Dhaka has also collected substantial amount of investments and among the new ones, the Karnaphuli EPZ is promising.

Figure 3 below depicts how investment in the EPZs has changed over time. Chittagong EPZ (CEPZ) did not have much investment in the beginning but it rose sharply in the 90s and recently CEPZ has been attracting the largest amount of investment among all the BEPZs. Dhaka EPZ (DEPZ) shows a similar trend but the initial growth of investment was more rapid and the level of investment in Dhaka EPZ is quite close to that in the Chittagong EPZ.

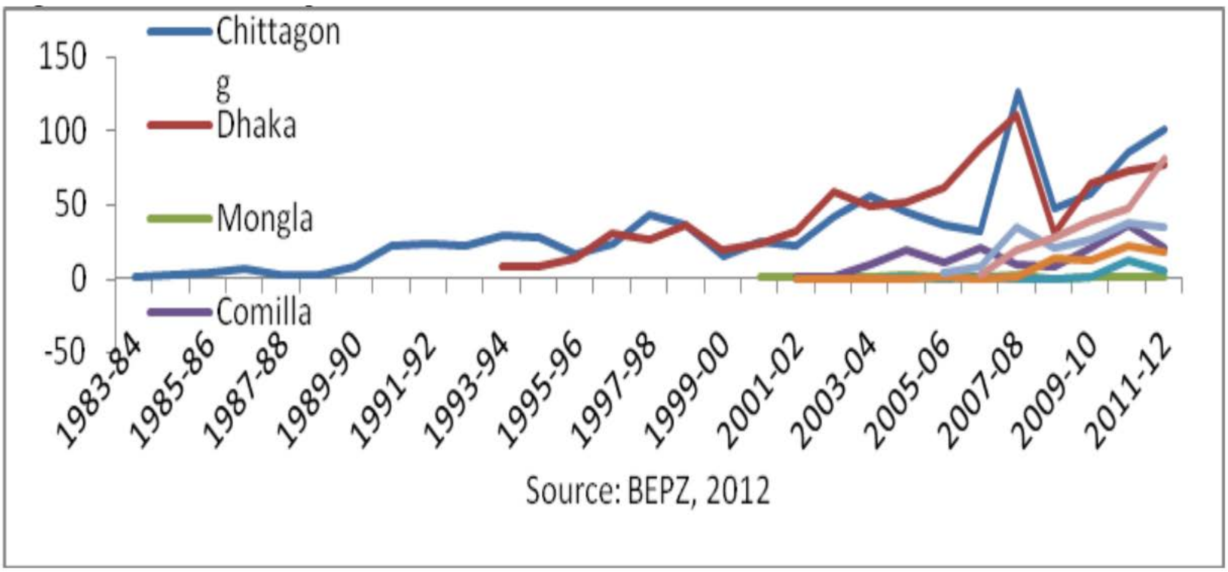


Figure 3 : Annual Changes in Investments in BEPZs

b) *Analysis:* Volume of Exports

Another potential benefit of EPZs is that their production will be exported. So export volume is a measure of EPZ performance. Adding value to EPZ exports adds value to the overall country economy, as well as providing valuable foreign exchange. In April-June 2012 Bangladesh total exports were $5669mn, of which BEPZs contributed $921mn (Bangladesh Bank, 2012). This represents 16.9% of total exports, a significant contribution by the BEPZs. BEPZs have generated $1067mn in 2000, compared to $4210mn in 2012, which is a fourfold increase in the volume of exports.

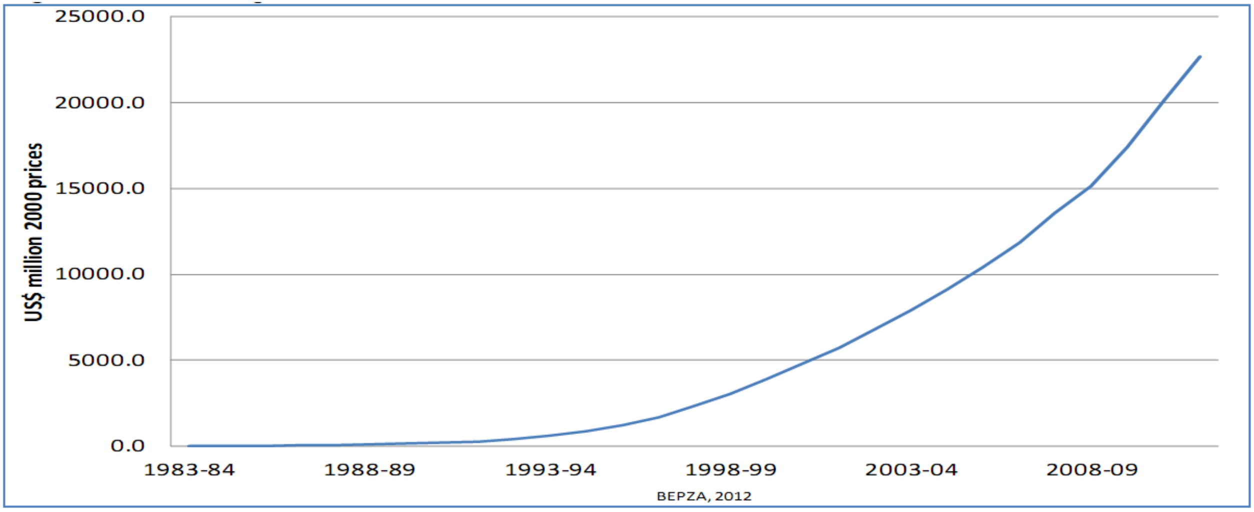


Figure 4 : Total Exports of BEPZs

Figure 4 above shows the total exports of BEPZs from 1983 to 2012. The trend is clearly upward. While the individual BEPZ's exports were rising, the number of BEPZs was increasing and these two factors led to total exports expanding. From 1983-93 when there was only one export processing zone, the total export volume increased at a relatively slow pace, after this export volume rose sharply.

Figure 5 below shows the exports of individual BEPZs. Again as with Investment BEPZ exports are dominated by the Chittagong and Dhaka EPZs. Until 2009-10 these two accounted for over 90% of BEPZs exports. However, in 2011-2 out of $4210.79mn total BEPZ exports, CEPZ and DEPZ together accounted for $3498.26mn (83.08%). The other EPZs have been established since 2000, within last decade. Among them, Karnaphuli and Adamjee showed a relatively competitive performance; though they are still far behind from CEPZ and DEPZ.

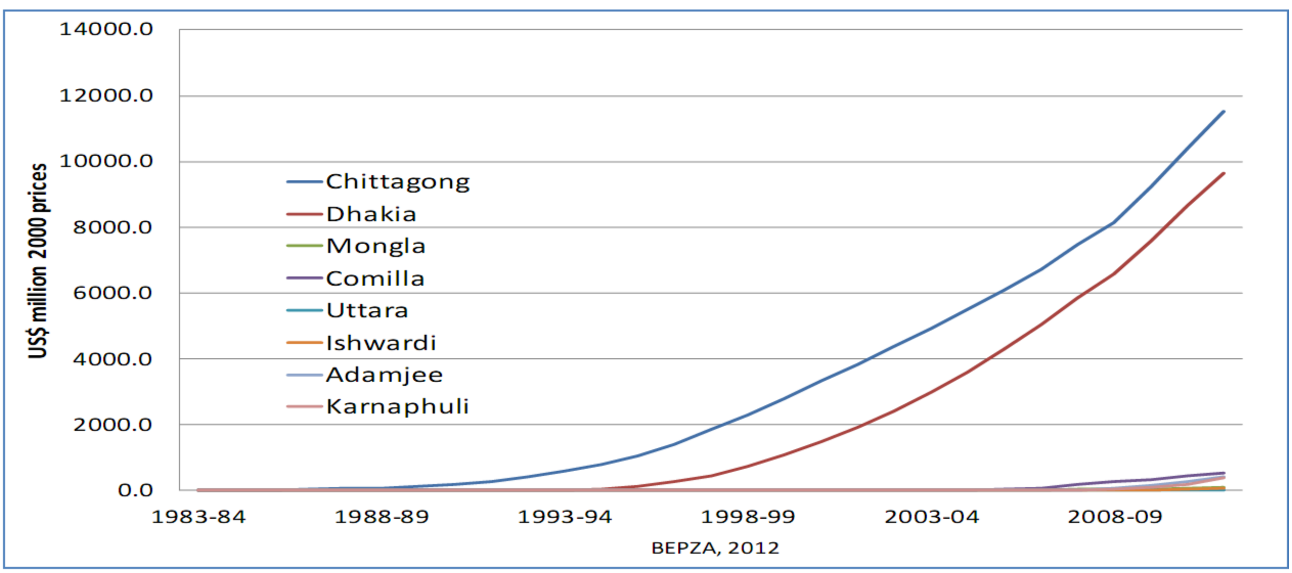


Figure 5 : Export of Individual BEPZs

To analyze further the progress of BEPZ exports, we can examine Figures 6 and 7 below.

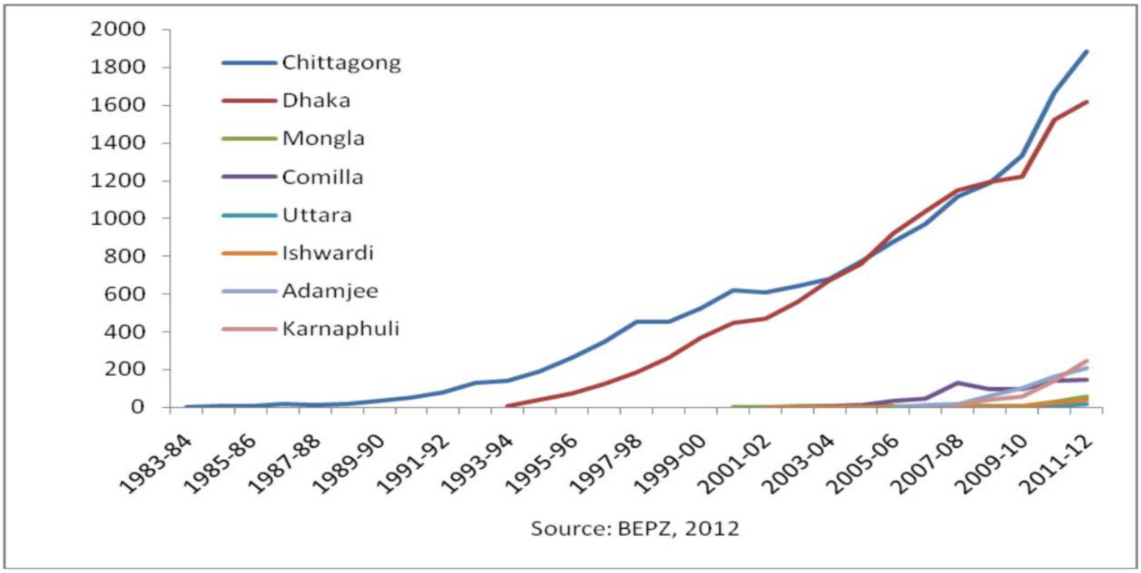


Figure 6 : Annual Changes in Exports in BEPZs ($mn)

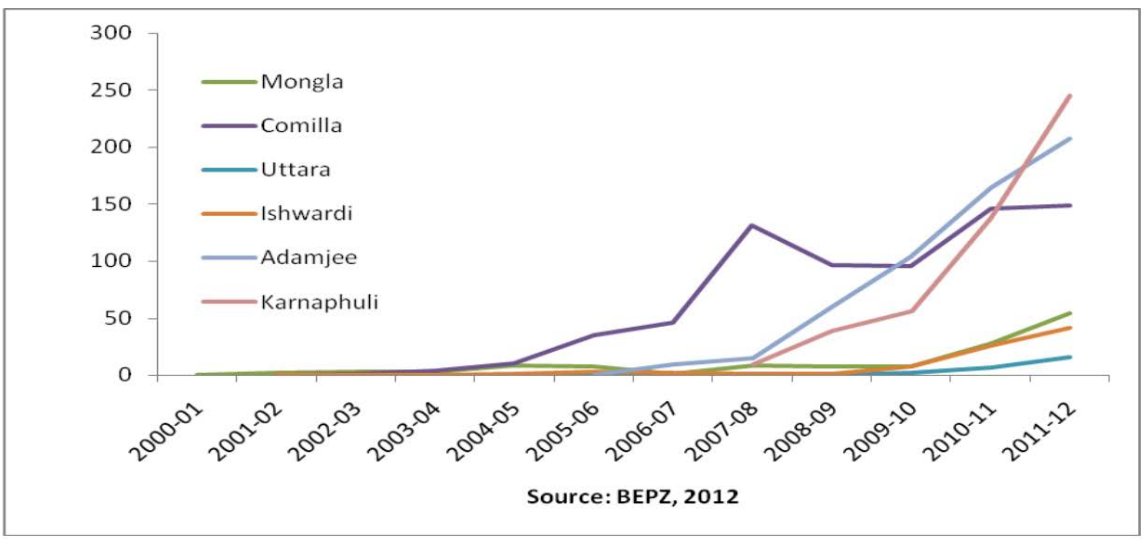


Figure 7 : Annual Changes in Export Volume in BEPZs Established Since 2000

Figure 6 and 7 show that Chittagong and Dhaka EPZs dominate the growth of exports and among the newer BEPZs Karnaphuli and Adamjee are showing a strong growth in their exports. Comilla EPZ's exports grew fast to begin with but they fell sharply in 2008-9 and have taken a while to recover.

Table 2 : Annual Rate of Change in Export Volume in BEPZs

	Chittagong	Dhaka	Mongla	Comilla	Uttara	Ishwardi	Adamjee	Karnaphuli
1983 - 88	8.28							
1987 - 91	37.84							
1992 - 95	212.30	59.80						
1996 - 01	478.46	275.38	0.00					
2002 - 07	787.45	786.29	4.49	19.18	0.02	1.17	4.85	
2008 - 12	1518.09	1385.77	24.13	121.26	6.24	18.96	133.95	119.79

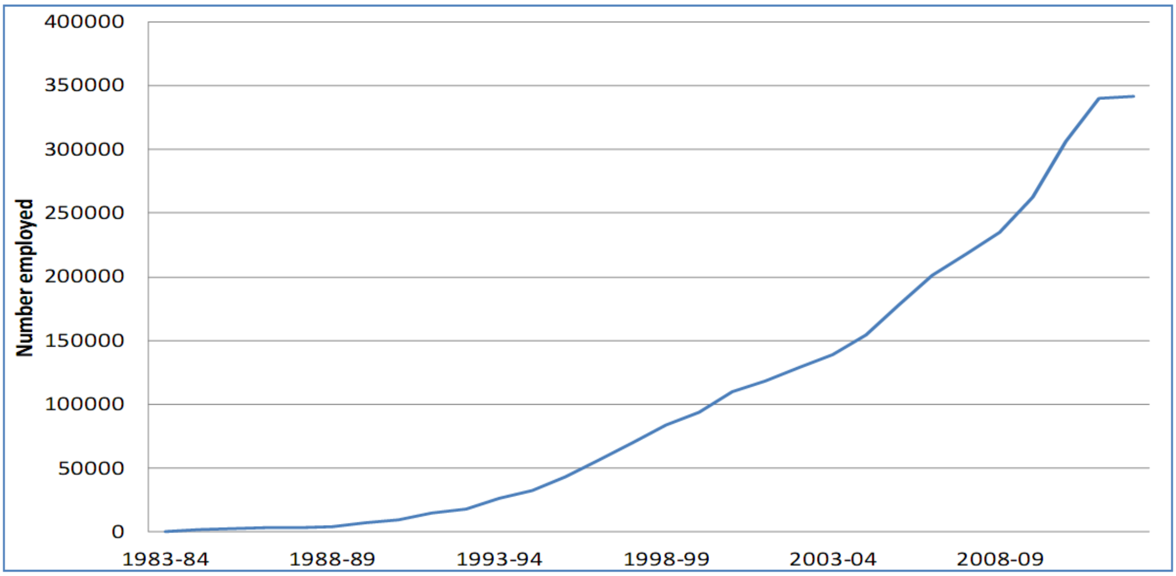
Source: BEPZA, 2012

This cross-sectional analysis enables a comparison between the different EPZs. In Chittagong EPZ, exports developed slowly to begin with but have grown rapidly since 1991. Dhaka EPZ's exports grew more quickly and since 2000 growth of Dhaka EPZ has been comparable with that of Chittagong. The other BEPZs are a long way behind these two in terms of exports but it is early days yet and if Comilla, Adamjee and Karnaphuli EPZs' exports continue to develop they could become very significant.

c) *Analysis:* Employment

The purpose of EPZs is to aid economic development. One way this could be judged is by employment. The number and quality of jobs created are measures of the extent to which this objective is achieved. These jobs should also not be at the expense of employment in the wider economy. The quality of employment in BEPZs is indicated by the higher wages in these zones. In 2010, fact the Bangladesh's average wage was $58 per month (ILO, 2012), whereas in BEPZs skilled labours' monthly wage ranged between $61 and $109 (BEPZA, 2012).

Data on employment in Bangladesh EPZs were obtained from the BEPZA. The time period for which the data is available, reflects of course the period over which the EPZ has been operational. These periods vary from 29 years in the case of Chittagong to six years for Karnaphuli. Thus cross-sectional data for all eight BEPZs is available only for the last six years.



Source: BEPZ 2012

Figure 8 : Total Employment in Bangladesh Epzs

Figure 8 shows total employment in BEPZs. This employment is the result of increasing employment in individual BEPZs and an increasing number of BEPZs. After a slow start total employment in BEPZs has grown relatively quickly after 1990. Employment growth flattens off in 2012.

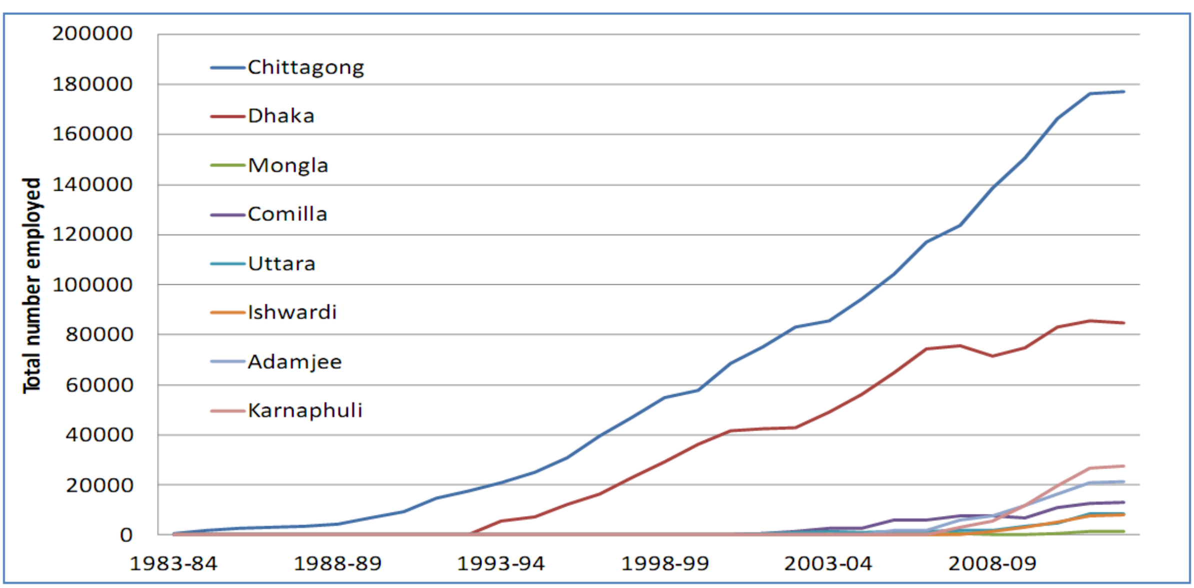


Figure 9 : Employments in each of the BEPZs

Figure 9 shows total employment in each of the BEPZs. It can be seen that Chittagong and Dhaka account for most of the employment in BEPZs. Even with the development of the other BEPZ these two still account for over 75% of BEPZ employment. Of the newer BEPZs Adamjee and Karnaphuli are more successful to generate employment, accounting for over 9% of total BEPZ employment in 2011-12.

Figure 10 below shows how employment in BEPZs has changed from year to year. It can be seen that there is a large fluctuation in the number of people hired each year. From relatively small numbers at its inception, employment in Chittagong increased relatively slowly from 1983 to 1989, but since then the growth has been rapid and relatively stable. Dhaka started off at a large scale, even in the year it started 1993, it increased employment more than Chittagong which had already been operating for ten years. Many skilled employees were transferred from the CEPZ to the DEPZ to ensure a smooth establishment of the newly formed EPZ. There was an $8.22mn investment, which was the largest one off investment for the country at that time (BEPZA, 2009). Then DEPZ employment grew rapidly until 2006, since when its rate of growth has slowed. In some years particularly 2008-9 employment fell in the Dhaka, Mongla and Comilla EPZs, but these falls were more than compensated by increasing employment in other EPZs, so BEPZ total employment continued to rise.

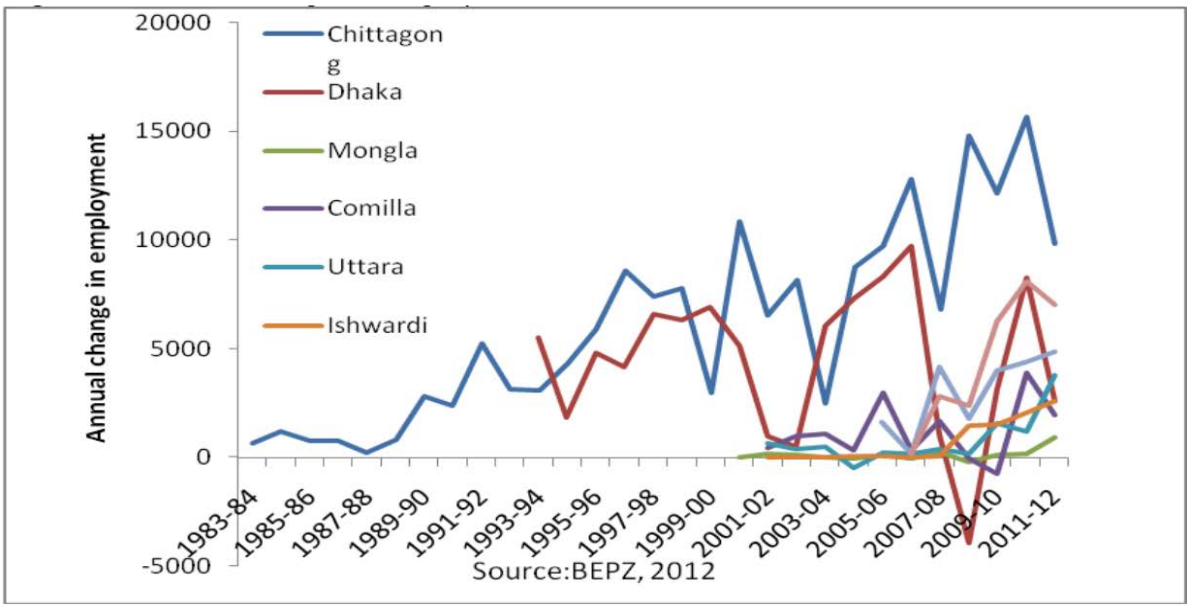


Figure 10 : Annual Changes in Employment in BEPZs

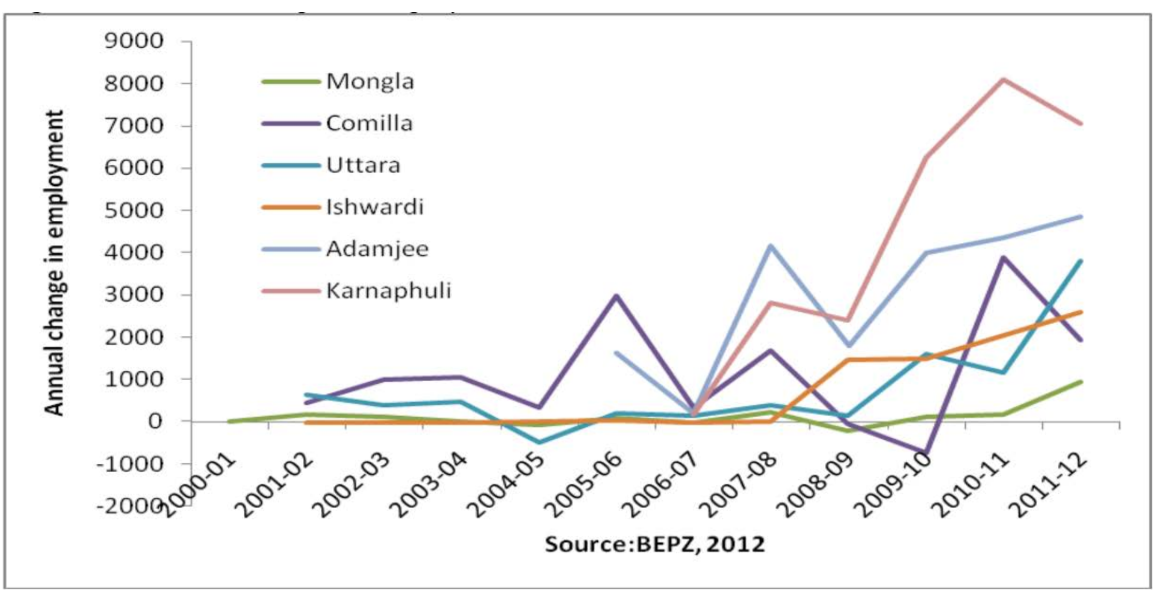


Figure 11 : Annual Changes in Employment in BEPZs Established Since 2000

The assessment of the relative performance of BEPZs is made difficult by the different time periods over which they have operated. Thus the employment in an individual BEPZ depends upon the characteristics of the BEPZ, the stage of development of the BEPZ and the economic circumstances in Bangladesh and the world.

Table 3 : Annual Rate of Change of Employment in BEPZs

	Chittagong	Dhaka	Mongla	Comilla	Uttara	Ishwardi	Adamjee	Karnaphuli	Total
1983 - 88	687.6								687.6
1987 - 91	2274.8								2274.8
1992 - 95	4992	4602.4							8268.4
1996 - 01	7103	5204.2	85	442	644				12558.4
2002 - 07	8379	6396.6	18	1132.6	150.6	9.4	908	174	16484.2
2008 - 12	11858	2219	242.2	1334.2	1422.6	1521.2	3840.2	5331.2	27770.4

Source: BEPZA, 2012

Examining the annual rate of change of employment over specific periods as shown in Table 3, again confirms the importance of Chittagong in the BEPZs, in every period it created the most jobs. Dhaka is also very important; it is second in creating jobs in every period except 2008-12. In the latest period both Adamjee and Karnaphuli created more jobs than Dhaka. The other BEPZs are a long way behind these four in terms of employment.

This cross-sectional analysis compares BEPZs in the same time period when external factors are similar, but these EPZs are at different stages of their development. Over time Chittagong has had a greater increase in employment in each successive period. This was also the case with Dhaka until 2008-12 when there was a large reduction in the amount of jobs created. Comilla EPZ has the growth of employment been increasing in every period. Adamjee and Karnaphuli show very great progress in employment change over the two periods in which they have operated.

Quite clearly, it seems that Chittagong has been most successful in creating employment. Dhaka was very successful for a period but the reason for the slowing in its growth needs to be established. For the others it is still a little early to judge but Adamjee and Karnaphuli seem to be very successful.

V. Prevalent Differences

Although all EPZs are subject to a common set of incentives and regulations, they differ in their characteristics. For example they were established at different times and so they are at different stages in their development. The success of EPZs is influenced by a number of factors. This study considers the two oldest EPZs Chittagong and Dhaka as the standards and draws a comparison with the others.

Bangladesh is known to foreign investors as a provider of low-cost labour (BEPZA report 2004-05). It is an over populated country but the population density is not even across the regions of the country. Official figures shows that the current population of the country is 160 million but the city of Dhaka alone has over 15 million inhabitants. This is the 9th largest city in the world (World Bank. 2010). Dhaka is also the second oldest city in the country with more urban facilities than any other Bangladesh city. This is the reason why more skilled labour is available in the DEPZ and why labour costs are comparatively higher in this area. This also explains why the land is more expensive here, and these two factors contribute to higher production cost. Availability of skilled labour is an advantage for the DEPZ but scarcity of land is a disadvantage.

To trace out the disadvantages available in DEPZ and provide more room for skilled labours, the BEPZA established Adamjee EPZ in 2005. This is the closest substitute of DEPZ. It has 293 acres of lands whereas Dhaka EPZ has 361 acre with almost double the number of occupied plots. Other close substitutes of DEPZ are the two EPZs situated in the northern part of the country Uttara EPZ and Ishwardi EPZ. Here it should be noted that we are calling Uttara and Ishwardi EPZs as substitute of DEPZ not as an official point of view. There is no convention that one EPZ is substitute for another as each of them could substitute one another. Therefore, here the word substitute means DEPZ was established long ago than Uttara and Ishwardi. Therefore, after those new two were being established there were many businesses and labour forces were going to Uttara and Ishwardi who might have come to DEPZ. From that point of view, new ones are substituting the capacity of the old ones.

Uttara EPZ was established in one of the most backward areas in the country. This EPZ does not even have any existing gas connection which discourages foreign investors. It has 211.99 acres of land one fourth of which is still unoccupied (BEPZA 2012). The above comparison of exports, investment and employment confirms its worst performance among the EPZs. The facilities available for Uttara EPZ are far superior. Ishwardi EPZ has efficient utility services, cheap labour is available in the Northern region and Ishwardi is one of the major gateways to the largest trade partner of Bangladesh, India.

Ishwardi EPZ (IEPZ) was established in 2001 but it became operational in 2004. In the beginning it could not attract investment due to lack of road links and utility access, because Northern Region of the country was under developed plus there were lots of trade conflicts taking place with India at that time. The primary reason behind the underperformance of Ishwardi is the unavailability of direct road connections with the economic hub of the country- Dhaka and the largest sea port of the country – Chittagong. In 1998, the government spent $696 million building the Jamuna Multipurpose Bridge, the 11th longest bridge in the world. This massive project improved connections between Northern Region and the rest of the country but there was still a shortage of highways that could connect the major towns to the bridge. Within a few years these roads were built, so from 2008 investment and employment at Ishwardi rose sharply. The effect of improved transport links was reinforced by the government's new policy to strengthen the economy of the North West Bangladesh. This has meant that Ishwardi EPZ has received is now getting more and more incentives than other EPZS. It is also the closest from to the Benapol port which is the largest Land Port in the country. Recent establishment of the high bandwidth internet connection made Ishwardi a potential gateway for sophisticated technologies. Although IEPZ has a lot of potential, it still has a far to go to match the performance of Dhaka EPZ.

Chittagong is undoubtedly the best performing EPZ, it is clearly outperforming its neighbours. Take Mongla EPZ for example, it is clearly the worst performing EPZ in the country, so why is it a flop? Only 30 plots out of 142 plots of Mongla EPZ had been let and only 11 factories built. At present the plot number has been reduced to 124 (BEPZA 2012) but the situation is not improving. Like Uttara EPZ, Mongla does not have any gas supply. Although the distance from both Dhaka and Chittagong is favourable but the century old roads and highways need much refurbishment. Mongla EPZ is situated in one the most backward regions of the country (Aggarwal 2006).

Comilla EPZ is situated in the middle point between cities Dhaka and Chittagong, the two economic hubs of the country. Facility-wise, it provides the necessary utilities and transportation. This EPZ has 267.47 acres of land with water and electric from its own sources. It has streetlights covering a 14-kilometre area and internal gas transmission pipeline (BEPZA 2010). The fact that Comilla EPZ's infrastructure and transport links are superior for example to Uttara and Mongla EPZs, Comilla, has contributed to it being the second best performer among newly established EPZs after Karnaphuli.

Karnaphuli EPZ (KEPZ) earned $244 million from export in the 2011-12 fiscal year, up by 39 per cent against the target. The government set the target at $175.00 million for the year 2011-12. Therefore, it is presumable that Karnaphuli EPZ has been performing well. KEPZ is the EPZ closet to CEPZ, so it has benefitted from business seeking an alternative location because of CEPZs' higher costs. KEPZ has 222.42 acres of lands with 254 industrial plots. KEPZ has the largest seaport (6 km from the Chittagong seaport) in the country to benefit it. KEPZ is situated at 9 km away from Chittagong Shah Amanat Intl Airport. The land area is much more developed in the KEPZ region with self sufficient utilities and facilities.

In 2010 Chittagong had a GDP of $25.5 billion one fourth of Bangladesh's GDP. This gives us an idea of the economic significance of Chittagong within the country. The location is the first factor behind the success of the CEPZ. The CEPZ has the largest exports, investment and employment of the EPZs since its beginning. If we compare between the CEPZ with the DEPZ, we find the followings-

1. CEPZ was established about a decade before DEPZ came into operation which gives CEPZ some competitive advantage.
2. Being the capital of the country and the most expensive town, Dhaka regularly faces lots of political unrests, employee wage hike and many other problems. Whereas Chittagong is less politically unstable. It helps keep running the CEPZ production process more smoothly.
3. Population density is in a more favourable condition in Chittagong (15351/km2). In Dhaka the figure is 23029/km2. This helps keep the city dwellers in Chittagong in more advantageous situation than those of Dhaka. Therefore, many skilled labours are now not moving from Chittagong.
4. Chittagong has an international sea-port which Dhaka doesn't have.

In view of the fact Chittagong EPZ (CEPZ) was the first to be established, it was not surprising that it developed slowly. Investment was low in the 1990s and consequently so was employment and exports. This was to be expected with foreign and domestic investors being tentative about such a new development. But from 1990s the CEPZ started to attract increasing amounts of investment and to generate significant amounts of employment and exports, to the extent that it has remained in the lead among BEPZAs in all these three areas of performance. These happened due to having a strong transportation linkage with the other parts of Bangladesh. CEPZ also gets advantage from the sea-port which is the largest of its kind in Bangladesh. Many skilled labours are now staying in Chittagong as the work facilities and political stability are more in Chittagong. Also Chittagong is one of the major tourist spots in the country which can easily determine Chittagong as one of the most favourite places to work in. CEPZ is the oldest EPZ with self sufficient facilities. It has the largest available land area among all eight EPZs (453 acres). It is situated in North which is within 6 km from Chittagong Port, 10 km from main business center of Chittagong and 9 km from Shah Amanat International Airport. It has uninterrupted supply of water, gas and power (BEPZA 2012). Moreover we can see a strong position of CEPZ in terms of exports, investment and employability among all eight EPZs in the country. This keeps CEPZ stands out of the crowd.

VI. Recommendations

EPZs are playing a vital role in keeping the wheels of the economy turning. Therefore, facilitating the continued development of the EPZs should be a strategic priority for the Government. In particular the adequacy of gas and electricity supplies in BEPZs should be prioritised. The lack of a gas connection was shown to be a factor limiting the performance of Mongla and Uttara EPZs. The availability of high skill workers should be enhanced by expanding training facilities.

Besides developing roads and highways, it is also necessary to have airports near to EPZs. Also existing seaports need to enlarge and their facilities enhanced. For instance Mongla has the country's second largest seaport capacity but the port is silting up. The establishment of backward linkage from production in EPZs is vital to ensure that the EPZs impact on the wider economic development of Bangladesh. This will also enhance the attractiveness of the EPZs as locations for investment.

Encouraging diversified investment is another recommendation that comes from this analysis. More diversified products mean less sensitivity to the adverse shifts in the world economic climate. This would eventually help Bangladesh upgrade its economy.

VII. Limitations

Many companies don't want to share their confidential information in the public. Information from the BEPZA has been limited to that which is publically available. This has meant that it has been possible to evaluate the performance of EPZs only in terms of their gross effect on the economy.

It has not been possible to establish the net effect for example the figure for exports did not take account of the additional imports needed to produce these products. Similarly figures for employment did not take into account any employment generated or lost outside of the zone.

VIII. Conclusion

Bangladesh has eight operating EPZs. Though public involvement, EPZs are still way behind in introducing the sophisticated technology such as internet banking but overall the progress of EPZs in the country is satisfactory.

The comparison among eight EPZs in Bangladesh has enabled us to evaluate their relative performance. This study considered volume of export, investment and employment of each zone as the performance determining factors. After analysing the data, this study found that Chittagong EPZ is the best performing EPZ in the country, with Dhaka close behind. Dhaka EPZ did not experience the slow early development that was the case in the CEPZ, since it was the second to be established this was perhaps because investors were familiar with the concept. So investment in the DEPZ grew very quickly after its establishment and so did employment and exports. Recently the level of investment and exports in DEPZ has approached but not quite exceeded that in CEPZ. Until 2000 the growth of employment in the DEPZ paralleled that in the CEPZ but since then employment has grown more slowly in the DEPZ.

Clearly the CEPZ and DEPZ have been successful, the more recent establishment of the other BEPZs make evaluation of their performance more problematic. The most recently established Adamjee and Karnaphuli have developed quickly attracting levels of investment comparable with the early development of DEPZ. This has been associated in these EPZs with employment and exports which are again comparable with the early DEPZ. So these two newer EPZs can be regarded at least as an initial success.

Comilla despite being established earlier has not quite achieved a level of investment, employment and exports comparable with Adamjee and Karnaphuli, thus it can be regarded as a partial success. The other three EPZs Ishwardi, Uttara and Mongla have been much less successful attracting much less investment, generating less employment and investment.

References

1. Aggarwal, A. et al. 2010. Special Economic zone in south Asia: Industrial Island or Vehicle for Diversification. International Trade department, the World Bank, 200, 23-24.
2. Aggarwal, A. 2005. Performance of Export Processing Zones: A Comparative Analysis of India, Sri Lanka and Bangladesh. Indian Council for Research on International Economic Relations, 155, 10-13.
3. BEPZA, 2012a. Year wise employment, Bangladesh Export Processing Zone authority, http://www.-epzbangladesh.org.bd/bepza.php?id=YREMPL
4. BEPZA, 2012b. year wise investment, Bangladesh Export Processing Zone authority, http://www.epzbangladesh.org.bd/bepza.php?id=YRINV
5. BEPZA, 2012c. year wise export, Bangladesh Export Processing Zone authority, http://www.epzbangladesh.org.bd/bepza.php?id=Yrexport
6. BEPZA, 2012d. Chittagong, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=cepz

7. BEPZA, 2012e. Dhaka, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-D
8. BEPZA, (2012f. Comilla, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=epz-col
9. BEPZA, 2012g. Uttara, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-U
10. BEPZA, 2012h. Adamjee, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-Adamjee
11. BEPZA, 2012i. Karnophuli, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-Karna
12. BEPZA, 2012j. Ishwardi, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-Ishwardi
13. BEPZA, 2012k. Mongla, [online] Available from: http://www.epzbangladesh.org.bd/bepza.php?id=EPZ-Mongla
14. BEPZA, 2009. Annual report. [ONLINE] Available at: http://www.epzbangladesh.org.bd/bepza.php?id=report
15. Bijoy, c. 2007. special economic zones: profits at any cost, counter currents.org. [online] available from:http://www.countercurrents.org/bijoy221007.htm
16. Furby, M. 2005. Evaluating of the Malaysian export-processing zone, especial focus on the electronic industry. [ONLINE] Available at: http://129.3.20.41/-eps/it/papers/0510/0510004.pdf
17. Islam, Z. and Muktatir, U. 2011. EPZ history in Bangladesh and its administration and legislation for economic enclave. Business and management review, 1/7, 86-107
18. ILO. 2008. Economic development and working conditions in export processing zones: A survey of trends. [ONLINE] Available at: http://ilo.org/public/-french/dialogue/download/wp3englishfinal.pdf
19. ILO. 2011. Export processing zones: Comparative data from China, Honduras, Nicaragua and South Africa. [ONLINE] Available at: http://www.ilo.org/-wcmsp5/groups/public/---ed_dialogue/---dialogue/documents/publication/wcms_158364.pdf
20. ILO. 2002. SME clusters in Indonesia: An analysis of growth dynamics and employment conditions. [ONLINE] Available at: http://www.oit.org/-wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/publication/wcms_123971.pdf. James, E. 2009. Theory of local economic development. Surrey: Ash gate publishing limited
21. Kankesu, J. 2003. Benefit cost appraisals of export processing zones, development policy review. [ONLINE] Available at: http://siteresources.-worldbank.org/EXTEXPCOMNET/Resources/2463593-1213887855468/13_BenefitCostAppraisalsof-EPZsASurvey.pdf
22. Madani, D. 1999. A Review of the Role and Impact of Export Processing Zones. [Online] http://siteresources.worldbank.org/INTRANETTRADE/Resources/MadaniEPZ.pdf
23. Magnus, et al (2000) Foreign direct investment: firm and host country decision. London: Macmillan press ltd.
24. OECD. 2007. EXPORT PROCESSING ZONES: PAST AND FUTURE ROLE IN TRADE AND DEVELOPMENT. [ONLINE] Available at: http://search.oecd.org/officialdocuments/displaydocumentpdf/?cote=TD/TC/WP%282006%2939/FINAL&docLanguage=En
25. Queder, M. 2009. An empirical analysis on its determinants and impacts, Munic personal repec achieve, "pp". 1-24.
26. Saunders, M. et al. 2003. Research Method for Business students. 3rd ed. Harlow: Pearson Education Limited.
27. Tantri, M. 2011. Special Economic Zones in India: Are these Enclaves Efficient? [Online] Available from: http://www.isec.ac.in/WP%20274%20-%20-Malini%20L%20T_5.pdf
28. UNCTADSTAT, (2009). [Online]. Available From: http://www.unctad.org/Templates/Page.asp?intItemID=5329&lang=1
29. WEPZA, 2012. free zone modern world, [online] Available from: http://www.wepza.org/
30. World bank, 2009. "clusters for competitiveness: a practical guide and policy implications for developing cluster initiatives."[online] available from:http://siteresources.worldbank.org/intranettrade/resources/cluster_initiative_pub_web_ver.pdf

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Working Capital Management and Performance of Selected Nigerian Manufacturing Companies

By Mike A. Onodje

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Accordingly, we recommend liberal debt and aggressive inventory management strategies together with the pursuit of optimum debt profile to improve Nigeria's manufacturing performance.

GJMBR-B Classification : NLMC Code: F63, J19

WORKINGCAPITALMANAGEMENTANDPERFORMANCEOFSELECTEDNIGERIANMANUFACTURINGCOMPANIES

Strictly as per the compliance and regulations of:

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I. Introduction and Overview

The performance of the Nigerian manufacturing sector has attracted considerable attention since independence in 1960 because of its potential for rapid economic growth. A growing manufacturing sector reduces poverty, disease and ignorance through wealth creation and employment generation. Despite this potential, the performance Nigeria's manufacturing sector has been declining over the years. This downward trend has been noticeable since the early period of the 1980s. As indicated in figure 1, the share of manufacturing sector contribution to the Gross Domestic Product (GDP) fell from 11.0% in 1980 to 4% in 1998, stagnating around 4% up to 2012.

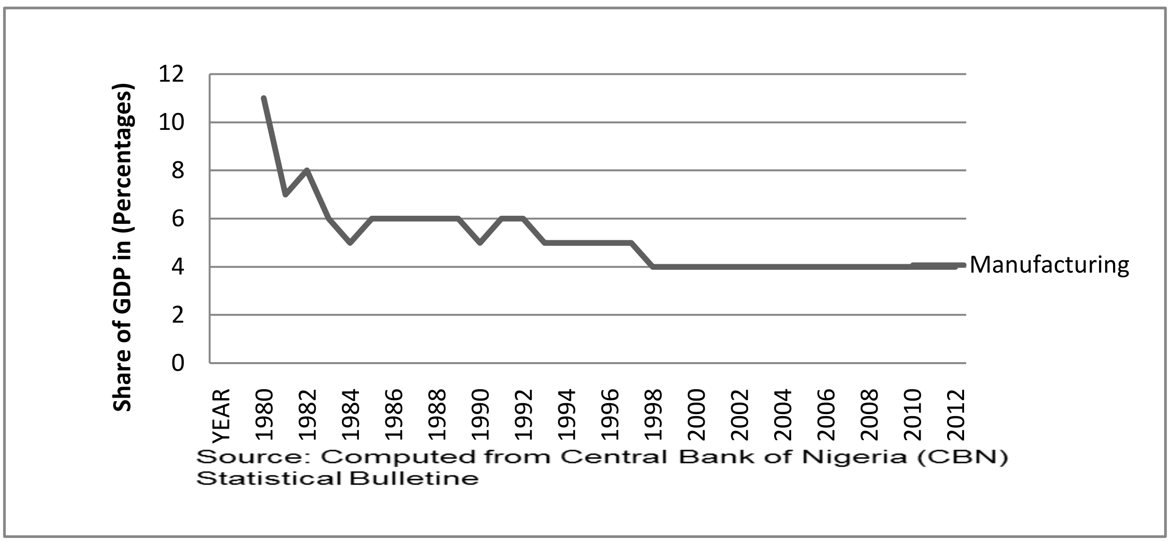

Figure 1 : Nigeria's Manufacturing Sector Contribution to GDP

The virtually stagnant manufacturing sector has negatively impacted on the Nigerian economy over the years. The economy relies heavily on imported manufacturing products following the low level of domestic supply of these products. Given the high population of Nigeria that is put at about 120 million people in the 2002 national Census, the massive importation of foreign manufactured products has imposed a drain on Nigeria's scarce foreign exchange. Additionally, such importation fuels imported inflation.

The falling performance of the manufacturing sector has also led to the closure of many manufacturing companies. According to Manufacturing Association of Nigeria (MAN, 2009) about 857 manufacturing companies have either closed down their operations in Nigeria or relocated to other neighboring countries since 1999. The development has contributed immensely to the high unemployment rate in Nigeria

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through retrenchments and contraction of job openings to job seekers.

Low manufacturing performance has equally contributed to the slow development of the agricultural sector of the country because the manufacturing sector lacks the requisite capacity to utilize agricultural products as inputs. The result is that potential income to farmers from manufacturing sector demand for farm produce is highly restricted. Based on the fact that Nigeria's agricultural sector accounts for the greatest share of employment, it is evident that the poor linkage between it and the manufacturing sector fuels unemployment and increases the incidence of poverty.

The problem is further worsened by limited ability of the manufacturing sector to process farm produce to final or semi-finished state for export as required by potential international trading partners. This, among other factors, has made it difficult for Nigeria to sufficiently benefit from opportunities offered by the World Trade Organization and the African Growth Opportunity Act of the United States of America.

II. Sources of Declining Manufacturing Performance in Nigeria

Judging from the negative impact of falling manufacturing sector performance on the Nigerian economy as illustrated above, reversing the trend has become a major issue of public policy. Various reasons have been offered for the declining performance of the manufacturing sector: they include inadequate technology, low capacity utilization rate, insufficient investment, high cost of production, inflationary environment and poor infrastructure (Akinlo, 1996; Adenikinju, 1999, Bankole, Lawanson and Aminu, 1999; Okaro, 2004).

The reasons advanced for the unsatisfactory performance of Nigeria's manufacturing sector can be grouped broadly under internal and external factors as shown in figure 2. While external factors include infrastructural facilities, macroeconomic stability, loans advances and security requiring macroeconomic tools, internal factors include financial controls, financial and human resources management, marketing and innovation which require microeconomic tools for their analysis and management.

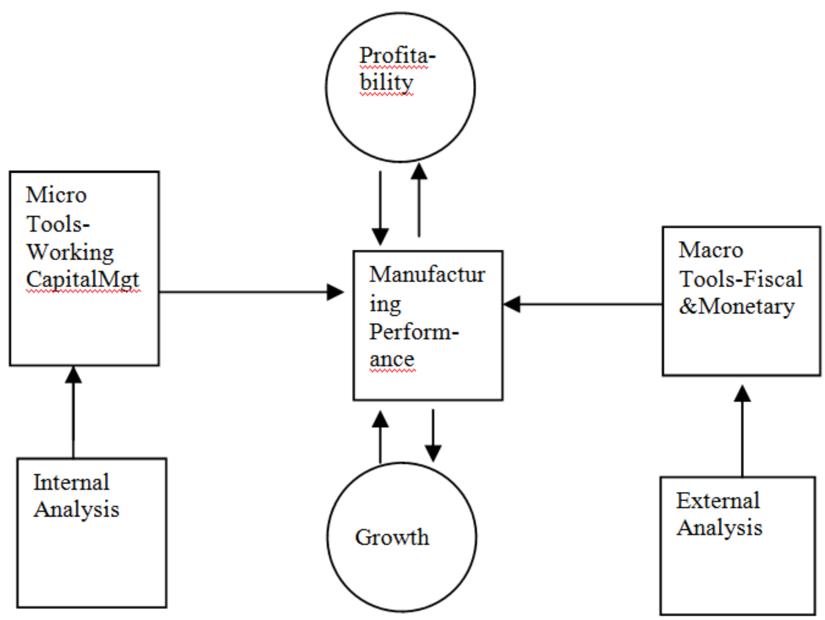

Figure 2 : Internal and External Analysis of Manufacturing Sector performance *Source:* the Author

Unlike the external factors, internal factors are controllable by the firms in so far as they are activities carried out within the manufacturing companies. Hence an attempt to understand the factors influencing manufacturing sector performance in Nigeria needs to also consider internal factors. In this regard, various studies have identified limited finance as an important factor militating against manufacturing performance in Nigeria. In a survey of the performance of the Nigerian manufacturing sector conducted by Malik, et al (2006) it is reported that access to credit is the most significant issue in Nigeria's manufacturing sector performance, after physical infrastructure as shown in figure 3.

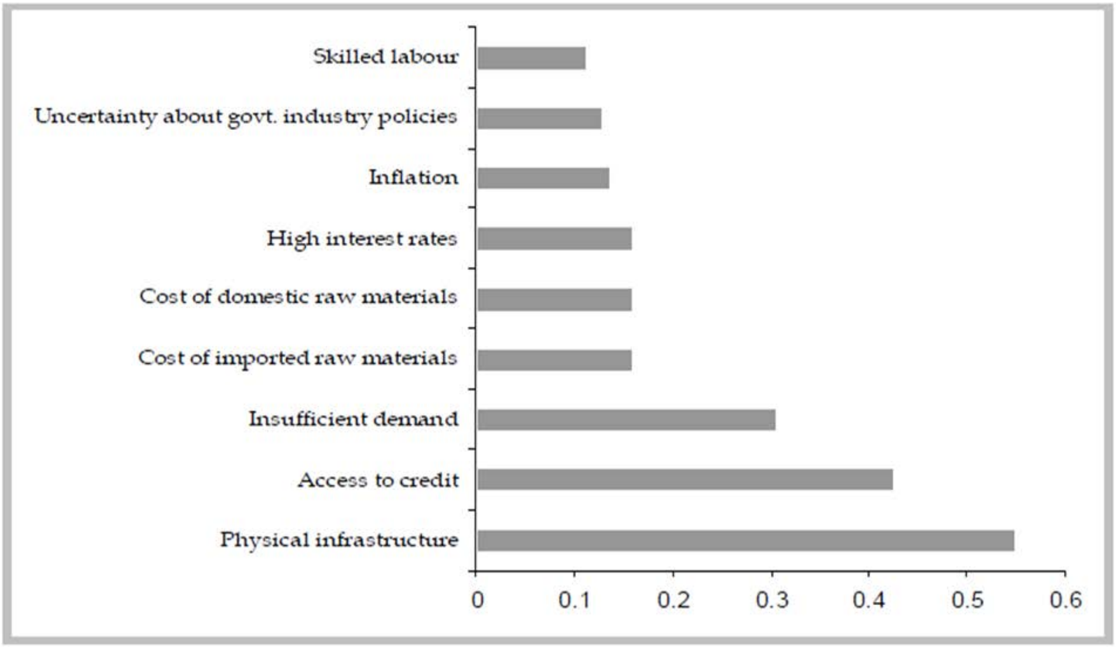

Figure 3 : Factors Perceived by Nigeria's Manufacturing firms as Obstacles to their Performance

Source: Malik A., Teal F. and Baptist S (2006)

Against the foregoing therefore, there is need to seeks ways to overcome the problem of limited access to finance. One of such ways is by determining whether working capital management, a financial activity within the control of Nigerian manufacturing companies, affects their performance.

III. Review of Literature

a) Theoretical Review

Various theories and related models have evolved over the years to explain or predict the behavior of the various components of working capital. Prominent amongst them are those dealing with inventory and cash management. An important model dealing with the inventory component of working capital management is the Economic Order Quantity model (EOQ) (Wilson, 1934, Ross et al, 2008). The EOQ model determines the point at which the combination of order costs and inventory carrying costs are the least to a firm. It states that the quantity of inventory to be ordered at a given time must be determined by two balancing factors: (1) the cost of holding or carrying inventories and (2) the cost of acquiring or ordering inventories. Purchasing larger quantities of inventories may decrease the unit cost of acquisition, but this saving may be more than offset by the cost of carrying inventories for a longer period of time.

The basic ingredients of the theories of cash and inventory components of working capital management include the optimum level of working capital, and the trade-off between profitability and risk associated with the level of working capital. Efficient working capital management requires that firms operate with some optimum (cheapest) level of working capital. Thus, the following theoretical relationships exist in the optimum working capital level of a firm: 1) the shortage cost of working capital is inversely related to assets levels, 2) the holding cost of working capital is directly related to asset levels, 3) in the long run, the total cost curve of a firm's working capital is U-shaped, and 4) total working capital cost is minimized at the point where the shortage cost curve cuts the holding cost curve at the lowest point. These theoretical propositions are depicted in figure 4.

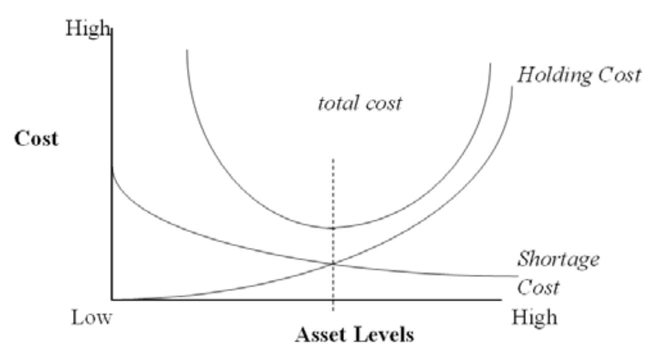

Figure 4 : The Cost of Holding Cash and Inventories

A number of factors have been identified as variables affecting the size of a firm's working capital. These include(Ross et al, 2008): 1) the extent to which the firm's business is subject to seasonal fluctuation and vagaries of taste and weather condition, 2) the operating cycle of the firm- an extended operating cycle implies tied down funds in inventories and debts receivables 3) the nature and size of the business- a manufacturing

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firm requires large build-up of raw materials and work-in-progress than a trading or retail organization, hence its need for higher amount of working capital. Also, the larger the firm, the more its scale of operation, and the more its need for working capital, 4) the extent to which the firm embarks on speculative purchase of stocks of raw materials and finished products, 5) the amount of working capital required to service fixed assets, 6) the firms credit policy- a liberal credit policy increases debtors level, 7) growth and expansion plans- a growing firm requires cash investments continuously, 8) profit appropriations - cash profits not distributed as dividend but retained as reserves will increase working capital, and 9) macroeconomic stability- fluctuations in interest rate, inflation rate and exchange rate affect working capital needs of the firm.

b) *Empirical Review*

The empirical literature provides evidence consistent with a prior expectation of the relationship between components of working capital and profitability (Eljely, 2004, Lazaridis et al, 2006, Garcia-Turuel et al, 2007, Singh, 2008, and Christopher et al, 2009). These results indicate that inventory conversion period and receivable conversion period are inversely related to profitability, while payable deferral period is directly related to profitability. However, an earlier study by Deloof, (2003) found that profitability is inversely related to accounts payable deferral period, thus contradicting a priori expectation. This result appears to suggest that unprofitable firms wait longer before paying their bills to creditors.

Incidentally, a later study by Nobanee et al (2009) also agrees with the contradictory result of Deloof, (2003) for account payable deferral period. The results of Nobanee et al (2009) also contradicts a priori expectation for inventory conversion period, indicating that shortening the inventory conversion period reduces profit rather increase it. An explanation for this may be that carrying higher level of inventory may enable the firm take advantage of business opportunity. However, this may only be possible for firms dealing in fast moving inventories.

Evidence suggests that shortening the cash conversion cycle increases a firm's profitability (Eljelly, 2004, Deloof, 2003, Lazaridis et al, 2006, García-Teruel et al, 2007, Christopher et al, 2009). This occurrence may be due to the fact that the firm with a short cash conversion cycle readily realizes its investments which it could quickly plough back into the business thereby taking advantage of profitable investment opportunities. However, this result was contradicted by those of Nobanee et al (2009) which suggest that shortening the cash conversion cycle reduces profitability rather than increase it. They explain that shortening the cash conversion cycle suggests aggressive management policy that may be resisted by debtors who are being pressurized to pay up and creditors who are not being paid in term.

Indeed, this reasoning is supported by the findings of Nazir and Afza (2009) which indicate that firms increase profit by adopting a conservative approach towards working capital management. Their results also show that investors attach risk premium to the stocks of firms with aggressive working capital management policy. The implication is that such firms source funds at higher cost to finance their operations thereby reducing their profit levels. In view of their results which indicate that shortening the cash conversion cycle harms profitability, Nobanee et al (2009) recommend that keeping the working capital components at their optimum levels is a better tool for increasing profitability than the focus on cash conversion cycle. This position is corroborated by the findings of Hao et al (2009) which show that maximum operating shortfall is a better predictor of the amount of cash holding a firm requires to remain profitable than the cash conversion cycle.

Another issue addressed in the literature is whether efficient working capital management necessarily impacts on firm performance. In this regard, studies (Singh et al, 2008, Christopher et al, 2009) indicate that efficient working capital management increases performance. Indeed, the results from Gosh and Majidocumented in Raheman and Nasr, 2007) show that Indian manufacturing companies performed poorly in terms of profitability in the period 1992/1993 to 2001/2002 because of inefficient working capital management practices. In the study by Christopher et al (2009), a 1% increase in current ratio, current asset to operating income, cash turnover ratio and leverage decreased the profit of 14 corporate hospitals in India by 10%. Also, Singh and Pandey (2008) find that 131 Athenian firms studied increased their profits by managing efficiently their cash conversion cycles and keeping each of the different components (account receivables, account payables, inventories) to an optimum level.

In summary, much of the evidence from the empirical literature suggests an inverse relationship between firm performance on one hand and cash conversion cycle, inventories conversion period and receivable conversion period on the other hand. Also, majority of evidence suggest a direct relationship between payable deferral period and firm performance. However, some few studies report opposite direction of influences between the working capital variables and firm performance. It is therefore an issue of interest to determine whether and how the working capital variables impact on the performances of Nigerian manufacturing companies.

IV. Data and Methodology

As shown by Nobanee and Alhajarr (2009), the conventional method of modeling the influence of working capital management on firm performance uses sales growth, operating income, and operating cash flow as some of the important measures of firm performance. Of these measures, operating income scaled by sales is the most widely used. Also, the most widely used explanatory variables include receivable conversion period (rcp), inventory conversion period (icp), payable deferral period (pdp), cash conversion cycle (ccc), quick ratio (qr), debt to equity ratio (de) and sg is sales growth.

The study extracts these variables over the period 2002-2011 from the published financial statements of a panel of 75 manufacturing firms sourced from the Nigerian Stock Exchange (NSE).The fixed and random effects' estimation procedures are employed under two alternate assumptions about the error term as explained by Madalla (2001). In the first assumption, the error term is assumed not to vary randomly over time t or the individual firms I; in which case, the fixed effect (FE) estimation technique is applied. The second assumption holds that the error term varies randomly over t or the individual firms i; in which case, the random effect (RE) estimation technique is applied.

However, a number of empirical studies have indicated that the FE and RE estimates may render the estimates biased and inconsistent. To overcome this problem, the Generalized Method of Moment (GMM) estimator proposed by Arellano and Bond (1991) and System GMM estimator proposed by Blundell and Bond (1998) are usually applied by researchers. Thus, we apply a one-step GMM estimation procedure on the data, in addition to the FE and RE estimation procedures to see if this improves the results.

Based on the foregoing, the explicit model for estimation can be stated as follows:

$$mfp_{it}= \beta_o + \beta_{1mfpit-1} + \beta_1 rcp_{it} + \beta_2 icp_{it} + \beta_3 pdp_{it} + \beta_4 ccc_{it} + \beta_5 qr_{it} + \beta_6 de_{it} + €_{it}$$

where mfpis manufacturing performance (measured as operating income to sales) and mfpit-1 is its one-period lag introduced in the model as explanatory variable to eliminate the effect of firm specific heterogeneity (De Grauwe and Skudenly, 2000).Also, rcp is receivable conversion period calculated as [(account receivable/sales) *365], icp is inventory conversion period calculated as[(inventory/cost of good sold)*365], pdp is payable deferral period computed as [(account payable/cost of goods sold)* 365], cccis cash conversion cycle calculated as[Receivable collection period + inventory conversion period - Payable deferral period], qris quick ratio computed as [(current assets – stocks)/current liabilities], andde is debt-to-equity ratio computed as total debt/equity. Equally, €is an error term, and the subscripts i and t are respectively theith manufacturing firm in the sample and time.

V. Empirical Findings

The regression results are discussed in this section with respect to the three methods employed in estimating the relationship between working capital management and manufacturing performance measured as operating income-to-sales.

First, we report in table 1 the results of the estimated model based on the fixed effect estimation procedure. The reported F-statistics is highly significant, indicating that the specified variables of the model robustly explain the relationship.

Table 1 : Fixed Effect GLS Regression of the Relationship between Working Capital Management and Manufacturing Performance

Dependent Variable: mfp_{it}	Coefficient	Standard Error	pValue
mfp_{it-1}	-0.0000436	0.0007079	0.951
rcp_{it}	-0.0062752*	0.0046731	0.181
icp_{it}	-0.0062167*	0.0046729	0.185
pdp_{it}	0.0062254*	0.0046729	0.184
ccc_{it}	0.0062485*	0.0046728	0.182
qr_{it}	0.0027206	0.0027337	0.321
de_{it}	0.1222858***	0.0640631	0.057
Constant	21.41292***	0.907777	0.000
F-Statistics	7.10***		

*Note: * significant at 75% confidence level, ** significant at 90% confidence level, * **significant at 95% confidence level*

The results show that the working capital variables are all significant determinants of manufacturing performance, although the relationships are rather weak at the reported 75% level of significance. While receivable conversion period, inventory conversion period and payable deferral period carry the expected signs, the cash conversion cycle carries an unexpected positive sign as equally reported by Nobanee et al (2009). The positive sign of the cash conversion cycle implies that shortening cash collection period of manufacturing firms harms rather than improve performances. In an economy like Nigeria where average per capita income is very low and poverty is high, it is reasonable to expect that manufacturing firms would rather embark on sales maximization than aggressive cash collection so as not to drive away cash strapped customers.

The results also indicate that the debt equity ratio is positive and highly significant (at 95%), implying that rising debt rather than equity finance increases manufacturing performance, due possibly to the benefits derivable from net debt tax shields (Ryan, 2005). The results show that liquidity variable qr is not a significant, implying that liquidity is not a significant determinant of manufacturing performance. However, the prior year manufacturing performance variable mfpit-1 is not significant, implying the possibility of firm specific bias in the estimates (De Grauwe and Skudenly (2000). Hence it is appropriate at this stage to evaluate the model using the other two methods of estimation.

Second, we report in table 2 the results of the estimated model based on the random effect estimation procedure.

Table 2 : Random Effect GLS Regression of the Relationship between Working Capital Management and Manufacturing Performance

Dependent Variable: mfp_{it}	Coefficient	Standard Error	pValue
mfp_{it-1}	-0.0000389*	0.000289	0.179
rcp_{it}	0.0003118**	0.0001881	0.098
icp_{it}	0.0003107**	0.0001881	0.099
pdp_{it}	-0.0003099** -	0.0001881	0.100
ccc_{it}	0.0003089** -	0.0001881	0.101
qr_{it}	0.0000422 -	0.0001053	0.689
de_{it}	0.0043931***	0.0024095	0.068
Constant	0.0216787***	0.0045362	0.000
Wald-statistics	54.93***		
Dependent Variable: mfp_{it}	Coefficient	Standard Error	pValue

*Note: * significant at 75% confidence level, ** significant at 90% confidence level, * **significant at 95% confidence level*

The reported Wald-statistics is highly significant, indicating that the specified variables of the model robustly explain the relationship. The estimated results show that the random effect method improves on the level of significance of the coefficients, with all the working capital variables being significant at 90% compared to the 75% level of significance reported with the fixed effect method. Also, the prior year manufacturing performance variablemfpit-1 is significant, implying the absence of firm specific bias in the estimates. However, only the cash conversion cycle variable carries the expected sign among the working capital management variables.

The receivable conversion period is positive as also reported by Nobanee et al (2009) and Deloof, (2003) in earlier studies. This implies that a longer debt collection cycle improves manufacturing performance, rather than the shorter debt collection mostly reported in the literature. This might mean that aggressive debt collection drive may be harmful to Nigerian manufacturing firms who produce mainly for the domestic market, given the very low per capita income of the average Nigeria consumer.

The payable deferral period carries an unexpected negative sign, implying that taking longer time to pay creditors may harm the performance of manufacturing firms. This result is equally supported by an earlier finding by Deloof, (2003). The inventory conversion period carries a positive sign as also reported by Nobanee et al (2009) and Deloof, (2003) in earlier studies.

This implies that carrying inventories for a longer period of time improves rather harm manufacturing performance. Nobanee et al (2009) explains that this could be interpreted by the fact that shortening the inventory conversion period could increase the stock-out/shortage cost of inventory, leading to lose of sales opportunities and poor performance.

The negative sign of the cash conversion cycle indicates that shorter cash collection period improves the performance of manufacturing firms. The negative sign of the debt equity ratio and its high significance (at 95%) imply that a rising debt profile is harmful to manufacturing performance. This appears to support the assertion that high debt burden occasioned by high cost of bank lending is injurious to Nigerian manufacturing firms (Malik, 2006). However, the liquidity ratio qris not significant, as similarly reported for the fixed effect method in table 1.

Third, we report in table 3 results of the estimated model based on the one-step difference GMM estimation procedure. The Sargan test result shows that the test instruments are not rejected. Equally, the results of the Arellano-Bond test does not reject the null hypothesis of no second-order serial correlation.

Table 3: One-Step Difference GMM Regression of the Relationship between Working Capital Management and Manufacturing Performance

Dependent Variable: mfp_{it}	Coefficient	Standard Error	pValue
mfp_{it-1}	-0.2932103***	0.0866205	0.001
rcp_{it}	1.510932	1.728168	0.382
icp_{it}	1.461534	1.710194	0.393
pdp_{it}	-1.46052	1.709861	0.393
ccc_{it}	-1.47096	1.713854	0.391
qr_{it}	0.1833684**	0.1125185	0.103
de_{it}	36.0452	45.49193	0.428

- *Note: * significant at 75% confidence level,** significant at*
- *90% confidence level,***significant at 95% confidence level*
- *Sargan test of over-identifying restrictions, P> Chi2 62.46,*
- *Arellano-Bond test for AR(1) in first difference = 0 -1.08*
- *Arellano-Bond test for AR(2) in first difference = 0 -0.85*

The prior year manufacturing performance variablemfpit-1 is significant, implying the absence of firm specific bias in the estimates. As shown by the results in table 3, only the prior year manufacturing performance mfpit-1 and liquidity qrare significant (at 95% and 90% respectively). Thus, the results indicate that, except for liquidity, all the other working capital variables are not important determinants of manufacturing performance in Nigeria.

VI. Summary and Evaluation of Findings

The study has thrown up three alternative results from the estimated model which is summarized in table 4. Estimates from the random effect method appear more robust than those from the other two methods. While the estimated relationship appears weak with the fixed effect method (at 75% significance) and non-existent with the one-step GMM, it is fairly strong with the random effect method (at between 90% and 95% significance). Equally, the reported standard errors are least with the random effect method (0.0080924 in total) compared to those of fixed effect method (0.9939734) and one-step GMM method (52.553146).

Table 4 : Summary of Model Results from the Three Estimation Methods

Dependent Variable: mfp_{it}	Fixed Effect	Random Effect	1-Step Difference GMM
rcp_{it}	-ve; 75% Significant	+ve; 90% Significant	Not Significant
icp_{it}	-ve; 75% Significant	+ve; 90% Significant	Not Significant
pdp_{it}	+ve; 75% Significant	-ve; 90% Significant	Not Significant
ccc_{it}	+ve; 75% Significant	-ve; 90% Significant	Not Significant
qr_{it}	Not Significant	Not Significant	+ve; 90% Significant
de_{it}	+ve; 95% Significant	-ve; 95% Significant	Not Significant
Total value of standard errors	0.9939734	0.0080924	52.553146

- *Note: * significant at 75% confidence level, ** significant at 90% confidence level, * **significant at 95% confidence level*
- *-ve = positive; +ve = negative.*

Based on the foregoing, therefore, it seems to us that the estimates of the random effect estimation are more robust in explaining the relationship being investigated. Accordingly, we conclude that receivable conversion period and inventory conversion period are directly or positively related to manufacturing performance in Nigeria. On the other hand, payable deferral period, cash conversion cycle and the debt-equity ratio period are inversely or negatively related to manufacturing performance in Nigeria. Additionally, liquidity (measured as quick ratio) has no significant relationship with manufacturing performance in Nigeria.

VII. Policy Implications and Recommendations

The results of the study show that there is need to look inwards in formulating policy measures to improve manufacturing performance in Nigeria. Managers of manufacturing firms would need to devise strategies of efficient working capital management as part of a holistic measure aimed at improving their performances. As shown by the results of the study, these measures include the following: 1) pursuit of liberal debt recovery strategy that that places emphasis on sales maximization without undue pressure on debtors given the low level of per capita income, high poverty incidence and unemployment in the country. 2) pursuit of aggressive inventory management strategy where large amounts of inventories are held to avoid stock-out cost and maximize sales in the face of emerging opportunities 3) development of a brand image that shows manufacturers care for unpaid creditors and customers who deposited monies for goods awaiting production. This involves ensuring that delays in the settlement of creditors and accrued bills are brought to a reasonable minimum consistent with the company's brand image.

Another policy implication is that rising debt profile is harmful to the performance of Nigerian manufacturing companies. Hence managers of manufacturing companies should put in place strategies for the efficient management of their capital structures as a way of ensuring optimum debt profile. Given that the Nigerian manufacturing sector holds a strategic position in Nigeria's quest to be one of the 20 most developed economies of the world by 2020, it should be provided a form of economic bailout assistance by the government to fast-track the needed improvement in its performance. In this regard one commends the effort of the government at setting up the Micro, Small and Medium Enterprises Development Fund (MSMEDF) which is aimed at rebuilding Non-Bank Financial Institutions (NBFIs) structurally, organizationally and operationally to enhance their effectiveness and impact on the Micro, Small and Medium Enterprises (MSME) sub-sector of Nigeria.

VIII. Conclusion

The study seeks to determine whether the internal factor of working capital management could be adduced as an additional reason for the low level of manufacturing performance in Nigeria, in to other issues of inadequate technology, low capacity utilization rate, insufficient investment, high production cost, inflationary environment and poor infrastructure usually canvassed in the empirical literature. Data extracted over the period 2002-2011 from the published financial statements of a panel of 75 manufacturing firms quoted on the Nigerian Stock Exchange (NSE) are analyzed using three alternative regression methods; namely fixed effect, random effect, and one-step difference GMM.

The results of the study show that efficient working capital and debt management are critical to improved manufacturing performance in Nigeria. Accordingly, the study recommends a liberal approach to the management of cash receivable portfolio of manufacturing firms in order to maximize sales revenue. Conversely, it recommends an aggressive inventory control policy to take advantage of emerging opportunities while minimizing stock-out costs. It also recommends that the deferral of creditors and accrued charges should be held at the minimum to enhance corporate credibility and market share. Finally, the study recommends that effort should be made by manufacturing firms with support from the government to ensure that the debt profiles of manufacturing firms are kept at optimum levels.

References Références Referencias

1. Adenikinju A. F. (1999). "Cost of power outages in Nigerian Manufacturing sector". African Journal of Economic Policy. June, vol. 6 No. 1 p97-115.
2. Akinlo A. E. (1996) "Adjustment Programme and Structural Shift in the Nigerian Industrial Sector". Ife Journal of Economics and Finance, Vol. 3 Nos. 1&2, p7.
3. Arellano, M., and Bond S., (1991), "Some Test of specification of Panel Data: Monte Carlo Evidence and an Application to Employment Equations", Review of Economic Studies, Vol. 58, pp. 277-297.
4. Bankole A. S., Lawanson O. A. and Aminu A. (1999), "Import competition and Nigeria's Manufacturing sector.
5. Analysis of the employment effects". African Journal of Economic Policy. June, vol. 6 No. 1 p1-30.
6. Blundell, R., and Bond, S., (1998), "Initial Conditions and Moment Restrictions in Dynamic Panel Data Models", Journal of Econometrics, Vol. 87, pp. 115-143.
7. Christopher, S. B. and Kamalavalli, A. L.(2009), "Sensitivity of Profitability to Working Capital Management in Indian Corporate Hospitals". SSRN:http://ssrn.com/abstract=1331500.
8. De Grauwe P. and Skudenly F., (2000), "The Impact of EMU on trade Flows", WeltwirtshaftlichesArchiv, pp139, 4. Available at RN:http://ssrn.com/abstract=1331500.
9. Deloof, M.2003, "Does Working Capital Management Affect Profitability of Belgian Firms?" Journal of Business Finance & Accounting, Vol. 30, pp. 573-588.
10. Eljelly, A. (2004), "Liquidity-Profitability Tradeoff: An empirical Investigation in an Emerging Market", International Journal of Commerce & Management, Vol 14 No 2 pp. 48 – 61.
11. García-Teruel, P. J. and Martínez-Solano P. (2007),"Effects of Work in Capital Management on SME Profitability". Available at SSRN:http://ssrn.com/abstract=982868.
12. Hao J., Kim W. and Rao R. K. (2009), "Contract Heterogeneity, Operatin Shortfalls, and Corp-orate Cash Holdings". Mccombs Research Paper Series No. FIN-13-09.
13. Lazaridis I. and Tryfonidis D. (2006), "Relationship between Working Capital Management and Profitability of Listed Companies in the Athens Stock Exchange". Journal of Financial Management and Analysis, Vol. 19, No. 1, January-June.
14. Malik A., Teal F. and Baptist S (2006), the Performance of Nigerian Manufacturing Firms: Report on the Nigerian Manufacturing Enterprise Survey. A Research Supported by United Nations Industrial Development Organization (UNIDO), Nigerian Federal Ministry of Industry and Centre for the Study of African Economies, Department of Economics, University of Oxford, United Kingdom.
15. Nazir M. S., and Afza T. (2009), "Impact of Aggressive Working Capital Management Policy on Firms' Profitability". The IUP Journal of Applied Finance, Vol. 15, No. 8, pp.19-30, August 2009.

16. Nobanee H. (2009), "Working Capital Management and Firm's Profitability: An Optimal Cash Conversion Cycle". Available at SSRN: http://ssrn.com/abstract=1471230.
17. Nobanee H. and Al Hajjar M. (2009), "A Note on Working Capital Management and Corporate Profitability of Japanese Firms". Available at SSRN http://ssrn.com/abstract=1433243.
18. Nobanee H. and Al Hajjar M. (2009), "Working Capital Management, Operating Cash Flow and Corporate Performance". Available at SSRN:http://ssrn.com/abstract=1471236.
19. Okaro S. C. (2004). "The impact of government policies on industrial development in Nigeria." The Nigerian Accountant, July/Sept. 2004, pp20-24.
20. Raheman and Nasr (2007), Working Capital Management and profitability – Case of Pakistani Firms. International Review of Business Research Papers Vol.3 No.1. March 2007, Pp.279 – 300.
21. Ross, S., Westerfield, R., and Jordan, B., 2008, Corporate Finance Fundamentals, 8th Edition, Mcgraw Hill.
22. Ryan B. (2004), Finance and accounting for business. Thompson publishers, UK, pp163 - 205.
23. Singh P. (2008), "Inventory and Working Capital Management: An Empirical Analysis".
24. Available at SSRN: http://ssrn.com/abstract=1113246.
25. Singh, J. P. And Pandey S. (2008), "Impact of Working Capital Management in the Profitability of Hindalco Industries Limited". The Icfai University Journal of Financial Economics, Vol.6, No. 4, pp. 62-72.
26. Wilson, R. H. 1934. A Scientific Routine for Stock Control, Harvard Business Review, 13; p116-128.

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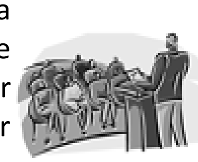

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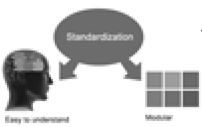

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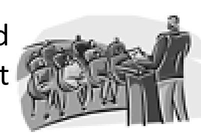

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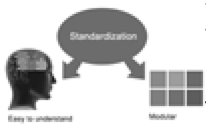

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Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

1. Choosing the topic: In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

2. Evaluators are human: First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

3. Think Like Evaluators: If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

4. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

5. Ask your Guides: If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

6. Use of computer is recommended: As you are doing research in the field of Computer Science, then this point is quite obvious.

7. Use right software: Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

8. Use the Internet for help: An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

9. Use and get big pictures: Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

10. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

11. Revise what you wrote: When you write anything, always read it, summarize it and then finalize it.

12. Make all efforts: Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

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Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

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The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

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- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

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Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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