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The Impact of Competitive Strategies, and Strategic Human Resource Management on Firm Performance of Palestine

Nermeen Sayyad

Al-Quds University, Faculty of Business and Economics
Department of Business Administration Jerusalem, Palestine

Abstract
This paper examines the impact of competitive strategies and strategic Human Resource Management on Firm Performance of Palestine from various critical perspectives. Rapid environmental changes, competition to provide innovative products and services, changing customer and investor demands and globalization have become the standard backdrop for firms. Sustained competitive advantage could be generated from a firm's human capital by designing strategic human resource management to diagnose a firm's strategic needs which is required to implement a competitive strategy and achieve operational goals. Effective human resource management strategy systematically organizes all individual human resource management measures to directly influence employee attitude and behavior in a way that leads business to achieve its competitive strategy. The researcher has selected corporate and non-corporate firms as well as small and Medium Corporation were chosen in different areas of Palestine (south, north, and middle) 106 respondents selected from 45 firms across the three zones of Palestine. The general objective of the study is to investigate the place of Strategic Human Resource Management in improving corporate performance among mentioned firms in Palestine. The study used descriptive statistics (frequencies, means and percentages) to answer the three research questions posed for the study. The Spearman Rank Correlation Coefficient was used to test the three hypotheses that guided the study. The final results showed that there is a strong positive correlation between strategic HRM and performance level of competition in the firms. It was also concluded that SHRM is an important and indispensable tool for any organizations performance and for any organization that wants to gain competitive advantage over others. Finally, this article develops a conceptual framework that explains the relationship between strategic human resource management, competitive strategies and firm Performance.

Key Words: Strategic human resource management, Firm performance, Competitive strategy, Palestine

INTRODUCTION
The word organization implies that there is a holistic system, members of this system are in some way committed or obligated to it, and that the system is arranged according to some kind of designated design or structure (April Young love 2006). The organizations usually have resources at their disposal which they deploy to realizing their goals and objectives. These resources are: Capital, Land, Labor (Human) and Technology. Humans are an organization's greatest assets; humans and the potential they possess drive an organization (Christine Jahn 2007). Today's organizations are continuously changing. Organizational change impacts not

only the business but also its employees. In order to maximize organizational effectiveness, human potential—individuals' capabilities, time, and talents—must be managed.

Organizations are seeking to create much competition between them, taking more market, more customers, more sales, etc. Rapid changes stemming from globalization, advancement of information systems and other factors have caused higher competition. Many organizations are driven by the market to set their goals in their performance. Some of the goals are: cost reduction, achieving sales levels, increasing the number of customers, increasing the market percentage, improving productivity and quality, innovative products. The realization of these goals will be achieved through the human resources management in organizations. Workforce, as the key to success, will enable the achievement of organizational performance.

Human resources are regarded as one of the most important sources of today's firms. Human resources management is more important than other competitive sources because these people use other assets in organization, create competitiveness and realize objectives. Thus firstly, organizations must understand the expectations of their workforce in order to achieve the desired performance. The realization of expectations of employees will enable the desired behavior of employees in the organization. The desired outcomes of the organization in managing their workforce are: competence, cooperation of employees with managers, cooperation of employees between them, showing the capabilities of employees; motivation, commitment and satisfaction; attitude and presence; employee behaviors.

The overall goal of performance management is to create a culture as high performance in which individuals and teams to take responsibility for the continuous improvement of business processes and their skills and contribute in achieving the targets set by managers. In particular, management performance can be expressed as the approximation of individual objectives of employees with organizational objectives provided that employees support the culture of the organization. (Armstrong, 2006).

The purpose of strategic human resource management is to improve business performance through people management. The organizations need to manage their human resources effectively and efficiently to achieve the desired goals and objectives. The achievement the goals and objectives translate also in better performance. So, the issues raised for discussion are: How should organizations manage their main source – human resources? Does strategic human resource management help to meet the needs, the goals and objectives of the business? As should be adapted strategic human resource management to realize the performance? How should adapt strategic management of human resources to increase organizational performance? The main objectives of the study are:

1. To observe closely how applicable is in practice the theoretical aspect of strategic human resource management for the achievement the organizational performance in Palestine.
2. To observe if organizations use the strategy of human resource management for the achievement of their performance objectives.
3. To observe the importance of these strategies in the organization and in their performance in Palestine.
4. Is there any relationship between Strategic Human Resource Management and organizational success in Palestinian firms?
5. Do Palestinian firms practice SHRM differently?
6. Does Strategic HRM have any significant effect on organizational performance?
7. Does SHRM give some organizations an edge over others that do not practice it

LITERATURE REVIEW

Human Resources Defined

Human Resources (HR) has been given many definitions over the years, but the two most popular definitions given by the American Heritage Dictionary are "the persons employed in a business or organization" (Houghton Mifflin Company [HMC], 2000) and "the field of personnel recruitment and management"(HMC). Both definitions fail to provide the key insight into the power of HR policies, strategies and quality personnel to be able to create substantial competitive advantage for an organization. The HR field has changed dramatically from the original HR departments of the early and mid-twentieth century to today. These original HR departments (called personnel departments at the time) existed primarily to hire new employees and administer employee benefits.

The achievements of organizational objectives can be different in different organizations. The studies emphasize the impact of HRM on organizational performance. Basically, and other studies in this area, point out that it is necessary to achieve organizational objectives and management of human resources should be strategic. Also, the strategies of human resource management should be integrated with the overall organizational strategy in the context of achieving performance. There has been much research on strategic human resource management that affects organizational performance. The discussions and definitions will be divided in two parts of speech: the strategic management of human resources and organizational performance.

Strategic Hrm Concept

Strategic HRM is a process that involves the use of overarching approaches to the development of HR strategies, which are integrated vertically with the business strategy and horizontally with one another. These strategies define intentions and plans related to the overall organizational considerations, such as organizational effectiveness, and to more specific aspects of people management, such as; resourcing, learning and development, reward and employee relations. Strategic HRM focuses on actions that differentiate the firm from its competitors (Purcell, 1999). It is suggested by Hendry and Pettigrew (1986) that it has seven meanings:

- ➢ The use of planning;
- ➢ A coherent approach to the design and management of personnel;
- ➢ Systems based on an employment policy and workforce strategy;
- ➢ Often underpinned by a "philosophy";
- ➢ Matching HRM activities and policies to some explicit business strategy;
- ➢ Seeing the people of the organization as a strategic resource;
- ➢ Achievement of competitive advantage (Armstrong, 2006).

Strategic HRM has a clear focus on implementing strategic change and growing the skill base of the organization to ensure that the organization can compete effectively in the future (Holbeche, 2004). SHRM facilitates the development of a human capital that meets the requirements of business competitive strategy, so that organizational goals and mission will be achieved (Guest, 1987). Strategy of human resource management is an integral part of business strategy. The main focus of this strategy is to achieve organizational objectives. So, strategy, then, is a set of strategic choices, some of which may be formally planned. It is inevitable that much, if not most, of a firm's strategy emerges in a stream of action over time (Boxall and Purcell, 2003).

Organizational Performance Concept

Campbell's (1999) theory defines performance as behavior or action relevant to the attainment of an organization's goals that can be scaled, that is, measured. Moreover, job performance is defined as what one is paid to do, or what one should be paid to do. The theory states that the measurement options, be they ratings from a supervisor, peer, or self, a simulated work sample, or hard criteria (e.g. tallying revenue generated, costs saved, customer complaints, or some variant of a computerized performance assessment) besides being valid, reliable, and not deficient should be free of contamination from sources of variation that are not under the control of the individual (e.g. differences in technology impacting a person's performance). Situational enhancers or constraints, if not taken into account in an appraisal, can contaminate the mean, variance, or both with regard to an individual's performance. Observation and interpretation hold the key to the establishment of effective criteria. Yet, an ongoing problem in appraising people is the lack of reliability in the observation of their behavior (Ronan and Prien 1971). This unreliability is largely attributed to well-known rating errors such as "first impressions", "halo", and "similar-to-me". Lifson (1953) found that up to one-third of performance measurement variance is due to rater differences despite the fact that the observers had considerable experience in observing and evaluating people in the workplace. Lance (1994) corroborated this finding. Experience, however, is not a substitute for training. To solve the problem regarding lack of reliability, an observer must be trained. In this section, training programs that have been shown to be effective are described, and the necessity of taking context into account is explained (Boxall, Purcell and Wright, 2007).

Organizational performance is one of the most broadly and extensively used dependent variables in organizational studies today, and yet, at the same time, it remains one of the most imprecise and loosely-defined constructs (Rogers and Wright, 1998). In the strategy literature, the focus of attention on this construct has been concerned almost entirely with financial measures of performance. Conceptually, organizational performance has been defined as the comparison of the value produced by a company with the value owners expected to receive from the company (Alchian and Demsetz 1972). Ramanujam (1986) indicate that a narrow definition of performance focus on the use of simple outcome-based financial indicators that are assumed to reflect the fulfillment of the economic goals of the firm.

The literature reveals that studies into the HRM performance have not determined a specific and precise meaning for the organizational performance construct. Some studies have used subjective measures to evaluate firms' performance, such as employee satisfaction, customer satisfaction, executives' perceptions about the company's performance, absenteeism, employee commitment, and other behavior aspects. Other studies reference various objective measures for evaluating firms' performance, such as financial and market indicators. As a result, there is no common theory concerning organizational performance, and researchers utilize different indicators or variables to measure this construct. For this reason, there is also a call for a precise theory of organizational performance (Janssens and Steyaert, 2009) and HRM researchers and professionals might give crucial and special consideration to filling such a gap (Guest, 2011).

Another way, the concept of performance has been expressed by Brumbrach (1988) as follows: performance means both behaviors and results. Behaviors emanate from the performer and transform performance from abstraction to action. Not just the instruments for results, behaviors are also outcomes in their own right – the product of mental and physical effort applied to tasks – and can be judged apart from results. This definition of performance leads to the conclusion that when managing performance both inputs (behavior) and outputs (results)

need to be considered. It is not a question of simply considering the achievement of targets, as used to happen in 'management by objectives' schemes. Competency factors need to be included in the process (Armstrong, 2006).

Strategy and Human Resources Management
In their seminal thesis on the development of HR function, Jamrog & Overholt (2004:1) declared that "over the past 100 years the HRM professional has been continuously evolving and changing, adding more and different responsibilities". The authors' account shows that the HRM function has evolved through many stages, from the medieval time through the industrial revolution, the scientific management, the human relations movement, etc., to the present strategic business partner model. For most of its history, HR has mainly focused on the administrative aspects of HRM, except recently, with the strident call for HRM to become a strategic business partner (Ulrich, 1997; Brockbank 1999; Lawler III & Mohrman, 2000; and Lawler III & Mohrman, 2003). Some scholars therefore, are wont to differentiate between the traditional HRM and SHRM. Traditional HRM is transactional in nature, concerned essentially with providing administrative support in terms of staffing, recruitment, compensation and benefits (Rowden, 1999; and Wei, 2006). Ulrich (1997) argues that the HR function has been an administrative function headed by personnel whose roles are essentially focused on cost control and administrative activities. Managing people is therefore the responsibility of HR manager.

HRM is then a "formal system for the management of people within the organization" (Bateman & Zeithaml, 1993:346). For Inyang (2001:8), HRM is simply "organization's activities, which are directed at attracting, developing and maintaining an effective workforce".

The many transactional or administrative activities involved in managing the human resources of an organization – training and development, staff motivation, compensation, staff commitment, quality performance, etc. are meant to be carried out effectively to influence the achievement of corporate objectives (Inynag, 2008a). The paradigm shift from the administrative aspects of HRM led to the emergence of SHRM as a new generation of value-added core responsibility or function of HRM. The emphasis of SHRM is that of a strategic business partner. It now supports the company's competitive advantage by providing high quality people and by helping business managers strategically plans the functions of the human capital within the organizations (Rowden, 1999). SHRM, strongly beliefs that critical organizational capabilities or performance behaviors are sine qua non, for the attainment of a particular business strategy or goal.

Unlike the traditional HRM which covers a wide range of employment practices, including recruitment, selection, performance appraisal, training and development and administration of compensation and benefits, SHRM reflects a more flexible arrangement and utilization of human resources to achieve organizational goals, and accordingly helps organizations gain competitive advantage (Wei, 2006).

Strategic Human Resources Management
Strategic human resource management is a complex process which is constantly evolving and being studied and discussed by academics and commentators. Its definition and relationships with other aspects of business planning and strategy is not absolute and opinion varies between writers. The definitions below are from the CIPD book Strategic HRM: the key to improved business performance (Armstrong, M et al 2002) within which there is comprehensive coverage of the various definitions and approaches to HRM, strategy and strategic HRM. Strategic HRM can be regarded as a general approach to the strategic

management of human resources in accordance with the intentions of the organization on the future direction it wants to take. It is concerned with longer-term people issues and macro-concerns about structure, quality, culture, values, commitment and matching resources to future need. It has been defined as: All those activities affecting the behaviour of individuals in their efforts to formulate and implement the strategic needs of business (Schuler, R.S. 1992). The pattern of planned human resource deployments and activities intended to enable the forms to achieve its goals Wright, P.M. et al 1992).

Strategic HRM can encompass a number of HR strategies. There may be strategies to deliver fair and equitable reward, to improve performance or to streamline structure.

However, in themselves these strategies are not strategic HRM. Strategic HRM is the overall framework which determines the shape and delivery of the individual strategies.

Boxall and Purcell (2003) argue that strategic HRM is concerned with explaining how HRM influences organizational performance. They also point out that strategy is not the same as strategic plans. Strategic planning is the formal process that takes place, usually in larger organizations, defining how things will be done. However strategy exists in all organizations even though it may not be written down and articulated. It defines the organization's behavior and how it tries to cope with its environment. Strategic HRM is based on HRM principles incorporating the concept of strategy. So if HRM is a coherent approach to the management of people, strategic HRM now implies that that is done in a planned way that integrates organizational goals with policies and action sequences.

Strategic Hrm and Business Strategy

A good business strategy, one which is likely to succeed, is informed by people factors. One of the driving factors behind the evaluation and reporting of human capital data is the need for better information to feed into the business strategy formulation process. In the majority of organizations people are now the biggest asset. The knowledge, skills and abilities have to be deployed and used to the maximum effect if the organization is to create value. The intangible value of an organization which lies in the people it employs is gaining recognition by accountants and investors, and it is generally now accepted that this has implications for long term sustained performance. It is therefore too simplistic to say that strategic human resource management stems from the business strategy. The two must be mutually informative. The way in which people are managed, motivated and deployed, and the availability of skills and knowledge will all shape the business strategy?

It is now more common to find business strategies which are inextricably linked with and incorporated into strategic HRM, defining the management of all resources within the organization. Individual HR strategies may then be shaped by the business strategy. So if the business strategy is about improving customer service this may be translated into training plans or performance improvement plans.

Strategic Hrm and Human Capital Management

A number of writers have argued that strategic HRM and human capital management (HCM) are one and the same thing, and indeed the concept of strategic HRM matches that of the broader definition of HCM quite well as the following definition of the main features of strategic HRM by Dyer and Holder (1998) shows: · Organizational level - because strategies involve decisions about key goals, major policies and the allocation of resources they tend to be formulated at the top. Focus - strategies are business-driven and focus on organizational

effectiveness; thus in this perspective people are viewed primarily as resources to be managed toward the achievement of strategic business goals. Framework - strategies by their very nature provide unifying frameworks which are at once broad, contingency-based and integrative. They incorporate a full complement of HR goals and activities designed specifically to fit extant environments and to be mutually reinforcing or synergistic.

This argument has been based on the fact that both HRM in its proper sense and HCM rest on the assumption that people are treated as assets rather than costs and both focus on the importance of adopting an integrated and strategic approach to managing people which is the concern of all the stakeholders in an organization not just the people management function. However, the concept of human capital management complements and strengthens the concept of strategic HRM rather than replaces it (Armstrong, M et al 2002). It does this by: drawing attention to the significance of 'management through measurement', the aim being to establish a clear line of sight between HR interventions and organizational success providing guidance on what to measure, how to measure and how to report on the outcomes of measurement · underlining the importance of using the measurements to prove that superior people management is delivering superior results and to indicate the direction in which HR strategy needs to go.

Shrm and Organizational Performance
Although most studies speak of SHRM practices leading to performance, such a one-way line of causation is unsatisfactory (Edwards and Wright, 2001). The usual key criticism of SHRM practices and organizational performance is that sound theoretical development that explains how such SHRM practices operate is absent (Becker and Gerhart, 1996). In an effort to address such theoretical developments in the area, scholars have proposed to consider intermediate linkages between SHRM practices and organizational performance (Ferris et al, 1998). Thus the general consensus developed is that SHRM practices do not lead directly to organizational performance.

Rather they influence firm resources, such as the human capital, or employee behaviors, and it is these resources and behaviors that ultimately lead to performance; even though only a few researchers (Katou and Budhwar, 2006) have measured these mediators and addressed their 24 importance. Since the SHRM practices are not standardized and they only differ according to the aims and objectives of each individual research, Katou and Budhwar (2006) suggest use of "mediating model" which adopts two systems of SHRM practices that are usually present in almost all works, namely, resourcing/development, aiming at attracting and developing human resources; and rewards/relations, aiming at retaining and motivating human resources. Similarly,

Gerhart (2005) suggests application of motivation as a mechanism by which SHRM practices impact organization performance.

Motivation is affected by a variety of SHRM practices, including recruitment, training and development, work arrangements, compensation systems, and appraisal systems. However, considering that the literature highlights that most studies examining the relationship between SHRM practices and organization's performance have been conducted mostly in a few developed countries (US and UK), and that only a few researchers have measured the mediators and addressed their importance, the question still left unanswered is the influence of SHRM practices on human capital or specifically, motivation and, consequently organizational performance in other contexts (Katou and Budhwar, 2006). To fill this gap and to further examine the existence of such a relationship, it is important to conduct research in

non-US/UK contexts. This study therefore seeks to investigate the association between SHRM practices and organization performance and also the mediating role of employee motivation in the Palestinian context.

Literature on SHRM shows that primarily there are three school of thoughts related to implementation of SHRM practices:

Universalistic approach
This is the simplest approach, which operates with a basic assumption that there is a linear relationship between variables and that can be extendable to entire population (Delery and Doty, 1996)

Contingency approach
Many researchers contend that contingency approach is more complex than universalistic approach because contingency approach is more inclined towards interactions rather than simple linear relationship (Schoonhoven, 1981; Van, A, and Drazin, 1985; Venkatraman, 1989).

Configurational approach
This is the most complex one because this approach is concerned about the synergetic effect of a certain SHRM practice (Doty, Glick, and Huber, 1994). Although there is more theoretical significance of contingency and configurationally approach, but both of these approaches lack statistical significance, while on the other hand, universalistic approach has more empirical significance (Syed et al., 2008). This study examines the implications of universalistic approach. We are using seven best practices of HRM that are described by Delery and Doty (1996) and further implemented by Syed et al., (2008), which are discussed below.

Internal career opportunities
Internal career opportunities refer to the tendency whether to hire employees mostly from within the organization or from the outside. According to Delery and Doty (1996), organizations give importance to internal hiring as compared to external. Pfeffe (1994) describes it as a give and take process in which managers promote their employees primarily from within the organization and show trust on them and in return expect greater performance.

The relationship between internal career opportunities and organizational performance is empirically supported by Blackwell, Brickley, and Weisbach (1994) and Shay (2006), who found a positive correlation between these variables. While, on the other hand, Gaertner and Nollen (1989) relate the promotion rate with psychological commitment.

Furthermore, Ngo and Tsang, (1998) provide support to Gaertner and Nollen's argument in their study of 778 business executives in Hong Kong ,who found a positive impact on commitment.

Training
Training refers to the quantity of official training given to employees. Organizations may choose either to provide extensive official training or to rely on attaining expertise through selection. Literature on universalistic approach shows that training has the most significant effect on organization's performance (Pfeffer, 1998, Pfeffer and Veiga 1999, Harel and Tzafrirs, 1999, Syed et al., 2008, Shay, 2006). Several researchers are of the view that training is a

universal best practice (Arthur, 1992, Delaney and Huselid, 1996, Huselid and Becker, 1996, Youndt, Snell, Dean, and Lepak, 1996).

In a study of Chinese firms, Syed et al. (2008) found training as the most influencing SHRM practice that accounted for 12.17% variance in organizational performance. Hatch and Dyer, (2004) found that extensive training caused fewer defects in products in their study of 25 semiconductor manufacturing firms. Huang (2001a, b) studied 568 Taiwan's companies and found a significant direct relationship among training and product and service quality. The findings of the study of managerial attitude toward HRM by Jennings, Cyr, and Moore, (1995) also found training and development to be the most significant SHRM practice, thereby supported the earlier studies.

Employee participation
Several researchers believe that employees' participation is directly associated with organization's performance (Arthur, 1992, Batt; Pfeffe, 1994; Colvin, and Keefe, 2002; Hodson, 2002; Kato and Morishima, 2002; Shay, 2006). Batt, Colvin, and Keefe, (2002) found an indirect relationship between employee participation in decision making and employee turnover rate. While Hodson, (2002) found another dimension and showed that workplace conflicts could be reduced through employee participation.

Result-oriented appraisals
According to Delery and Doty (1996), primarily appraisals are based on two types: results based and behavior based. Behavior-based appraisals focus on the specific behaviors that best match the job while result-oriented appraisals focus purely on the results of those behaviors. In a result-oriented appraisal system, certain incentives are given to employees on completion of their performance objectives (Pfeffer, 1998). Delery and Doty, (1996) found a significant positive relationship between result-oriented appraisal and organizational performance. Furthermore, the study by Syed et al., (2008) also showed similar results.

Profit sharing
Profit sharing refers to the integration of pay with organizational performance. Delery and Doty, (1996) found a positive significant relationship of profit sharing with performance. In a study of Chinese firms Syed et al., (2008) investigated the impact of profit sharing on two fold performance measures and found a unique relation in which profit sharing had a positive significant relation with only financial measures of organizational performance and not significant relation with other dimensions of performance (product/service quality).

Employment security
The importance of employment security is emphasized by Pfeffer, (1998) who holds that it is unrealistic on the part of the organizations to expect hard work, devotion and commitment from their employees in the absence of employment security. Syed et al., (2008) found a positive significant relationship between employment security and organizational performance. Furthermore, Pfeffer, (1998) describes that the importance of employment security according to firm's point of view is twofold: cost; and competition.

If organization does not provide its employees with job security then they obviously switch towards better opportunities and thus increasing cost (training, selection etc) and competition.

Job description
The degree to which job duties are well defined is very important. Delery and Doty, (1996) find a moderate correlation between job description and a firm's performance.

Furthermore, the study by Syed et al., (2008) shows that 8.30% variance in organizational Performance is observed due to job description.

What is performance measurement?
Performance measurement is simply a method for assessing progress towards stated goals. It is not intended to act as a reward/punishment mechanism, but rather as a communication and management tool. In Performance Measurement and Evaluation: Definitions and Relationships (GAO/GGD-98-26), the U.S. General Accounting Office (GAO) defines performance measurement as the ongoing monitoring and reporting of program accomplishments, particularly progress towards pre-established goals. It is typically conducted by program or agency management. Performance measures may address the type or level of program activities conducted (process), the direct products and services delivered by a program (outputs), and/or the results of those products and services (outcomes). A program" may be any activity, project, function, or policy that has an identifiable purpose or set of objectives.

Performance measures quantitatively tell us something important about our products, services, and the processes that produce them. They are a tool to help us understand, manage, and improve what our organizations do. Effective performance measures can let us know:

How well we are doing, · If we are meeting our goals, · If our customers are satisfied, · If our processes are in statistical control, and · If and where improvements are necessary.

They provide us with the information necessary to make intelligent decisions about what we do. A performance measure is composed of a number and a unit of measure. The number gives us a magnitude (how much) and the unit gives the number a meaning (what). Performance measures are always tied to a goal or an objective (the target). Performance measures can be represented by single-dimensional units like hours, meters, nanoseconds, dollars, number of reports, number of errors, number of CPR-certified employees, length of time to design hardware, etc. They can show the variation in a process or deviation from design specifications. Single-dimensional units of measure usually represent very basic and fundamental measures of some process or product. More often, multidimensional units of measure are used.

Relationship between Organizational Effectiveness and Human Resources Management
Most of the early reviews of the literature were published by notable industrial psychologists as cited in Ferris (et al., 1999). As a consequence, these reviews tended to emphasize applied individual-level issues, such as employee testing, training and motivation.

Gilmer's (1960) discussion of situational variables explicated the importance of matching personnel strategies with organizational strategies. Further, Gilmer invited researchers to design measures to assess the relationship between "individual personalities" and "company personalities" (1960 as cited in Ferris et al., 1999).

Some researchers have proposed that evaluations of effectiveness should be based on financial measures (e.g., profit) and for years, human resources issues have been secondary to such measures. Today, many CEOs agree that profit alone is not enough to hold the enthusiasm and loyalties of employees or to call attention to the vital elements of a business that must receive attention if it is to perform effectively (Watson, 1991 as cited in Zellars & Fiorito, 1999). Under the threat of exit (Hill & Jones, 1992), organizations now recognize that they must fulfil

responsibilities to many constituencies (Baumhart, 1968; Clarkson, 1991 as cited in Zellars & Fiorito, 1999), including employees.

Mohrman & Lawler III, (1997) advocates that an organization is created in which the human resource management practices of the past no longer fit. Organizations are faced with a situation that cries out for new solutions to the thorny challenges of integrating business and people needs.

Acquaah (2004) states that human resource management practices enhance organizational effectiveness and performance by attracting, identifying, and retaining employees with knowledge, skills, and abilities, and getting them to behave in a manner that will support the mission and objectives of the organization. Thus, the effectiveness of HRM practices depends on how it engenders the appropriate attitudes and behaviors in employees, in addition to its implementation.

Today, HR departments are expected to contribute to organizational performance (Ettore, et al. 1996; Fitz-enz, 1994; Mathes, 1993), and many organizations now believe that the success of the strategic management process largely depends on the extent to which the HR function is involved (Butler, et al. 1991 as cited in Zellars & Fiorito, 1999).

Studies at the last decade (e.g., Arthur, 1994; Delery & Dory, 1996; Huselid, 1995; Huselid & Becker, 1996; Huselid, Jackson & Schuler, 1997 as cited in Dyer & Shafer, 1998) have reported rather large effects on such outcomes as employee turnover, productivity, quality, profits, and even stock prices. Trouble is, for a variety of methodological reasons - including unreliable measures of HRM and OE, common method variance, poorly specified models, and cross-sectional rather than longitudinal research designs - these estimates strain credibility to the point of incredulity (Becker & Gerhart, 1996 as cited in Dyer & Shafer, 1998).

Over time, employees who feel neglected will seek alternatives and may withdraw either through increased absenteeism and turnover or decreased commitment. This may threaten the firm's survival or at least hinder its success as other sources of competitive advantage such as scale economies and protected markets wane – "what remain as a crucial, differentiating factor is the organization, its employees, and how they work" (Pfeffer, 1994, p.14 as cited in Zellars & Fiorito, 1999).

It is important that a firm adopt HRM practices that make best use of its employees. This trend has led to increased interest in the impact of HRM on organizational performance, and a number of studies have found a positive relationship between so-called "high-performance work practices" (Huselid, 1995) and different measures of company performance. Furthermore, there is some empirical support for the hypothesis that firms, which align their HRM practices with their business strategy, will achieve superior outcomes (Bae & Lawler, 1999). ©Research Institute for Progression of Knowledge www.ripknet.org

SURVEY ANALYSIS
Table 1: Socio-Demographic characteristics of the Respondents

Age of Business	Frequency	percentage
0-5	10	9
6-10	54	51
More than 10	42	40
Total	106	100
Number of employees		
Below 50	47	44
51-100	36	34
Above 100	23	22
Total	106	100
Product diversity		74.50
Single line product	79	25.50
Multi products	27	100
Total	106	

Source: Field survey (2016)

Analysis of data and research questions
Strategic HRM by SMEs
Is strategic HRM practiced by Palestinian firms?

Table 2

S/n	Variable	SA	A	U	D	SD	Remark
7	Structured planning mechanism	4 (3.8)	40 (40.6)	4 (5.7)	50 (50.0)	0	Disagreement
8	Differentiation strategy	9 (9.4)	38 (37.7)	4 (5.7)	42 (43.4)	3 (3.8)	Disagreement
9	Sales growth/low cost strategy	0	46 (45.3)	3 (3.8)	50 (49.0)	2 (1.9)	Disagreement
10	Mixed strategy/revenue growth	0	37 (34.9)	6 (5.7)	59 (55.7)	4 (3.3)	Disagreement

The research showed that majority of the SMEs in Palestine does not adopt strategic HRM. This is an indication that majority of the respondent's staff of the SMEs was in disagreement that their firms does not have structured planning mechanism, differentiation strategy, low cost strategy/sales growth and mixed strategy. This concludes that the disagreement to these variables implies that these firms do not adopt them in their management processes in return this will affect their performance level.

How does SHRM affect the level of competition in Palestinian firms?

Table 3

S/n	Variable	SA	A	U	D	SD	Remark
11	Do things that gives us edge over our rivals	20 (23.6)	58 (56.6)	7 (7.5)	11 (12.3)	0	Agreement
12	Frequency of customer complaints	0	13 (11.3)	33 (28.5)	65 (58.5)	2 (1.9)	Disagreement

The respondents showed that the adoption of strategic HRM will enhance the ability of SMEs to do things that gives them edge over others and as well enable them to experience growth in customer base. The result from the question item 12 indicated that none of the SMEs is best in terms of attaining to customer complaints; hence none of them could satisfy customers need effectively.

Hypotheses testing
H0 1: Adoption of strategic HRM has no significant effect on performance of SMEs Hypothesis one was testing with questionnaire item 7 and 8

Table 4

Variable	Data 1	Data 2	Rank 1	Rank 2	D	D^2
A	3	11	2	3	1	1
B	45	39	4	4	0	0
C	5	5	3	2	1	1
D	52	44	5	5	0	0
E	0	4	1	1	0	0

Calculating the Spearman Rank correlation coefficient of ranked data, R= 1-(6∑d2)/n (n2-1)

Analysis of the result, Spearman rank correlation (calculated) =0.9 Spearman rank (table) at p= 0.05=0.900
Degree of freedom (DF) = 3

This shows strong positive correlation between strategic HRM and performance level of SMEs in Palestine. On the other hand, adoption of strategic HRM has significant effect on performance level of SMEs in Palestinian firms. Since the p value is below the 5% level of significance for this study. Therefore, the study rejects the null hypothesis that adoption of strategic HRM does not have any effect on performance level of SMEs in Palestine.

H02: Adoption of strategic HRM does not have significant effect on level of competition of SMEs in Palestine.

Hypothesis two was testing with questionnaire item 11 and 12

Table 5

Variable	Data 1	Data 2	Rank 1	Rank 2	D	D^2
A	25	0	4	1	3	9
B	60	12	5	3	2	4
C	8	30	2	4	2	4
D	13	62	3	5	2	4
E	0	2	1	2	1	1

Using R= 1-(6∑d2)/n (n2-1)
Analysis of the result, the spearman rank correlation (calculated) =0.1 Spearman rank (table) at p=0.05=0.198
Degree of freedom=3

These represent strong positive rank correlation between strategic HRM and SMEs competition level. This implies that the adoption of strategic HRM influences competition in small and medium enterprises. The p value is below the 5% level of significance for this study. Therefore, the study rejects the null hypothesis that adoption of strategic HRM does not have significant effect on level of competition of SMEs in Palestine.

CONCLUSION

An effective Human Resources Management gives chance employees to contribute effectively and productively to the overall company direction and the accomplishment of the organization's goals and objectives. In working life, the most important value is employees. That is why Human Resources Management is the key factor for success of a business. Being a global world and being a part of global competitive markets processes force businesses to manage human factor more truly for every level.

A growing number of sources in HRM literature support the change and development of Human Resources perspectives from personnel management to HRM and then to Strategic HRM; they claim that, the human resources are the companies' most important assets, and effective management of these resources will contribute to the sustainable competitive advantage of firms. The survey showed the level of use and effect of strategic HRM on SMEs in Palestine. Descriptive and spearman rank correlation indicated the following findings Strategic HRM is an important and indispensable tool for any organization performance and for any organization that wants to gain competitive advantages over others. The study reveals that a genuine application of strategic HRM by SMEs will enhance staff and organizational performances. Strategic HRM has effect on level of competition of SMEs in Palestine.

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A Quantitative Evaluation of Metacognitive Awareness among Business Administration Students

Doha Al Awdah

Department of Business Administration- Female Branch

Jubail University College P O Box 10074, Jubail Industrial City 31961,KSA

Dr Sofia Jasmeen

Department of Business Administration- Female Branch

Jubail University College P O Box 10074, Jubail Industrial City 31961,KSA

Dr Asha Alexander

Department of Business Administration- Female Branch

Jubail University College P O Box 10074, Jubail Industrial City 31961,KSA

Abstract

Purpose - The metacognitive approach is the new learning paradigm to enrich the standard of education in general and that of business education in particular The purpose of the study was to ascertain the views and opinions of Business Administration students regarding the metacognitive awareness. Design- A self-administered questionnaire was distributed to female undergraduate students. Statements cover between two major components, including knowledge about cognition and regulation of cognition. For analyzing the hypothesis, parametric as well as non-parametric test have been used. Findings –The students had a substantial awareness of metacognition and was correlated positively and significantly with their academic performance. There was no significant difference in the metacognitive awareness of undergraduate students based on their academic levels, majors and learning styles. This significant improvement on the academic performance of the students was due to the university adherence to the domains set by the national quality framework. Students on each academic level benefited by alignment of Learning Outcomes, Assessment Methods, and Teaching Strategy and attained increasing knowledge ,skills communication and information technology preparing them to be autonomous learners. Originality/Value – This paper contributes to the need for significance of metacognitive awareness among undergraduate students. The findings provide insight into students' metacognitive skills and to adopt certain teaching strategies and assessment patterns for inculcating high order thinking in the students to prepare them as autonomous learners and engage lifelong earning among them.

Key words – Metacognition, Metacognitive Awareness, Academic Levels, Academic performance, Learning Styles, Autonomous learners

INTRODUCTION

Business Administration Education in developing countries is gaining more attention and consideration due to its prominent advantages in economic, political, technological and social aspects of the country. The metacognitive approach is the new learning paradigm to enrich the standard of education in general and that of business education in particular (Bransford et al, 2000). Metacognition is the process of controlling and monitoring one's own cognition. The

prefix 'meta' refers to thinking about thinking and it is the awareness of one's own thoughts and reflection on the thinking of the self and others (Kuhn and Dean, 2004). The paradigm shift from teacher-centered to student-centered education requires students to possess the metacognitive skills .This enhances lifelong learning which takes place   outside the formal business school environment (Hannon et al, 2004; Hinton, 2005). These skills are vital assets for the manger to perform in the workplace and play a crucial role   in delivery of courses in the domain of business education (Braun 2004). Cultural Metacognition is the key skill in the international business to handle complexity, communicate virtually, and work across cultures and to get the full potential of teams and networks of people. (Morris, 2012).Several studies examining the deficiencies in the level of general business decision making recommend that poor critical thinking is the main element of failing decision making (Braun, 2004; Pascarella, 1997).

Metacognitive skills which invariably includes critical thinking skills are the need of the hour. The academic institutions could play a dominant player to hone this skill among the learners. Halpern (1998) stresses that critical thinking is the most required skill at any workplace, yet there is ample evidence that many adults consistently engage in flawed thinking. Hannon et al (2004) identifies the presentation of a specific module entitled 'Critical Thinking' in the bachelor's program of business subjects. Braun (2004) converses the possibility of including the training of critical thinking skills into customary content-focused courses. The most frequently sought solution is adapting active learning approaches and incorporating the metacognitive skills in the learning method. The Harvard case study method (Braun, 2004) and problem-based learning are among the most well-known solution tools (Capon and Kuhn, 2004; Gijselaers, 1996).Metacognition is a critical part of self-learning .Today, most models of self-regulated learning consolidate parts of both metacognition and self-regulation concentrating on self-monitoring (Dinsmore, Alexander, & Loughlin, 2008). As students become more skillful at using metacognitive strategies, they become more confident, perform better on exams and complete work more efficiently. These students are characterized as one who ask questions, take notes, and assign their time and their resources in ways that help them to be autonomous learners (Paris & Paris, 2001)

The prominent role of metacognitive skills would, therefore, justify a strong locus in the business curriculum.The women in Saudi Arabia are encouraged to seek professional education and careers as part of the Kingdom's development plans. Building management competence is based on Islamic principles (Abdus Sattar Abbasi et al 2010, Mohammad Bagher Babaei et al 2012). The institutes use various models to develop competencies in the students (McEvoy et al, 2005). Research studies shows the presence of high managerial competencies (Asha et al, 2013) and highly entrepreneurial quotient (Asha et al, 2013) among management students. Metacognitive skills can be taught to students to improve their learning (Nietfeld & Shraw, 2002; Thiede, Anderson, & Therriault, 2003). It is imperative that instructors help learners develop metacognitively but the biggest challenge is to explore metacognition awareness among the students and to set tasks at an appropriate level of difficulty to make it challenging enough but not so challenging that students becomes frustrated(Biemiller & Meichenbaum, 1992).Research problemThe nature of learning in the Middle East and particularly among Saudi students seems to be deep-rooted in memorization and recall (Rugh, 2002; Cassidy, 2003). To be self-directed, learners, need a set of skills to be developed and also an attitude. The skills must be developed to be effective and the individuals may utilize these skills, depending on the particular requirementsof a given situation. If a student's formal education consisted of his passively receiving information from his teachers, then that student's skills in monitoring and managing his ownlearning may be poorly developed, and his commitment to actively managing his own learning will be lacking. (Allison 2006). However,

this attitude to learning can be changed with the useof teaching and assessment strategies that is focused on deep and constructive learning and facilitate the culture of self-reflection, self-regulation and self-efficacy among learners. This will help them acquire the relevant competencies needed to function optimally as managers in Saudi Arabia. The literature reveals that the training of metacognitive abilities and the assessment of these abilities is an area which is attracting a lot of attention from academicians during current times. It is very challenging for learners to be mindful about their strengths and limitations. However, in recent years, scant literature has addressed issues in assessing the level of metacognitive awareness and its relation with demographic factors. Then the primary research question of this study was, "What is the level of metacognition awareness among undergraduate business students at College of Business Administration"?

RESEARCH METHODOLOGY

Primary data were collected by self-administered questionnaire distributed to female undergraduate students of Eastern province of Saudi Arabia. The duration of the undergraduate program includes four academic years plus one academic year for the preparatory. Each academic consists of two semesters. The figure of female students pursing business administration was large in number so it was impracticable to pursue the study on hundred percent enumerative bases. The sample included representation from freshmen (first-year college students), sophomores (second-year college students), juniors (third-year college students) and seniors (fourth-year college students). The questionnaire was distributed to 250 respondents and response were received from 190 respondents. The empirical studies related to metacognition assessment are built primarily on the observation of students solving problems or in thinking aloud sessions. A variety of self-scoring instruments are now available to assess the metacognitive abilities of university students. The present research uses the self-scoring instrument that is metacognitive awareness inventory (MAI) (Schraw and Dennison) and aims to add to the sparse literature on assessing the level of students' metacognitive awareness. It further aims to find if metacognitive awareness is correlated with the student's (a) academic performance (b) academic levels (c) learning styles and (d) majors.

The questionnaire comprised of two parts. In the first section the respondents provided demographic information along their academic level, major, cumulative GPA and getting a line mode. Academic levels were freshmen, sophomores, juniors and seniors. Two options on major were provided, namely Business (BUS) and Management Information Systems (MIS). Cumulative GPA included five ranges, first is below 2 referred to as underperforming students. The second category is between 2.00 to 2.49 and the third was between 2.50 and 2.99. The average students fall under the second and third category. The fourth category of GPA is between 3.00 and 3.49 categorized as excellent. While the fifth range, which falls between 3.5 and 4 is regarded as exceptional. The learning styles category included visual, auditory, kinesthetic and mixed style. Visual learners do learn best through seeing and observing, auditory learns best through listening, kinesthetically learn best while doing, touching and moving while mixed learners those whom are adaptable to any learning situation. A learning style questionnaire developed by the British Council was circulated to students at the start of each semester in which have made students aware of their style of learning.

The second part of the questionnaire was built from metacognitive awareness inventory (MAI) (Schraw, G. & Dennison, R.S. (1994). It encompasses 24 statements based on the five point Likert scale ranging from strongly agree to strongly disagree. Statements covers between two major components, including knowledge about cognition and regulation of cognition (Brown, 1987; Flavell, 1987; Jacobs & Paris, 1987). Knowledge about cognition includes three sub

processes that facilitate the reflective aspect of metacognition: declarative knowledge (knowledge about self and strategies), procedural knowledge (knowledge about how to use strategies), and conditional knowledge (knowledge about when and why to use strategies). Regulation of cognition includes a number of sub processes that facilitate the control aspect of learning. Five component skills of regulation includes Planning (goal setting, and allocating resources prior to learning), Information Management Strategies (Skills and strategy sequences used to process information more efficiently including organizing, elaborating, summarizing, selective focusing),Comprehension Monitoring (assessment of one's learning or strategy use),Debugging Strategies(strategies used to correct comprehension and performance errors)and Evaluation (analysis of performance and strategy effectiveness after a learning episode) (Artzt& Armour-Thomas, 1992; Baker, 1989). Data preparation begins with preliminary check of the entire filled up questionnaire for its completeness. The collected data was edited, coded, tabulated, grouped and organized according to the requirement of the study and then entered into SPSS (Statistical package for social sciences) for analysis. The Cronbach's Alpha test was run to estimate the reliability of questionnaire items, Descriptive Statistics such as mean, standard deviation, frequencies were used to summarize and describe the basic features of data, Pearson Product-Moment Correlation test was used to measure the strength of a linear correlation between variables, One-Way Analysis of Variance (ANOVA) and T Test was used to further analyze the data. To achieve the stated objectives, the following hypotheses were framed:

Ho1: There is no significant difference in the metacognitive awareness of students based on their academic performance

Ho2: There is no significant difference in the metacognitive awareness of students based on their academic levels

Ho3: There is no significant difference in the metacognitive awareness of students based on their learning styles

Ho4: There is no significant difference in the metacognitive awareness of students based on their majors

ANALYSIS AND INTERPRETATION OF DATA

The primary data were analyzed using Statistical Package for the Social Sciences (SPSS 16.0). The students' level of metacognitive awareness was determined by the analysis of the results of the questionnaire.

Reliability Test: Cronbach's Alpha for Internal Consistency: Cronbach's alpha coefficient was run to determine the reliability of the questionnaire items of knowledge and regulation. Cronbach's alpha ranges between 0 and 1. The closer Cronbach's alpha coefficient is to 1 the greater the internal consistency of items in the scale. To determine the reliability of each group of items, George and Mallery (2003) developed the following rules of thumb: > 0.90 = Excellent, 0.80 - 0.89 = Good, 0.70 - 0.79 = Acceptable, 0.60 - 0.69 = Questionable, 0.50 - 0.59 = Poor and < 0.50 = Unacceptable. The value of alpha coefficient of knowledge and regulation items which are 0.80 and 0.81 respectively, suggesting that the items have a good internal consistency. Hence, it can be concluded that the questionnaire is reliable.

Descriptive Analysis: Table 1 shows the descriptive statistics of the eight sub-categories of metacognition. It describes basic features of the data in a meaningful way. Mean score is the average of a data set whereas standard deviation is dispersion of a set of data from its mean. It clearly shows that the mean score of the eight sub-scales are above the mid-point on a five-point Likert scale. The mean score is highest in both debugging which is equal to 3.98 and conditional knowledge which is equal to 3.97 and lowest in monitoring and procedural

knowledge which are equal to 3.72. The mean score of knowledge and regulation are very close. Students overall metacognitive awareness was calculated as 3.86 which is above the mid-point on a five point Likert scale. It can be concluded that the level of metacognitive awareness of the students was high.

Table 1: Descriptive Statistics of Subscales of Metacognition

	Mean	Std. Deviation	Variance
Declarative Knowledge	3.924	.578	.334
Procedural Knowledge	3.721	.665	.442
Conditional Knowledge	3.974	.894	.798
Planning	3.747	.702	.493
Information Management	3.945	.594	.353
Monitoring	3.719	.606	.368
Debugging	3.977	.578	.334
Evaluation	3.897	.689	.475
Knowledge	3.873	.587	.344
Regulation	3.857	.473	.224
Metacognition	3.861	.473	.224

Correlation: A Pearson product correlation was run to determine the relationship between students' awareness of the eight sub factors of metacognition and their academic performance as demonstrated by cumulative GPA. The closer the number is to 1 the stronger the relationship. A plus sign means a positive correlation while a minus sign means a negative correlation. Table 2 shows Pearson's r and it is (+) between all of the sub-scales of metacognition and GPA. Hence, there is a positive relationship between the eight subscales of metacognition and cumulative GPAs of the respondents. Furthermore, the p-value indicates a significant correlation. Hence it is inferred that there is a significant positive correlation between the eight subscales of metacognition and respondents' GPAs. A Pearson product correlation was run to determine the relationship between students' awareness of the two components of metacognition in relation to their academic performance. Knowledge and regulation overall and their correlation with respondents GPAs were calculated.

Table 2: Correlations between Subscales of Metacognition and GPA

	Declarative Knowledge	Procedural Knowledge	Conditional Knowledge	Planning	Information Management	Monitoring	Debugging	Evaluation
Procedural Knowledge	.616**							
Conditional Knowledge	.463**	.483**						
Planning	.554**	.563**	.467**					
Information Management	.569**	.542**	.326**	.384**				
Monitoring	.475**	.547**	.429**	.526**	.477**			
Debugging	.479**	.364**	.272**	.341**	.547**	.329**		
Evaluation	.613**	.488**	.498**	.513**	.469**	.471**	.379**	
GPA	.313**	.274**	.186*	.249**	.265**	.131	.273**	.263**

Table 3 shows Pearson's r for the correlation between knowledge and GPA which is 0.301, regulation and GPA is 0.317. Therefore, the value of r is positive in both correlations. Furthermore, p-value= 0.001, indicates that the correlation is significant at the level 0.01. Hence it is inferred that there is a significant positive correlation between respondents' knowledge and regulation of metacognition and their GPAs. Thus, alternative hypothesis is accepted and there is a significant correlation between students' metacognitive awareness and their academic performance. The significant positive relationship between student's academic performance and metacognitive   awareness .has likewise been demonstrated in studies conducted by Sawhney and Bansal (2015) in undergraduate students.

Table 3: Correlations between Knowledge, Regulation and GPA

	Knowledge	Regulation
Regulation	.768**	
GPA	.301**	.317**

One-Way ANOVA: A one- way analysis of variance (ANOVA) was calculated on students' metacognitive awareness to their academic levels. Table 4 shows, F (3, 186) = 1.45, p=0.229 > 0.05 (chosen level of significance). Hence it is inferred that there is no significant difference in the metacognitive awareness of students based on their academic levels. Thus, null hypothesis is accepted and there is no significant difference in students' metacognitive awareness among different academic levels while Khezrlou (2012) finding of one-way ANOVA indicated learners' preferences for the metacognition strategies varied across different levels of education.

Table 4: One-way ANOVA of Metacognition and Academic Levels

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.968	3	.323	1.453	.229
Within Groups	41.304	186	.222		
Total	42.272	189			

A one-way analysis of variance (ANOVA) test was performed on students' metacognitive awareness of objection to their learning styles. Table 5 shows, F (3, 186) = 0.95, p=0.416 > 0.05 (chosen level of significance). Hence it is inferred that there is no significant difference in the

metacognitive awareness of students based on their learning styles. Thus, null hypothesis is accepted and there is no significant difference in students' metacognitive awareness based on their learning styles Steven Shannon (2008) carried out research project to determine metacognitive strategies for specific learning styles to create self-directed learners.

Table 5: One-Way ANOVA of Metacognition and Learning Styles

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.640	3	.213	.954	.416
Within Groups	41.631	186	.224		
Total	42.272	189			

T test: Table 6 shows metacognition mean scores of BUS and MIS majors of respondents. The mean score of MIS 3.90 is slightly higher than of BUS which is 3.84.

Table 6: Group Statistics of Metacognition among BUS and MIS

	Major	N	Mean	Std. Deviation
Metacognition	BUS	123	3.836	.458
	MIS	67	3.907	.499

Table 7 shows Independent Sample T Test between BUS and MIS Majors. An independent samples test was run to determine whether the metacognition of MIS and BUS majors are significantly different. Indicates p-value= 0.419 > 0.05 (chosen level of significance); thus, the upper set of figures will be considered (equal variances are assumed). Hence it is inferred that there is no significant difference in the metacognitive awareness of students based on their major. Both BUS and MIS students are equally aware of their own metacognitive manners. Thus, null hypothesis is accepted and there is no significant difference in students' metacognitive awareness based on their majors while Dirk Tempelaar (2006) in his empirical analysis, finds strong differences in the relationship between metacognition and course performance for different types of subjects.

Table 7: Independent Sample T Test between BUS and MIS Majors

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Equal variances assumed Equal variances not assumed	.656	.419	-.998	188	.320	-.07163
			-.972	126.01	.333	-.07163

DISCUSSION

In recent years, business education has garnered much attention due to widespread research that has been conducted in management education on developing competencies for competitiveness in management students (Asha Alexander 2015), measuring entrepreneurial quotient(Asha Alexander and Areej Al Shamrani.(2013a), measuring managerial competencies in management program.(Asha Alexander and Farah A. Al-Moaibed .(2013b) need analysis for the human resource management program (Asha Alexander and Ghadah Al Saleh (2015) and exploring factors for improving career fair experience for management students (Asha Alexander and Ghadah Al Saleh, 2016) but insufficient literature has addressed issues on metacognition awareness among business administration students in Saudi Arabia. The present study was confined only to female Business Administration students in the eastern province of Saudi Arabia. Moreover, the study was restricted to 190 undergraduate students; a

larger sample can be taken up in future research to comprise all colleges of Saudi Arabia for further study. The results obtained in this study suggest that students had substantial awareness and control over their thinking and that there is a positive correlation between students' awareness of metacognition and their academic performance and there is no significant difference in the metacognitive awareness among freshmen, sophomores, juniors and seniors. Hence, students from the four different academic levels disclose similar metacognitive awareness. Additionally, findings with regard to the majors reveal that there is no significant difference in the metacognitive awareness between Business students and Management Information Systems students based on their majors. Furthermore, the findings of this study relating to the learning style disclose that there is no difference in the metacognitive awareness among visual, auditory, kinesthetic and mixed learners. This may be due to learners adopt different styles of learning for Different course requirements. There is no significant difference in the metacognitive awareness of undergraduate students based on their learning styles. Recent studies have also indicated that metacognitive aware learners are more strategic and perform better than unaware learners (Garner & Alexander, 1989; Pressley & Ghatala, 1990).The significant improvement in the academic performance of the students and awareness of metacognition skill in present study was due to the adherence of curriculum to the domains set by the national qualifications framework (NQF) at Saudi Arabia Students Learning Outcomes,

Assessment Methods, and Teaching Strategy are aligned between student learning and teaching and aim of stimulating higher order thinking of students. The learning domains are Knowledge, Cognitive Skills, Interpersonal Skills & Responsibility, Communication and Information Technology. Simpson and Nist (2000) emphasize that instructors need to provide explicit instruction on the use of study strategies. Differentiated teaching strategies are selected in present study to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities Therefore, a module on enhancing metacognitive skills can be planned and mapped with courses' learning outcomes which will further improve students' knowledge and regulation of their cognition and helps them to be autonomous learners. The instructors can guide the students to become strategic thinkers by encouraging students to preset questions in that spans three phases of metacognition in the learning task namely planning, monitoring and evaluating phase (Fogarty, 1994).

CONCLUSION

Business educators are entrusted with the task of accomplishing critical thinking and selfdirected learning among the students .The high metacognition awareness among the students in the present study is an evidence to the fact that the students possesses these vital skills and the delivery of courses in the domain of business education was very successful from teacher centered to student-centered education thereby enriching the standard of business education. Developing metacognitive awareness is important to the instructors as well as it will further help them to guide learners to become strategic thinkers by creating right challenging and motivating environment .It helps the learners to be more conscious about what they are learning and engage in lifelong learning,

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The Impact of the Resource Specificity on the Interfirm Interaction

Popov Evgeny
Institute of Economics, Ural Branch of Russian Academy of Sciences
Ural Federal University, Post address: 620014, Russian Federation
Ekaterinburg, Moskow st., 29, Institute of Economics
Ural Branch of Russian Academy of Sciences

Simonova Viktoriya
Ural Branch of Russian Academy of Sciences.
Russian Federation, Ekaterinburg, Moskow st., 29
Institute of Economics, Ural Branch of Russian Academy of Sciences

Abstract
The transactional nature of hybrid organisations in the Russian industrial market is analysed with the help of conceptual tools drawn from transaction cost theory. The dependency of the impact of the specificity of resources on the transactions of hybrid organisations is empirically determined. An outline of the specific character of the organisation of inter-firm cooperation in the Russian industrial market is presented.

Keywords: inter-company transactions, hybrid organisation, transaction management mechanisms, transaction cost theory

INTRODUCTION

In modern institutional economic theory, three types of alternative mechanisms for transaction management can be distinguished (market, hierarchical and hybrid), the applicability of which is explained with the help of conceptual tools drawn from transaction cost theory (see Williamson O., 1991). Researchers in this area are paying particular attention to hybrid mechanisms of transaction management, due to their widespread and effective use by corporations in the real economy.

It has been over 20 years since the publication of one of the first studies to assess the hybrid forms of Russian organisations (see Bim, Jones and Weisskpof, 1993); however, this paper remains a relevant assessment of the real transactional interaction between participants of a hybrid agreement. A fortiori, the relevance of such research increases under the conditions of the transformation of the mechanisms of governance transactions in Russian industry.

The objective of the present work is to reveal the transactional nature of hybrid organisations in Russian corporations using conceptual tools drawn from transaction cost theory. In order to substantiate the conclusions of the study, an empirical verification of the working hypotheses regarding the impact of the specificity of resources for inter-firm transactional interactions is applied.

THE TRANSACTIONAL NATURE OF HYBRID ORGANISATIONS

Hybrid organisational forms occupy an intermediate position between hierarchical and market forms (see Williamson O., 1991). Representing a discrete set of organisational forms, they are not uniform in content, combining in varying degrees the attributes of the two extreme types of institutional arrangements. In this case, they are not simply the result of a synthesis of the attributes of two opposing governance mechanisms, but possess unique characteristics that inhere in the distinctive logic of processes occurring through their coordination (see Podolny Joel M., Page Karen L., 1998). Analysis of these unique characteristics, adapted to the particular features of certain transactions, can reveal the transactional content of hybrid organisations.

In order to identify the essential characteristics of hybrid organisations, it is necessary to begin with an examination of the various definitions and approaches to the identification of sustainable forms of inter-firm interaction within the framework of scientific approaches such as transaction cost theory, the network approach, relationship marketing, strategic management and others.

The introduction by Oliver Williamson of the concepts of "hybrid organisations" into the economic cycle contributed to the qualitative analysis of different organisational means within a single theoretical framework. Williamson defined hybrid institutional arrangements as long-term contractual relationships, which preserve the autonomy of the parties, but also involve the creation of transaction-specific precautions that prevent opportunistic behaviour of participants and provide adaptation to changing circumstances in terms of non-zero contractual risks (see Williamson O., 1991). This definition points to the long-term nature of the relationship. This approach preserves the independence of the parties based on the right of ownership; the stability of the relationship is provided by inbuilt mechanisms designed to protect transactions.

Claude Menard treats "hybrid forms as special structures of transaction management, distinguished both from the market and from the hierarchy, which are relevant in two cases – depending on participants or multilaterally when this dependence is already creates a need for close coordination, but is still insufficient for full integration" (see Menard C., 1998). Here he emphasises the strategic interdependence of the participants' intercompany relationships and focuses on the need for joint coordination of economic activities.

In accordance with the approach of Candace Jones and his colleagues "the network organisational model presupposes a selected, sustainable and structured range of autonomous businesses involved in the creation of goods and services on the basis of implied and indefinite contracts, contributing to adaption to unforeseen circumstances, the environment, and coordinating the protection of exchange transactions" (see Jones C. et al., 1997). According to this definition, inter-firm interaction presents itself as a stable, selective system. However, the basis of cooperation in such a system implies incomplete contracts and implied agreements, involving a problematic recourse to external legal mechanisms.

Jeffrey Bradach and Robert Eccles emphasise the unique coordination mechanism used in inter-firm cooperation, which is neither reducible to a hierarchical administrative authority nor to market-derived price signals. The authors interpret hybrid organisations as "transaction management mechanisms, based on trust and cooperation" (see Bradach J., Eccles R., 1989).

The selection of a number of characteristics that should be used when disclosing the transactional nature of hybrid organisations can be derived from an analysis of the definitions.

Primarily, to the distinctive characteristics of hybrid organisations should be added the fact that the resources of economic agents include the use of assets common to several companies rather than focusing on a single integrated structure or an exclusive contract. When pooling resources and firm-specific functionality for any joint implementation activities, business entities (firms) remain autonomous in the legal sense and only carry out economic cooperation on the basis of the contracts and agreements concluded between them. At the same time, the process of cooperation in hybrid organisations, based on recurring transactions, aims to preserve the differences between the individual partners to ensure their complementarity.

The basis for such cooperation consists in the contractual nature of the interaction. Cooperation and coordination between independent economic entities that share resources is based on contracts that are more or less formalised. At the same time, however, many authors emphasise the importance of attitudinal contracting, reflecting the "spirit of the agreement", which is often more important for the interaction of participants than a formal agreement (see Menard C., 2004; Baker G., Gibbons R., Murphy K. 2002). The importance of a sustainable interaction is underpinned by the sharing of complementary and means-specific resources and the competencies of firms whose union is not possible based on an exclusive use of the price mechanism. Instead, it is necessary for the parties to ensure compliance with each other. The requirement for compliance on the one hand presupposes the existence of switching costs applied to the other counterparty and, on the other, indicates the emergence of multiplicative effects, providing a systematic advantage to hybrid organisations. The foregoing allows us to characterise the studied forms of organisation not as open but rather as selective systems, suggesting the presence of non-price barriers to entering into contractual relations. In summary, organisational relations are described as "hybrid" when there is a formal autonomy of interdependence between the parties, but the mechanism of their selection is an important element of the investigated forms of economic cooperation.

Another important characteristic of a hybrid inter-firm association is the strategic management of joint activities in the absence of legal controls over the relevant property. This means that, irrespective of whether hybrid organisations primarily rely on market-based mechanisms or the management of administrative processes, individual elements of the planning interactions must be implemented collaboratively. In other words, planning in the context of resource pooling is not primarily autonomous but is carried out in accordance with the formation of the private plans of companies. In general, there may be sufficient freedom of action within the framework of inter-firm interaction to support the possibilities of determination of priorities according to the character and focus of activities that take into account the responsibility for the final result.

Since the basis of cooperation consists in incomplete contracts, specific mechanisms for adapting to unexpected events are required in order to ensure the sustainable operation of this form of economic cooperation. In other words, freedom from conflicts is not guaranteed (see Popov E.V., Simonova V.L., 2006). Therefore, in order to ensure the sustained operation of the hybrid agreements, procedures for the settlement of conflicts through collaborative problem solving should be developed (see Mohr J., Spekman R., 1994). In fact, it is a mechanism for filling the gaps in the contract, which is too expensive to identify ex-ante on account of high uncertainty and bounded rationality, and in which resides the significance for the continuation of cooperation. Here there is ample scope for putting private order conflict resolution mechanisms into effect reducing the need for recourse to the legal system.

Important elements of the coordination system in the context of hybrid inter-firm interaction, ensuring the stable functioning of the forms of organisation are reputational mechanisms,

replacing the costly monitoring system obtaining in hierarchical structures. Disclosure requirements are aimed at easing the problem of information asymmetry. Given the selectivity of hybrid organisations, the communication system, within and through which information is exchanged, must have specific properties for business entities participating in this agreement.

Thus, hybrid organisations require the sustained interaction of legally independent firms involved in cooperative activities on the basis of incomplete or implied formal contracts, providing for flexibility in adapting to unforeseen circumstances and comprising protection mechanisms for implemented transactions. The type of contracting framework involves formal contracts, within which actively developing informal relationships, based on trust and social ties, are formed as a result of the experience of the ongoing interaction.

The proposed concept of hybrid organisations creates a theoretical basis for the development of working hypotheses concerning the impact of the specificity of the resources used in the transaction characteristics of inter-firm cooperation.

IMPACT OF THE RESOURCE SPECIFICITY ON THE INTERFIRM INTERACTION CHARACTERISTICS

Impact of the resource specificity

As part of the approach developed by Williamson, alternative control mechanisms, such as market, hierarchical or hybrid, are not mutually exclusive, but complementary; consequently, their application is determined by the level of transaction costs (see Williamson, 1996).

The magnitude of these costs is directly dependent on the conditions and characteristics of the ongoing transactions, amongst which are typically divided the specificity of resources, the frequency of transactions and the degree of economic uncertainty. Despite the importance of attributes such as the frequency of transactions and the level of uncertainty, Williamson rejects a key role in the exact extent of resource specificity, determining the choice of adequate forms of coordination. The specificity of resources determines the extent to which these resources are tailored to the needs of a particular user, as well as the degree to which they can be used to satisfy alternative needs.

To date, there are a number of empirical studies confirming the conclusions of the theory of transaction costs. In particular, researchers confirm the influence of the level of specificity of assets costs accompanying the transaction, and consequently the selection of the control mechanism (see Anderson E., Schmittlein D., 1984).

Thus, the specificity of the resource is a key feature of the transaction, which defines the organisational parameters of inter-firm cooperation. Accordingly, the theoretical justification of the main characteristics of the organisation of inter-firm interaction is necessarily dependent on the degree of specificity of the resource used in transactions with a view to their subsequent empirical verification.

First of all, a list of characteristics of inter-firm cooperation is defined within the framework of hybrid agreements, the combination of which will be determined by the degree of specificity of resources involved. Proceeding from the above analysis, the transactional nature of hybrid organisations can be divided into four groups of characteristics of inter-firm cooperation: institutional, management, communicational and resource. The institutional component of the organisation of inter-firm agreements reflects the prevailing norms of interaction between firms; the management component characterises the strategic orientation of inter-firm cooperation and coordination mechanisms used in collaborative activities; the

communicational component reflects the effectiveness of the exchange of knowledge and information between the participating companies; and the resource component characterises the complementarity of participants of the inter-firm cooperation. Table 1 reveals the contents of the isolated groups.

The impact of the specificity of the resource on the characteristics of the proposed hybrid agreements is summarised below.

Institutional Characteristics

The use of specific resources is associated with problems such as the problems of "extortion" and irreversible investment. To mitigate these risks, the participants in the interaction will more thoroughly try to elaborate formal agreements, the detailing of which will reflect the specific conditions of the transaction relationship. To a certain extent, this legally protects the partners. However, complex binding contracts are usually too complex and too expensive; for this reason, the growth of the specificity of resources and associated risks require mechanisms that are complementary to formal contracts. Accordingly, it would be logical to expect that with increasing specificity of resources the nature of the contractual relationship will change, with formal contracts being supplemented by informal agreements formed on the basis of the relationship (first hypothesis – H1).

From the point of view of the importance of trust as a characteristic of hybrid agreements, an illustrative interpretation of some authors is presented in terms of the three coordination mechanisms based on price, power, and trust (see Bradach J., Eccles R., 1989).

Many authors consider trust between partners as an important mechanism for ensuring the stability and security of relations in terms of their interdependence, which is a consequence of the use of specific resources (see Hunt S., Morgan R., 1995). Consequently, we can assume that the higher the specificity of the resources used, the higher the level of trust between the partners (H2).

According to advocates of the network approach to the analysis of hybrid arrangements, social networks are the fundamental basis for sustainable inter-firm interaction (see Nieves J., Osorio J., 2013). Social ties between employees of firms included in a network of inter-firm cooperation contribute to the accumulation of specific inter-firm knowledge and continuity of relations, which can have a significant impact on the use of specific resources by legally autonomous economic agents. Consequently, the growth of asset specificity increases the importance of social networks based on interpersonal relationships (H3).

Communicational Characteristics

The interaction between economic agents within a hybrid agreement is based on an explicit or indirect exchange of information. R. Miles and C. Snow consider the exchange of information between the parties as the basis of trust and coordination (Miles R., Snow C., 1986). Disclosure requirements are aimed at easing the problem of information asymmetry, including the behavioural uncertainty of economic agents, and enhancing the effectiveness of the coordination process between the inter-firm cooperation of the parties. Therefore, with an increase in resource specificity, the intensity of information sharing also increases.

In addition, a growth in asset specificity increases the strategic level of the transmitted information. Since the exchange of information involves certain risks, especially in an environment where the information is strategic in nature, there is an increased demand for quality technical communications with partners. Consequently, a growth in the specificity of

the resources used is accompanied by an increased intensity of information exchange, with this information becoming ever more strategic in nature, which, in turn, generates the need for more reliable information technology (H4).

Management Characteristics

In terms of inter-firm interaction that involves the use of specific resources, it is necessary to reconcile the objectives of the various participants in order to ensure the effectiveness of the interaction. In addition, there is a need for close cooperation with partners in addressing operational issues. Therefore, with increasing resource specificity, enhanced administrative functions need to be unified under the legal independence of participants of inter-firm cooperation (H5).

Although, from the perspective of property rights, the main characteristic of the hybrid relations of firms consists in their autonomy, property (property relations) can be distinguished as distinctively characteristic in the Russian business environment as a mechanism for coordination between the parties' inter-firm interactions. The property mechanism has considerable potential for effective long-term cooperation by reducing the cost of transactions by means of a simplified procedure for the harmonisation of goals, selection of strategic alternatives and coordination of ongoing activities. We can assume that under the conditions of high risks associated with specific assets, the enterprise will seek to organise inter-firm cooperation through the use of the mechanism of participation in the property of the partner (H6).

Resource Characteristics

To ensure the sustainability of transactions that use specific resources, it is necessary to ensure the compliance of the parties to each other, which involves the implementation of mutual investments and formation of mutual relations (Wilson D., Jantrania S., 1996). Therefore, the specificity of tme resource necessitates investment in the partner in order to ensure better compliance of the parties to each other (H7).

In addition, the degree of specificity of the resource creates a locking-in effect on the part of the partner and increases the costs of switching suppliers. In this case, inter-company relationships will be regarded as a selective system (H8).

EMPIRICAL RESEARCH

Today there are many investigations devoted to the empirical verification of the transactional theory basis. In particularly these investigations are about the dependence between transactional characteristics and the government mechanisms. In the most of the papers researchers show the specificity of assets as the key factor in the choosing of the method for transactional organization. But here we haven't the single view on the empirical identification of this parameter. Therefore in our research we used the expert estimation of the degree of specificity of resources due to the investigation of Masten S., Meehan J., Snyder E. (1989): Spes_Res is the expert assessment of the degree of specificity of resources used, measured on a 10-point scale (1 corresponds to the level when the resource acquired by the supplier is the standard on the market; 10 corresponds to a product specifically designed by the provider for the needs of a particular company which does not have the possibility of being used by another consumer.

In accordance with the theory of transaction costs in relation to the assessment of economic institutions (Popov E., 2014), the specificity of resources is considered by us as influencing

parameters that may influence the choice of the characteristics of the organisation of inter-firm relationships., which also was estimated by the 10-point scale jn the basis of survey.

- Extent of formalisation of relations (Formal_Re) is estimated by a score system in which a business relationship with a partner is governed by a formal agreement: one point corresponds to the ratio in which the contract is a mere formality, with all issues being resolved on an informal basis; 10 points designates relationships that are governed solely by the terms of the contract, which stipulate all possible conditions of the deal and take into account all the specifics of the relationship with the counterparty;
- Level of trust between the partners (Trust), measured according to a 10-point scale, calibrated according to the belief that the partner will not act in bad faith (1 corresponds to a situation where there is no assurance that the partner will not act in bad faith or take advantage of changed conditions for mercenary purposes and 10 corresponds to the full assurance that the partner will not act in bad faith but will act in the interests of the general development);
- Sophistication of intragroup social network (So_Net) represents the importance of the inter-firm social network on a 10-point scale, estimated according to the importance of personal interaction (1 – low, due to the human factor not forming a significant part of the interaction; 10 – high, due to personal interaction playing an important role at all levels of the interaction);
- Information exchange intensity (Inf_Int) represents the intensity of the exchange of information on a 10-point scale (1 corresponds to a weak information exchange, when all the necessary information, including current information, is accessible by the employees of the company and 10 – strong, is when a significant amount of the required information is provided by the partner),
- Strategic level of information provided (Strat_Inf) represents the strategic level of information transmitted, on a 10-point scale determined by assessing the level of potential damage in the event of "leakage" of information provided by the partner outside the company (1 – low level, due to the partner only providing general information published in official sources for public use; 10 – very high, because the transmitted information is strategic in nature),
- Quality of technical communication (Tech_Com) represents an assessment of the quality of technical communications (communications, information technology, technical maintenance and support services, etc.). With partners according to a 10-point scale (1 – unreliable, does not provide for the needs of production; 10 – reliable, consistently provides for production needs and security of information interaction),
- Presence of common strategic development goals (Co_Dev) represents potential joint development with partners on a 10-point scale, as measured by the consistency of goals and objectives (1 – weak, due to companies having different goals and objectives; 10 – strong, due to having a significant proportion of goals and objectives in common),
- Participation in the collaborative solution to the current problems of the partner (Coord) represents the need for joint coordination on a 10-point scale, estimated according to the importance of the participation of a partner in solving the current problems of the enterprise (1 – not important, because all problems are decided separately; 10 – very important because many decisions are taken through interaction),
- Participants' compliance requirement in terms of business processes (Spec_inv) represents the need for specific investments in the partner evaluated on a 10-point scale (1 – no need for specific investments; 10 – the need for specific investments is very high, since it is necessary to ensure that the technological, intellectual, etc. levels of business processes of the partner enterprise),
- Blocking effect action (Lock_Eff) represents the degree of locked-in-ness of the partner to the consumer enterprise on a 10-point scale (1 – low, i.e. the partner produces

products for many businesses; 10 – high, i.e. the entity is the only consumer of the partner's products).

In order to test the effect of asset specificity on the characteristics of hybrid agreements, an empirical study was conducted by the Institute of Economics of the Ural Branch of the Russian Academy of Sciences in 2013-2014. In this study, the object of the analysis consisted in the relations between producers and their major suppliers. Interviews were conducted with senior managers from more than 100 industrial corporations in the Ural region for which transactions with suppliers are characterised by stable relationships maintained over a long period of time.

The analysis of dependence between inter-firm transactional characteristics and the specificity of resources used was carried out on the basis of correlation and regression analysis. The results was shown in the Table 2.

The obtained results are shown lower due to the investigated hypotheses.
H1: increasing specificity of resources the nature of the contractual relationship will change, with formal contracts being supplemented by informal agreements formed on the basis of the relationship

As shown by the empirical results, the relationship with a partner is predominantly governed by formal contract in the course of implementation of industrial enterprise transactions. Thus, 77% of transactions are realised on the basis of complete formalisation and regulated solely by the terms of the contract (10 points on 10-point scale); 12% of the transactions are characterised by a high degree of formality (7-9 points); 7% of transactions are subject to moderate formality (4-6 points); and 4% of transactions are characterised by a low degree of formalisation (less than 3 points when all issues are resolved on an informal basis).

Under the conditions of the predominance of complete formalisation of inter-firm relations, an analysis of the entire dataset does not permit a determination of the level of formalisation of relations depending on the degree of asset specificity. However, this dependence can be seen if we analyse the weakly formalised 23% of transactions.

In this case, the results of the study demonstrate an inverse relationship between the degree of specificity and the formalisation of the relations. It can be assumed that an increase in the specificity of resources used suggests a certain flexibility in relations oriented towards long-term cooperation. In addition, the obtained results update the research on mechanisms in use by Russian enterprises to influence the partner and control the implementation of the contract, secured by the legal system of alternative mechanisms.

H2: the higher the specificity of the resources used, the higher the level of trust between the partners

Our results revealed a paradoxical situation, thereby confirming the ambiguity of conclusions concerning the impact of trust on transaction costs. Accordingly, a negative relationship was revealed between the level of trust that exists between the firms and the degree of specificity of the resource (the correlation coefficient between the variables $r = -0.63$), i.e. with increasing specificity of the resource, concerns about the achievement of the outcome of the agreement also increase.

This fact can be explained by the specific character of the Russian business environment, in which personal relationships and past experiences of mutual obligations are not able to mitigate the risks associated with specific assets occurring under weak enforcement of contracts and the general economic instability of the Russian economy.

The findings underscore the importance of analysis of credible commitments and other precautionary measures taken by domestic industrial actors in the implementation of specific investment decisions.

H3: the growth of asset specificity increases the importance of social networks based on interpersonal relationships.

The results demonstrate a positive relationship between the degree of asset specificity and the relevance of the human factor in the communications between enterprises. This fact confirms the conclusions about the need for multilateral, stable relations, which can only arise in the course of interpersonal communication in the organisation of inter-company transactions, based on the use of specific resources.

H4: a growth in the specificity of the resources used is accompanied by an increased intensity of information exchange, with this information becoming ever more strategic in nature, which, in turn, generates the need for more reliable information technology

The results of empirical studies show that the growth of asset specificity increases with the intensity of the exchange of information between enterprises. The relationship between the degree of specificity and intensity of asset information exchange is represented in. In addition, a growth in asset specificity increases the strategic level of the transmitted information.

Since the exchange of information involves certain risks, especially in an environment where the information is strategic in nature, there is an increased demand for quality technical communications (networks, information technology, technical maintenance and support services, etc.) with partners. The results confirm the conclusions: the growth of asset specificity and, consequently, the strategic level of the transmitted information, leads to growing dissatisfaction with the quality of traditional technical communications, hence the need to increase spending on information security.

H5: with increasing resource specificity, enhanced administrative functions need to be unified under the legal independence of participants of inter-firm cooperation

Hybrid forms of inter-firm cooperation presuppose the existence of coordination mechanisms to manage the implementation of the contract. The results of the study confirm the conclusions regarding the impact of the degree of asset specificity on the development of mechanisms used to coordinate inter-firm cooperation. Thus, with increasing specificity of resources used in transactions, the potential of joint development is enhanced by means of objectives and tasks In addition, in terms of resource specificity, many issues are resolved only through partner interaction.

H6: under the conditions of high risks associated with specific assets, the enterprise will seek to organise inter-firm cooperation through the use of the mechanism of participation in the property of the partner

The results obtained from the research into mechanisms of organisation of transactions of industrial firms in the Urals refute the findings of previous studies regarding the dominance of proprietary mechanisms in the inter-firm cooperation of Russian enterprises. Thus, the vast majority (86%) of the analysed transactions between industrial firms and their major suppliers are implemented on the principles of legal independence.

This result makes it possible to draw conclusions about changes in the terms and principles of the organisation of economic practice in the Russian economy over the last decade, when the consolidation of management functions began to implement administrative functions predominantly without combining the assets of the various participants. The reasons for these transformations should be sought in the changes to the institutional structure of the Russian economy.

H7: the specificity of the resource necessitates investment in the partner in order to ensure better compliance of the parties to each other

Statistical indicators of the relationship between the studied parameters lead to the conclusion that the need to ensure the compliance of the parties to each other is an essential condition for the functioning of hybrid agreements that involve the use of specific resources.

H8: the degree of specificity of the resource creates a locking-in effect on the part of the partner and increases the costs of switching suppliers

The effect of locking in the supplier can be estimated in terms of the isolation of the partner relative to the consumer enterprise. The results show a positive relationship between the degree of specificity of the resource and the effect of locking in the supplier. A graphical illustration of the dependency is represented in Fig. 10.

CONCLUSION

The conducted analysis of transactions of hybrid organisations in Russian corporations leads to the following conclusions.

The model verification of hybrid mechanisms of inter-firm interaction confirms the applicability of some of the conclusions of the theory of transaction costs to the economic conditions obtaining in Russia. With the growth of asset specificity, acting as an indicator of transaction costs, the significance increases of such characteristics of hybrid organisations as relational contracting, intensity of the exchange of information with the increasing demands on the level of technical communications, co-development capacity building, consolidation of administrative functions, resource interdependence and the need to ensure the compliance of the parties to each other.

At the same time, the following Russian-specific factor applying to the organisation of inter-firm cooperation is revealed.

First, under the conditions of the instability of the Russian economy, personal relationships and past experiences of mutual obligations, which are factors in the formation of trust, are not able to fully mitigate the risks associated with specific assets, with the result that as asset specificity grows so trust in the partner and confidence in the implementation of agreements is reduced.

Second, the weak legal institutions underpinning the Russian economy were found to exert a strong influence on the parameters of informal ties of inter-firm cooperation.

Third, when organising inter-firm cooperation, greater significance is accorded to the mechanisms impacting on the partner and the control of the implementation of the contract, forming an alternative to trust.

Fourth, over the past decade, the consolidation of management functions began to implement control functions without, as a general rule, also unifying the assets of various actors, i.e. on the basis of legal independence.

Thus, the theoretical and practical analysis of transactions of hybrid organisations demonstrates the possibility of a theoretical description of contemporary inter-firm interactions and a determination of the specific manifestations of transactional relations under the contemporary conditions of Russian industrial corporations.

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Table 1. Interfirm interaction characteristics

Group characteristics	Content characteristics
Institutional	Extent of formalisation of relations
	Level of trust between the partners
	Sophistication of intragroup social network
Communication	Information exchange intensity
	Presence of networked databases and quality of technical communication
	Strategic level of information provided
Management	Presence of common strategic development goals
	Participation in the collaborative solution to the current problems of the partner
	Form of organisational interaction
Resource	Participants' compliance requirement in terms of business processes
	Blocking effect action

Table 2. Dependence between the inter-firm transactional characteristics (Y) and the specificity of resources used (X).

Characteristics of inter-firm transactions (Y)	Correlation coefficient between Y and X	Coefficient of X in the regression model	t-coefficient	Average meaning of X due to the current level of specificity of resources used								
				1	2	3	4	5	6	7	8	10
Formal_Re	-0,73	-0,358	-2,37	9,3	-	6,3	8,0	5,0	-	7,0	3,0	-
Trust	-0,63	-0,452	-5,03	6,5	7,5	8,6	6,5	4,0	5,3	4,0	5,8	3,5
So_Net	0,5	0,426	3,80	4,6	7,8	8,0	6,5	7,0	8,6	6,0	9,8	8,0
Inf_Int	0,51	0,466	4,65	2,5	6,5	3,0	4,5	5,0	7,2	4,7	8,5	5,3
Strat_Inf	0,69	0,352	6,18	2,1	2,5	1,8	4,0	3,0	3,4	3,0	2,7	5,3
Tech_Com	-0,68	-0,300	-5,49	9,1	9,3	9,6	8,0	8,0	9,25	7,3	5,8	7,8
Co_Dev	0,71	0,375	5,41	2,8	3,5	4,9	4,0	5,0	4,0	5,7	3,8	6,5
Coord	0,55	0,554	5,05	2,5	4,5	6,2	6,5	5,0	6,6	5,0	7,5	5,5
Spec_inv	0,71	0,380	6,00	1,5	1,2	1,3	1,5	2	3,9	1,7	5,3	3,5
Lock_Eff	0,80	0,443	7,70	2,3	1,7	1,5	4,5	5	2,6	3,7	5	6,7

A Journey through Development of Inland Waterways in India

Aditya Gupta
College of Management and Economic Studies
University of Petroleum Energy Studies, Dehradun, India

Neeraj Anand
College of Management and Economic Studies
University of Petroleum Energy Studies, Dehradun, India

A K Bansal
Inland Waterways Authority of India (IWAI)

Abstract
Inland Waterways (IWT) is the finest mode of transportation available.With lowest capital cost, low running cost and low maintenance cost the cost of moving goods through this mode is just a fraction of other modes like Road and Rail.On top of this IWT is an environment friendly mode with least external costs.India has been blessed with long navigable waterways in excess of 14000 KM.However, post-independence IWT never got the desired attention resulting in IWT share of total transportation a meagre 0.4%.This prompted the authors to evaluate the progress of IWT since independence, the various challenges being faced and suggest possible steps to increase IWT share in India. The paper outlines the various waterways in India, the governance structure to manage IWT, various policies and programs undertaken by Indian authorities to promote IWT, a comparison of Indian IWT with US, China and EU, the key barriers in growth and future recommendations.

INTRODUCTION
"I am the river, sit and listen to my wisdom" Ian Menard 1994. River symbolizes freedom, growth, transformation, perseverance and most importantly, movement. Rivers have a very large role to play in development of human civilization. The 5000 year old Egyptian civilization was completely built around river Nile. The great Giza pyramids would not have built without movement of blocks of stone through river Nile

Inland Waterways Transport (IWT) is the transportation of cargo over rivers, backwaters, canals and creeks. Among all modes of transportation in a country, it is the most inexpensive mode of transportation due to following reasons:

a) Low Capital Cost: Being a natural mode, Inland Waterways does not require a large development cost like road construction or Rail-Track lying. Estimates show that developing and building an inland waterway costs about 5-10 per cent to that of 4-lane highway/railway [1].
b) Fuel efficient: Water transportation is always considered to be the most cost efficient transportation mode. It is estimated that one litre fuel can transport 24 tonne/km freight by road, 85 tonne/km by rail and 105 tonne/km by waterways [1].
c) Least maintenance cost: Maintenance cost of IWT is assessed at 20% that of road. [1]

IWT is safest, most economical and environment friendly mode of transport. It offer less resistance to traction at reasonable speed and enjoys low maintenance cost as channels are almost natural [2].

The total external costs of inland navigation after accounting for all externalities, including accidents, congestion, noise emissions, air pollution and other environmental impacts are seven times lower than that of road transport [3].

History of IWT in India.
Archaeologists have found a burnt brick basin at Lothal, Gujarat India built during the Indus Valley Civilization in about 2400BC, which is the earliest known dock found in the world, connecting Harrapan towns with Arabian sea through ancient course of Sabarmati river [4]. For centuries, Ganges and its principal tributaries servers route of trade and commerce [5]. Ancient Greek historian, Megasthenes quotes that, Ganges and its main tributaries were navigated from 4BC and inland navigation flourished then [6]. Kautilya (4th Century BC) in his Arthashastra wrote extensively about navigation, boat sizes, port charges, ferry regulation laws, expeditions, the duties of the state and the workforce and trade and taxation in the days of the Mauryan Empire [7]. Riverine traffic was dominant in the Mughal period; available records suggest trade between Agra and Satgam in Bengal. Mirzapur, Varanasi, Patna and Munger were important ports from where smaller vessels could ship their goods on the bigger ones [7].

Even during the period of British rule the Brahmaputra and Barak-Surma rivers were used extensively for transport and trade between northeast India and the port of Kolkata. With the growth of the tea industry these rivers became important carriers of trade. The East India Company started the water route along the Brahmaputra from Kolkata to Dibrugarh way back in 1844. A regular fortnightly steamer service operated between Kolkata and Agra on the river Yamuna and by 1863 three similar services were operating between Kolkata and Assam. River services up the river Ganga extended as far as Garhmukteshwar, 645 km above Allahabad, and Ayodhya, 325 km up the river Ghaghara [107]. At the peak in 1877 as many as 180,000 country cargo boats were registered at Kolkata, 124,000 at Hooghly and 62,000 at Patna. However during end of 19th century and early part of twentieth century, the British Government started neglecting inland navigation, in favour of road and railway transport and irrigation projects, by the state led to the consumptive use of river water; as flow reduced, river-beds started silting up. The Assam earthquakes of 1897 and 1950 and the Bihar earthquake of 1934 caused many upheavals in the river beds of the Brahmaputra and tributaries of the Ganga, severely impairing drainage: navigation through these rivers was more stressed [7].

IWT potential in India
India has an estimated 14500 km of navigable inland waterways, including river systems, canals, backwaters, creeks and tidal inlets that can effectively support mechanized crafts. About 5200 km of major rivers and 485 km of canals are suitable for inland transport [9].

This mode is extensively used for transportation in many countries. IWT contributes about 8.5% of total cargo movement in USA, about 8.3% in China, 38% in Netherlands, 24% in Belgium and 13% in Germany [10]. However, in India the progress on IWT is far from satisfactory. IWT enjoys a share of less 0.5% in the total transportation in the country. It has been estimated that diversion of one billion tonne-km of cargo to the IWT mode will reduce transport fuel costs by 5 million USD and the overall transport costs by 9 million USD [2, 11].A 10% share of IWT in total transportation could reduce India's transportation bill by at least Rs 10,000 crores or USD 1.8 Billion.

In spite of carrying a rich history of river based transportation, wide array of river system, the apparent advantages of Inland Waterways still the share of IWT in India has been dismal.

This prompted authors to two central research questions:
RQ1. What is the progress made by India in IWT sector since Independence?
RQ2. What are the challenges which have been hindering the growth and what at possible suggestions to overcome them?

Research Methodology
To address research question one, a detailed survey has been made of published literature and statistics on Inland Water Transport in India to understand the historical development, the progress made since independence, the governance structure, various agencies involved in this sector, the various policy initiatives taken by Indian Government to promote this sector.

To address research question two, semi structured interviews have been conducted with various players in the IWT sector, namely officials of IWAI, Shippers, Barge owners and operators and Industry experts. The interviews brought insights on the challenges faced by Inland Waterways Industry in India and highlighted some of the recommendations to promote and progress in this sector.

Physical features and Traffic utilisation
The inland water transport sector did not get the attention it deserved until 1980, when a National Transport Policy Committee, headed by B D Pandey, found funding to this sector was grossly inadequate [7]. The National Transport Policy Committee (1980) [8] recom¬mended the following principles for declaration of a national waterway.
   a) It should possess capability of navigation by mechanically propelled vessels of a reasonable size.
   b) It should have about 45 m wide channel and minimum 1.5m depth.
   c) It should be a continuous stretch of 50 kms. The only excep¬tion to be made to waterway length is for urban conglomera¬tions and intra-port traffic.
   d) It should pass through and serve the interest of more than one State (or).
   e) It should connect a vast and prosperous hinterland and Major Ports (or).
   f) It should pass through a strategic region where development of navigation is considered necessary to provide logistic support for national security (or).
   g) It should connect places not served by any other modes of transport.

Based on the above principles, five National Waterways have been declared by Indian Government till 2015. The details of the 5 declared waterways are as per table 1 [1]. The Indian Parliament has approved a bill in 2016 declaring another 106 waterways as National Waterways across the country. Figure 1 to 5 indicates the 5 waterways in greater detail and figure 6 indicates all 5 NWs on Indian map. Though not declared as National Waterway one of the most commercially significant IWT in India is the tidal river system in Goa, comprising the Zuari and Mandovi rivers and the Cumbarjua Canal [12].

Table 1: A comparison of 5 National Waterways

	National Waterway 1	**National Waterway 2**	**National Waterway 3**	**National Waterway 4**	**National Waterway 5**
Year of declaration	1986	1988	1993	2008	2008
Rivers and Path	The Ganga - Bhagirathi - Hooghly river system between Haldia (Sagar) & Allahabad	The river Brahmaputra between Bangladesh Border and Sadiya	168-km West Coast canal (Kottapuram-Kollam) segment, the 23-km Udyogmandal canal-Kochi Pathalam bridge portion and the 14-km Champakara canal (Kochi-Ambalamugal)	This consists of the Kakinada-Puducherry stretch of canals, the Kaluvelly tank-Bhadrachalam-Rajahmundry stretch of the river Godavari and the Wazirabad-Vijayawada stretch of the river Krishna.	The Talcher-Dhamra stretch of river Brahmani, Geonkhali-Charbatia stretch of East Coast Canal, Charbatia-Dhamra stretch of Matai river and Mangalgadi-Paradip stretch of Mahanadi delta rivers
Length in KM	1620	891	205	1027	623
States in passes through	UP, Bihar, West Bengal	Assam	Kerala	Andhra Pradesh, Tamil Naidu, Pondicherry	West Bengal and Orissa
Least Available Depth in meters	Haldia (Sagar) - Farakka (560Km) - 3m Farakka - Barh (400KM) - 2.5m Barh - Ghazipur (290KM) - 2m Ghazipur – Chunar/Allahabad (370KM) - 1.5m	Bangladesh Border - Pandu (255 km) - 2.5m; Pandu-Neamati (374 Km) - 2.5m; Neamati-Dibrugarh(139 km) - 2m; Dibrugarh-Oriumghat (92 Km) - 1.5m	2 meters has been provided in the entire NW-3	Under Development	Under Development. To maintain LAD of 2 m in the Brahmani river all through the year.

Aids to navigation	The day navigation is provided in entire stretch of NW-1 all-round the year. The night navigational is available on large part of NW1.	Day navigation marks with bamboos and navigational lights fixed on country boats / beacons have been provided from Bangladesh Border to Dibrugarh	The entire route length of NW-3 has been provided with aids to facilitate 24 hours navigation		
Terminals	Floating terminals at 20 locations and four permanent terminals a Kolkata, Gaighat Patna, Farakka and Pakur.	One fixed terminal at Pandu and 10 floating terminals	Total 11 locations envisaged. Nine have already been constructed. Remaining two locations under construction.		
Type of cargo moved	Cement, Fly Ash, Iron Ore, Coal, Tyres, Steel Plain Sheet, Stone Chips, Petroleum Products, Grains Aluminium block, Coke, Cooking coal, ODC.	Bamboo, Bamboo products, Coal, Plant & machinery, Cement, Building material, fertilizer, Food grains, Milk & other essential commodities	Phosphoric Acid, Sulphur, Zinc, Furnace oil, Rock Phosphate, Various commodities in containers, Furnace oil-bunkering, POL(bunkering to ships), Potable water		
Cargo movement in Million MT in Year 2013-14	31.72	24.53	9.58	Under Development	Under Development
Map	Refer figure 1	Refer figure 2	Refer figure 3	Refer figure 4	Refer figure 5
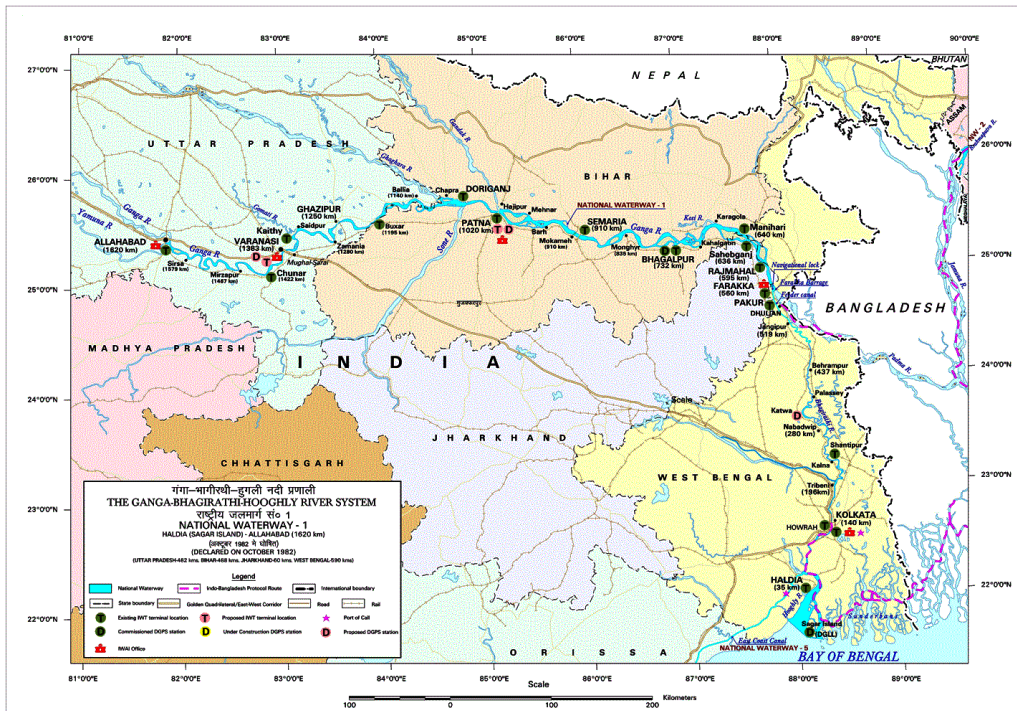
Figure 1 – National Waterway 1

Figure 2 – National Waterway 2.
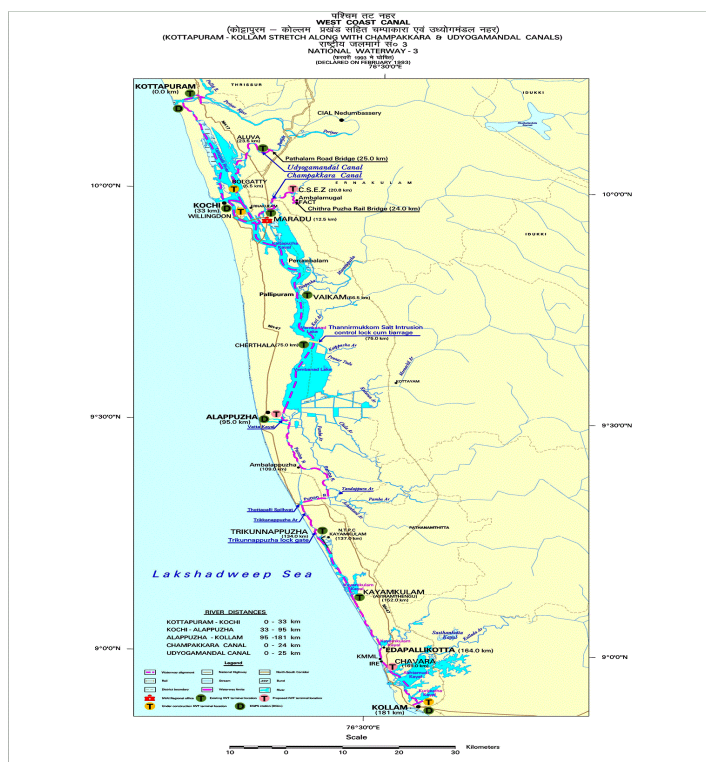
Figure 3 – National Waterway 3

Figure 4 – National Waterway 4

Figure 5 – National Waterway 5

Figure 6 – All National Waterways on Indian Map

LENGTH OF WATERWAYS INCLUDING COMPARISON WITH OTHER COUNTRIES

The following table indicates the total length of waterways in India and how it compares with other countries.

Table 2: Waterways Length in KMs

	US	EU	China	India
Designated Waterways	40,000	35,000	61,000	4,400
Commercially Significant	16,000	8,000	24,000	2,900

In case of India, The NW1, 2, 3 The Goa and Mumbai Waterways are considered as commercially significant.

Classification of waterways

The Indian Government have classified Waterways, as under, based on the LAD, Width and bend radius.

Table 3: Classification of Waterways in India.

	River						Canal						Vessel			
Class of Waterway	Waterway minimum Depth in m	Waterway minimum Width in m	Bend radius in meter	Vertical clearance between piers in metres	Horizontal clearance between piers in metres		Waterway minimum Depth in m	Waterway minimum Width in m	Bend radius in meter	Vertical clearance between piers in metres	Horizontal clearance between piers in metres		Tonnage capacity in DWT for self propelled Vessel	Dimension of Vessel L*B*D in m	Tonnage capacity in DWT for one tug and 2 barge combination	Dimension of one tug and 2 barge combination L*B*D in m
I	1.2	30	300	4	30		1.5	20	300	4	20		100	32*5*1	200	80*5*1
II	1.4	40	500	5	40		1.8	30	500	5	30		300	45*8*1.2	600	110*8*1.2
III	1.7	50	700	7	30		2.2	40	700	7	40		500	58*9*1.5	1000	141*9*1.5
IV	2	30	800	10	50		2.5	50	800	10	50		1000	70*12*1.8	2000	170*12*1.8
V	2	80	800	10	80								1000	70*12*1.8	4000	170*24*1.8
VI	2.75	80	900	10	80		3.5	60	900	10	60		2000	86*14*2.5	4000	210*14*2.5
VII	2.75	100	900	10	100								2000	86*14*2.5	8000	210*28*2.5

Source: Gazette Notification date 20th to 26th January 2007, Ministry of Shipping, Road Transport and Highways [13]

Modal Share

The following chart the shares of various modes in India. The share of IWT in the total transportation pie is insignificant as of now.
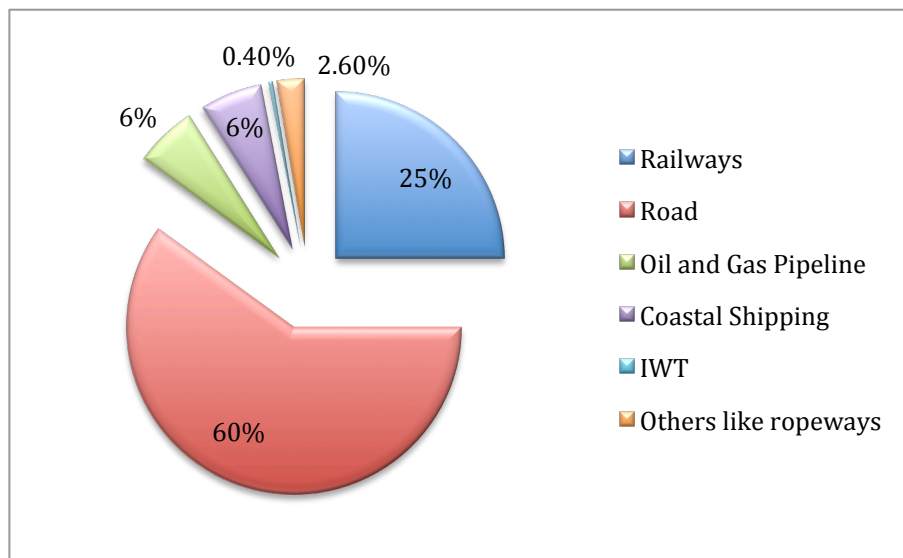
Source: IWAI

Cargo Traffic

The following table indicates the cargo carried on Indian Waterways.

Table 4: Cargo moved on various modes

Details of Waterway	Cargo Moved (Million Tonnes)				
	2009-10	2010-11	2011-12	2012-13	2013-14
National Waterway No. I	1.84	1.88	3.31	2.72	3.35
National Waterway No. II	0.18	2.16	2.41	2.43	2.48
National Waterway No. III	0.67	0.89	1.34	1.24	1.07
Sub Total NWs	**2.69**	**4.93**	**7.06**	**6.38**	**6.89**
Goa Waterways	54.43	55.38	43.47	10.68	0.60
Maharashtra Waterways	12.51	14.87	19.95	24.20	24.77
Grand Total	69.63	75.18	70.48	41.25	32.26

Source: Ministry of Shipping website

Commodity Types

Following Table indicates the main types of commodities transported on IWT in India.
IWT is used mainly to transport bulk commodities like cement, coal, flyash, fertilisers, food grains and Over Dimensional Cargo (ODC).

Table 5 : Composition of Cargo Moved on National Waterways (In Million tonnes)

Commodity	2009-10	2010-11	2011-12	2012-13	2013-14
Building Material	1.39	1.49	1.53	1.73	2.00
Chemicals	0.00	0.10	0.06	0.09	0.12
Fertilisers	0.25	0.34	0.31	0.36	0.30
Food items	0.20	0.15	0.15	0.49	0.41
Mix	0.03	0.09	2.15	0.56	0.62
Ore/Minerals	0.08	0.06	0.02	0.30	0.14
POL/POL Products	0.41	0.49	0.42	0.34	0.24
Coal	0.00	0.00	0.00	0.08	0.56
Iron & Steel	0.00	0.00	0.00	0.00	0.01
Miscellaneous	0.33	2.21	2.43	2.44	2.49
Total	**2.69**	**4.93**	**7.06**	**6.38**	**6.89**

Source: Ministry of Shipping website

GOVERNANCE STRUCTURE FOR IWT AND INSTITUTIONS

India is a federal republic governed under a parliamentary system and consists of 29 states and 7 union territories.

Institutional Framework

The following are the main institutions involved in policy and administration of IWT in India.

Ministry of Shipping

The Ministry of Shipping, a branch of the Government of India, is the apex body for formulation and administration of the rules and regulations and laws relating to Shipping. The Ministry of

Shipping encompasses within its fold shipping and ports sectors which include shipbuilding and ship-repair, major ports, national waterways, and inland water transport. Ministry of Shipping has been entrusted with the responsibility to formulate policies and programmes on these subjects and their implementation [14].

The Inland Waterways Authority of India (IWAI)
The Inland Waterways Authority of India (IWAI) came into existence on 27th October 1986 for development and regulation of inland waterways for shipping and navigation. The Authority primarily undertakes projects for development and maintenance of IWT infrastructure on national waterways through grant received from Ministry of Shipping. The head office of the Authority is at Noida. The Authority also has its regional offices at Patna, Kolkata, Guwahati and Kochi and sub-offices at Allahabad, Varanasi, Bhaglapur, Farakka, Hemnagar, Dibrugarh (Assam), Kollam, Chennai, Bhubaneswar and Vijayawada(A.P.). The key responsibilities of IWAI are [1, 15]:
   a) Infrastructure development & regulation of NWs
   b) Techno- economic feasibility studies
   c) Proposals for declaration of new NWs
   d) Advise Central Government on IWT matters
   e) Assistance to States in IWT development
   f) Classification of waterways

Central Inland Water Transport Corporation Limited (CIWTC)
Central Inland Water Corporation Limited (CIWTC LTD) was incorporated in May 1967 as a Govt. of India Undertaking after taking over the business from a loss making erstwhile sterling company, namely River Steam Navigation & Co. (RSN & Co.). It is under the administrative control of Ministry of Shipping (MOS), Govt. of India. The main activities were transportation of cargo in the rivers in the Eastern India & North-Eastern India and on the Indo-Bangladesh protocol routes. Operate & Maintain terminals [16]. With effect from August 2016, Government has decided to close down CIWTC due to continuous losses [17].

The National Inland Navigation Institute (NINI)
The National Inland Navigation Institute (NINI) has been set up by Inland Waterways Authority of India (IWAI) at Patna, Bihar in February 2004 with a view to develop human resource for the Inland Water Transport sector including development, maintenance and management of waterways. The institute imparts quality training on various aspects of inland water transportation namely development & management of waterways, surveying & dredging of waterways, design & construction of terminals, design & construction of vessels, Technical & commercial operation of vessels, running of vessels, terminal management, and traffic-management.

The institute provides refresher and upgradation education to existing professionals in river engineering, dredging, surveying, Hydrography, repair & maintenance of inland vessels.

The institute provides training at three levels namely induction, upgradation and professional development for vessel operations. The training provided at NINI is fully residential for trainees seeking fresh employment in the sector [18].

State Governments
IWAI mainly plans, builds and manages National Waterways. Beside National Waterways the local waterways are being managed by various State Governments. The Ministry of Shipping

has also launched a scheme called Central Sector Scheme for the North Eastern State which allows 100% subsidy for any projects implemented by state government for IWT sector.

Legal Framework
Act 1917
Act 1917 provides for the State Governments to frame Rules regarding the survey and registration of Inland Mechanically propelled vessels. Any Indian National can own and operate the vessel anywhere in the country if registered under the I.V. Act [11].

IWAI Act 1985
a) Section 12 of the IWAI Act 1985 empowers the Inland Waterways Authority to enter into and perform any contract necessary for the discharge of its functions under the Act.
b) Section 14 of the IWAI Act empowers the Authority to provide or permit setting up of infrastructure facilities for national waterways.
c) Section 17 of the IWAI Act provides for the Authority, with the previous approval of the Central Govt. to levy fees and charges at such rates as may be laid down by regulations made in this behalf for services or benefits rendered in relation to the use of the National Waterways for the purposes of shipping, navigation infrastructural facilities including facilities relating to the berthing of vessels, loading of cargo and storage of cargo. The fees and charges levied shall be collected in such manner as may be determined by regulation. ("Regulations" means regulations made by the Authority under the IWAI Act, 1985).
d) Section 19 (1) (c) provides for crediting to the "IWAI Fund" all sums received by the Authority from such other sources as may be decided upon by the Central Govt [111].

National Waterways Act, 2016 [Wikipedia]
The Act came into force from April 2016. The Act merges 5 existing Acts which have declared the 5 National Waterways and proposes 106 additional National Waterways. The Bill identifies total 111 waterways as national waterways [19]. The Schedule of the Bill also specifies the extent of development to be undertaken on each waterway. The Bill repeals the five Acts that declare the existing national waterways [20]. These five national waterways are now covered under the Bill. The Statement of Objects and Reasons of the Bill states that while inland waterways are recognised as a fuel efficient, cost effective and environment friendly mode of transport, it has received lesser investment as compared to roads and railways. Since inland waterways are lagging behind other modes of transport, the central government has evolved a policy for integrated development of inland waterways.

Table 6: Participation of Government Agencies, Public & Private Sector Enterprises in IWT/NW development [12]

Vessels / Terminals	Construction, Operation & Maintenance	Government Agencies	Public Sector Enterprises	Private Sector Enterprises
Waterway	Constructing of waterway	IWAI	CIWTC in Sundarbans	-
Waterway	Maintenance of Waterway	IWAI	Subcontracted Dredging	Subcontracted Dredging
Waterway	Navigational Support	IWAI	Ports, near port areas GPS suppliers (KPT, Port of Panaji)	-
Carriers (Vessels)	Vessel Manufacturing	-	CIWTC, Hooghly Docks, Garden Reach Shipbuilders & Engineers (GRSE)	Several
Carriers (Vessels)	Vessel ownership	IWAI	CIWTC/KSINCL and others	Several
Carriers (Vessels)	Vessel maintenance/repair	-	CIWTC/KSINCL and others	Several
Carriers (Vessels)	Vessel Operation	-	CIWTC/KSINCL and others	Several
Terminals (Jetties)	Terminal construction	IWAI and State Government	Mormugao Port Trust, CIWTC	Several
Terminals (Jetties)	Terminal operation	-	Mormugao Port Trust	Several
IWAI - Inland Waterways Authority of India CIWTC - Central Inland Water Transport Corporation KSINCL-Kerala State Inland Navigation Company Limited				

NATIONAL FIVE YEAR PLANS

Five-Year Plans (FYP's) are integrated nationalized economic programs which lay the foundation plans for economy growth of a country. Planning Commission is responsible for development, execution and monitoring of FYP's in India [21]. India's first 5 year national plan was released in year 1951 and we are now in the 12thFYP (2013–17).

1st to 5th FYP (1950 to 1980)

Limited progress happened on Inland Waterways during first to fifth FYP from 1950 to 1980. The key developments which happened during this period are listed below [22, 23, 24, 25, and 26]:

Farakka Barrage

The Farakka barrage was constructed in the 1970s to reduce siltation in river Hooghly, which was causing great problems in the operation of Kolkata port due to reduced draft between Haldia and Kolkata. Prior to its construction, the line of navigation from Patna to Assam was through the rivers Ganga, Padma and Jamuna, linking the river Brahmaputra at Dhubri. This route was also utilised by vessels plying between Kolkata and Assam. To enable navigation from Farakka to Kolkata, a lock was also constructed. With the commissioning of the navigation lock joining the main river and the feeder canal, the navigation route linking the Ganga and Bhagirathi was opened in November 1987[7]

Establishment of Central Inland Water Transport Corporation Limited (CIWTC)
The Joint Steamer Companies i.e. India General Steam Navigation Co. and Rivers Steam Navigation Co. were made a P.S.U. in 1967 as Central Inland Water Transport Corporation Limited (CIWTC). The main activities are transportation of cargo in the rivers in the Eastern India & North-Eastern India and on the Indo-Bangladesh protocol routes. Operate & Maintain terminals [16].

India-Bangladesh protocol
This protocol was signed in 1972 between the two countries. Under this protocol, India and Bangladesh agreed to use inland waterways for passage of goods between two places of one country through the territory of the other and also for inter-country trade. The protocol provides for 50:50 sharing on tonnage basis for inter-country and transit cargo by Indian and Bangladeshi vessels.

6th FYP (1980–85)
The inland water transport sector did not get the attention it deserved until 1980, when a National Transport Policy Committee, headed by B D Pandey, found funding to this sector was grossly inadequate. Moreover, whatever was allotted was not utilised. The committee that no institution, government or the private sector, was willing to tap the potential of the sector [7]. The concept of 'national waterway' was introduced in 1982 to boost inland water transport [27, 28].

7th FYP (1985–90)
The main developments during the Seventh Plan were [29]:
Establishment of Inland Waterways Authority of India (IWAI)

The momentous development during seventh FYP was the establishment of Inland Waterways Authority of India (IWAI) on 27 October 1986, to develop and regulate inland waterways for shipping and navigation.

Declaration of National Waterway 1
The first National Waterway was declared in October 1986. The declaration was very significant as it showed the intent of the Government to seriously develop IWT as a mode. Declaring a river stretch as National Waterway meant a focused approach about development, allocation of funds, project being identified and executed and allowing a navigable path round the year.

Declaration of National Waterway 2
NW2 on Brahmaputra was declared in September 1988. The Indian North Eastern region has a disadvantage of being connected to main India through a very small region also known as Chicken Neck. Declaration of NW2 had another objective of creating an alternate method of connecting NE with mainland India.

8th FYP (1992–97)
The main developments during the Eigth Plan were [29, 30]:

During 8th FYP a total of Rs 331 crores was allocated to IWT sector. Out of this money Rs 152 only was spent. The money spend was mainly on NW1 and NW2 to increase the depth, creation of fairways, setting up terminals and setting up navigational aids on both these National Waterways.

Declaration of National Waterway 3

The West Coast Canal from Kottapuram to Kollam was declared as National Waterway No.3 vide National Waterway Act 1992 (33-F of 1992) and notified on 1st Feb. 1993. From Kottapuram to Kollam including Champakara and Udyogmandal canals with a navigable length of 205 kms.

9th FYP (1997–2002)

The main developments during the Nineth Plan were [30, 31]:

Release of IWT Policy was the most significant thing to happen in Nineth FYP. The policy:
   a) Indicated that the potential of IWT could be as large as 50 BTKM.
   b) Indicated that each shift of one BTKM of cargo to IWT will save the country at least Rs 45 in transportation cost.
   c) Recognised that budgetary support is not enough to revive IWT. It requires support from public sector units and private sector. The private sector has a crucial role to play in the development of the sector.
   d) Indicated guidelines and various schemes for private participation in IWT sector.
   e) Authorized IWAI for joint ventures and equity participation in BOT projects.

   a) Recognised the need to develop Human capital for IWT sector.
   b) Recognised the need to interlink waterways with various ports.

National Waterway No.1.
   a) Navigable depth of 2 metres was maintained throughout the year on the stretch from Haldia to Farakka (560 kms) and from Farakka to Patna (460 kms) for about 330 days in a year.
   b) Permanent terminal facilities created at Kolkata, Pakur and Farakka.
   c) Floating terminal facilities created at Haldia, Kolkata, Karagola, Bhagalpur, Munger, Patna, Ballia and Allahabad.
   d) Night navigation facilities being provided in the Kolkata- Farakka stretch
In National Waterway No.2.
   a) Depth of 2 metres was maintained between Dhubri and Pandu (260 kms) for about 330 days a year.
   b) The Waterway route from Calcutta to Guwahati (Pandu) covering about 1500 kms was made navigable round the year with 1.8 metre draft vessels.
   c) Provision of night navigational facilities between Dhubri and Guwahati was implemented.
   d) Floating terminal facilities were provided at Dhubri, Jogighopa, Pandu, Tezpur and Neamati.
   e) Warehousing facility is available at Pandu Terminal.

Inland Water Transport has been accorded the status of infrastructure under Section 80 IA of Income Tax Act so as to enable it to avail itself of concessions applicable to other infrastructure sector.

10th FYP (2002–2007)

The main developments during the Tenth Plan were [31, 32]:
   1. An outlay of Rs 903 crores was approved for IWT sector in Tenth FYP.
   2. The main developments during Tenth FYP were on maintenance of fairway including procurement of vessels for channel development (dredgers, survey launches etc),

setting up of terminals, provision of navigational aids, procurement of cargo vessels for demonstration purpose etc for the three national waterways, techno-economic feasibility studies on other waterway systems.

NW1

Waterways: Projects were identified and implemented in the 10th Plan period to provide a navigational channel of 45 m bottom width and 3 m depth in the Haldia-Farakka stretch, 45 m bottom width and 2 m depth in the Farakka-Varanasi portion and 30 m bottom width and 1.5 m depth in the Varanasi- Allahabad stretch. These included annual fairway development measures such as bandalling and channel marking, dredging, river training measures, hydrographic surveys, procurement of vessels such as dredging units, tug-cum-buoy lying vessels, survey vessels, repair of vessels and constructing regional offices at Haldia, Kolkata and Patna [7].

Navigational Aids: Navigational marks for day navigation were provided all round the year. Night navigation aids were provided between Tribeni and Farakka (364 km) during the 10th Plan and these were maintained [7].

Vessels: In the 10th Plan period, therefore, IWAI acquired different types of vessels for operation on NW-1 to dredge shoals, for talweg and detailed surveys, inspection and monitoring field works [7].

NW2

Fairway Development: River conservancy works (bandalling and dredging) to maintain navigable depth were taken up on year-to-year basis. LAD of 2 m between Dhubri and Dibrugarh was maintained for most parts of the years during the 10th Plan period. [7]

Navigational aids: The target was to provide day navigation aids in the entire waterway and night navigation aids in the Dhubri-Guwahati sector by the end of the 10th Plan. Navigational marks for day navigation were provided in the entire waterway all-round the year. Night navigation aids were provided during the 10th Plan between Bangladesh border and Pandu with the help of manned country boats [7].

Terminals: A project to construct a fixed RCC terminal at Pandu (Guwahati), capable of handling containers, was sanctioned during the 10th Plan and this was almost completed. During the 10th Plan, five pontoons and mounted cranes and two shore cranes were also procured [7].

For encouraging states to develop IWT sector, funding pattern of CSS was revised in Nov 2002. In the revised pattern, 100% grant for NE States including Sikkim and 90% grant for other States was provided.

The Govt. approved an Inland Vessel Building Subsidy Scheme (IVBSS) under which 30% subsidy was payable to the entrepreneurs for construction of inland vessels built in India for operation in national waterways, Sunderbans and Indo Bangladesh protocol routes.

Table 7: Central Plan Outlay ad Expenditure during 2002-03 to 2006-07

Rs. in Lakhs

Year	Central Schemes		Centrally Sponsored		Total		Utilisation %
	Outlay	Expenditure	Outlay	Expenditure	Outlay	Expenditure	
2002-03	8690	7831	300	Nil	8990	7831	87.11
2003-04	8868	8147	1000	985	9868	9132	92.54
2004-05	12557	5796	2000	1598	14557	7394	50.79
2005-06	13500	6551	1500	1500	15000	8051	53.67
2006-07	13300	8839	1700	1200	15000	10039	66.93
Total	**56915**	**37164**	**6500**	**5283**	**63415**	**42447**	**66.94**

Source: Material supplied by TRW, M/O Shipping

Table 7.1: State Plan Outlay and Expenditure during 2002-03 to 2006-07

Rs. In Lakhs

Year	State Plan	
	Outlay	Expenditure
2002-03	19218	1434
2003-04		1340.88
2004-05		3096.31
2005-06		4773.48
2006-07		1398.62
Total	**19218**	**12043.29**
(% Utilisation)	**(100)**	**(62.67)**

Source: Statistics of Inland Water Transport published by TRW, M/O Shipping

Table 8:   (Rs. in Crore)

Five Year Plan	Outlay for Transport Sector	Outlay for IWT	Expenditure for IWT
1st 1951-56	504	0	0
2nd 1956-61	1299	0	0
3rd 1961-66	1395	6	NA
4th 1969-74	2571	12	11
5th 1974-79	5420	32	16
6th 1980-85	12080	72	63
7th 1985-90	22644	226	188
8th 1992-97	56090	331	152
9th 1997-02	124188	308	147
10th 2002-07	148351	903	384 (IWAI only)

11th FYP (2007–2012)

The main developments during the Eleventh Plan were [32, 33]:

a) Two additional waterways were declared as National Waterways in November 2008. These were NW-4 and NW-5. As a result of this, the following waterways totalling 43, 82 km have been declared as National Water Ways (NWWs):

b) A major project was finalised involving a private agency for developing infrastructure and transportation of 3 million tonnes per year of imported coal from Sagar/Sandheads to Farakka power plant of NTPC Ltd. through NW-1 for a period of 7 years.

c) Pandu port in Guwahati was developed as an IWT based inter modal hub in the North East region with broad gauge railway connectivity.

d) Besides 8 terminals at various locations on NW-3, IWT Ro-Ro/Lo-Lo jetties at Bolghatty and Willingdon islands in Kochi on NW-3 were set up to provide IWT linkage to Vallarpadam Port.

e) Kaladan Multimodal Transport Project. This project was conceptualised by the Ministry of External Affairs to provide alternative connectivity from Mizoram to Haldia/Kolkata ports through River Kaladan in Myanmar. The project envisages Coastal Shipping/Maritime Shipping from Haldia to Sittwe, IWT from Sittwe to Paletwa (in Myanmar) and thereafter by road from Paletwa to Mizoram.

Table 9: Financial performance during 11th FYP

S. no.	Budget head/waterways	2007-08	2008-09	2009-10	2010-11	2011-12	Total 11th Plan (Rs in cr.)
		Exp.	EXP	Exp	EXP	EXP	EXP
I	Grant to IWAI						
1	National waterway 1	41.85	52.77	38.75	49.59	45.99	228.95
2	National waterway 3	17.92	10.3	26.71	23.96	25.93	104.82
3	Others	1.71	1.99	3.32	2.38	0.17	9.57
	Sub total (Grants to IWAI	**61.48**	**65.06**	**68.78**	**75.93**	**72.09**	**343.34**
II	North Eastern Area						
4	National water way 2	19.47	32.18	55.1	37.51	57.81	202.07
5	Central Plan Scheme for NER@	0	0	1.05	3	2.57	6.62
6	Proposed NW-6 (Barak)	0	0	0	0	0	0
	Sub total II (NER)	**19.47**	**32.18**	**56.15**	**40.51**	**60.38**	**208.69**
III	Subsidy	1.85	0.27	0	0.69	1.32	4.13
IV	Tech Studies and R&D	1	0.82	1	0.5	1	4.32
	Grand Total	**83.8**	**98.33**	**125.93**	**177.63**	**134.79**	**560.48**

POLICIES AND PROGRAMS TO ENCOURAGE IWT INDUSTRY

There are various initiatives and programs undertaken by Indian authorities to promote IWT. Following are the some of the major initiatives:

Indo-Bangladesh Protocol on Inland Water Transit and Trade

An Inland Water Transit and Trade Protocol exist between India and Bangladesh under which inland vessels of one country can transit through the specified inland water routes of other country. This protocol provides alternative connectivity of North East Region with Bangladesh as well as with rest of India through Haldia and Kolkata Port in West Bengal. The protocol was first signed in the year and has been extended after that. The Protocol is currently valid till March 2020[1].

This protocol connects National Waterway-1 (The Ganga River) with National Waterway-2 (The Brahmaputra River) and Barak river of Assam in North-East through designated inland water routes on Jamuna and Meghna river system of Bangladesh. The designated inland water routes under this protocol are (i) Kolkata-Silghat – Kolkata, (ii) Kolkata – Karimganj – Kolkata, (iii) Rajshahi – Dhulian, Rajshahi and (iv)Silghat – Karimganj – Silghat. For inter-country trade, five ports of call have been designated in each country. These are: Haldia, Kolkata, Pandu, Karimghat and Silghat in India and Narayanganj, Khulna, Mongla, Sirajganj and Ashuganj in Bangladesh.

Table 10: Details of cargo movement and voyage permissions

Year	Cargo moved	Voyage permissions		
	(Lakh-Ton)	Inward	Outward	Total
2004	3.23	463	461	924
2005	5.56	846	821	1,667
2006	7.53	1,142	1,108	2,250
2007	8.89	1,448	1,302	2,750
2008	8.84	1,291	1,257	2,548
2009	13.39	2,198	1,838	4,036
2010	14.96	2,338	2,028	4,366
2011	14.81	2,082	2,031	4,113

Figure 7: India Bangladesh Protocol Routes

IWT Policy

IWT Policy was announced by Government of India in year 2001. The policy recognises Inland Water Transport (IWT) is an economic, fuel-efficient and environment friendly mode of transport and need to actively promote the IWT sector for it to take a reasonable share in the inter-modal mix of inland transport. The policy includes several fiscal concessions, and policy guidelines for development of this mode and to encourage private sector participation in development of infrastructure and ownership and operation of inland vessels.

Following were identified as thrust areas in the policy for development of IWT [11]:

   a) Developing waterways for navigation with the necessary infrastructure such as fairway, terminals, and navigational aids and fleet so that the IWT mode becomes competitive.
   b) Augment the IWT fleet by suitable type of vessels and ensure adequate cargo support.
   c) Encouraging private participation. The objective of developing IWT as an important mode of transport cannot be achieved only through the provision of budgetary support to the State enterprises. The private sector has to play a crucial role in the development of the sector.
   d) Pooling PSU resources. Efforts will be made for pooling the resources through captive users such as public sector undertakings dealing with oil, coal, fertilisers and cement. These agencies will be encouraged to make liberal investment in IWT sector either as soft loan or as capital investment.
   e) Funding from external sources. Another important avenue to be explored as a source of funding for the IWT projects would be the external resources. Investment in potential waterways as turn-key package with external assistance may be explored as part of privatisation.
   f) Special emphasis would be laid on the development of inland water transport facilities in the North-Eastern region.
   g) Developing human capital. Human resource development is also essential if the IWT objectives are to be achieved. For building up trained and skilled manpower for IWT

operations, the setting up of a National Inland Navigation Institute, Regional Navigational Institutes and Regional Crew Training Centres was envisaged.

h) Interlinking waterways and ports with coastal shipping holds good prospects in respect of several river systems in India.

i) Research & Development has to play a crucial role in the development on this sector. Design of low-cost and shallow-draft vessel and introduction of navigational aids are important factors for improving the economics of IWT.

Encouraging Private Participation

The policy provides initiatives, mechanisms and guidelines for private participation in IWT. The areas of private sector participation identified by Policy are listed below [11]:

a) Ownership and operation of vessels for cargo and passengers
b) Fairway development and maintenance
c) Construction and operation of river terminals or river ports
d) Provision and operation of mechanised cargo-handling systems
e) Putting up and maintenance of navigational aids
f) Provision of pilotage services
g) Setting up and running of IWT training institutions.

Mechanism for Private participation

a) The Government / IWAI will carry out a pre-feasibility study of the project identified for private investment and results of such studies would be provided to the prospective investors at a nominal cost and such details would be published in the National Newspapers for wide publicity.

b) A Detailed Project Report (DPR) will also be prepared by the IWAI which will form part of the tender document. Cost of the DPR study will be recovered from the successful bidder.

c) IWAI will also acquire the land wherever required for creation of facilities and hand over to the party on lease.

d) IWAI will assist the enterprise in obtaining environment clearance of the project.

e) Govt. support for facilitating long term cargo assurance.

Initiatives to encourage private participation [11]:

1. **Joint Venture by IWAI**

   IWAI can enter into commercial/joint ventures subject to financial exposure of the Government being limited to equity participation. However, additional concessions in the form of grants, subsidies and other expenditure for development of infrastructure will not be within the scope of the joint venture projects.

2. **Equity participation by Govt. in BOT Projects**

   Approval has been given for private sector participation subject to the equity participation of Government/IWAI Limited to ceiling of 40% for BOT project being worked out on case-to-case basis, subject to details of plan scheme for the purpose being finalized in consultation with Planning Commission. The details of some of the projects implemented under this scheme are as under:

Table 11:

S. no.	Company name	Equity participation of	Share Holders Agreement(SHA)	Barrages constructed	Total estimated cost	Equity share %	Equity of M/s IWAI
1	Royal Logistics (Ship) Ltd	IWAI and M/s ad SK logistics LTD.	Signed at Noida on 3.4.08 between IWAI and M/s SKS logistics LTD.	Six inland barrages of 2000 DWT each constructed and operated between Kolkata and Pandu.	33.00 cr.	M/s SKS Logistics Ltd - 70%	30%
2	Vivada Logistics Pvt. Ltd	IWAI and M/s Vivada and Inland waterway LTD.	SHA for this company was signed at Noida on 13.5.08.	Two inland barrages of 1500 DWT each are envisaged to be constructed and operated	10.00 cr.	M/s Vivada Inland Waterways - 70%	30%
3	SKS Waterways Ltd	IWAI and M/s ad SK logistics LTD.	SHA for this company was signed at Noida on 12.6.08 between IWAI and M/s SKS Logistics Ltd.	Eight inland barrages of 2000 DWT each constructed and operated between Kolkata and Mongla (Bangladesh).	44.00 cr.	M/s SKS Logistics Ltd - 70%	30%
4	IWAI	M/s ICM (I) Pvt. Ltd., Kolkata.		Setting up and operation on 3 floating jetties in West Bengal for handling of flyash being export to Bangladesh.	2.70 cr.	M/s ICM (I) Pvt. Ltd. - 90%.	10%

3. **Tax exemption similar to National Highways**

Grant of 100% tax exemption to investors in this sector for five years and further 30% tax exemption permissible under the Income Tax Act to be availed of in the next five years within a period of 15 years as in the case of National Highways so as to enable this sector to develop.

4. **Enhancement in depreciation rate for inland vessels**

   The rate of depreciation for all vessels ordinarily operating on Inland Waterways will be fixed on a par with the rate of depreciation applicable to ocean going vessels, from time to time.

5. **Vessel Building Subsidy of 30%**

   With a view to encouraging IWT fleet expansion, a scheme will be operationalized providing for vessel building subsidy of 30% for ship owners for inland vessels built in Indian shipyards during Ninth FYP. This subsidy was only provided during tenth FYP and discontinued thereafter. Several representations have been made to Government to restart this subsidy.

6. **Customs Duty concessions.**

   In-principle approval has been given for levying minimum customs duty on imported equipment and machinery for the development of inland waterways to be identified by IWAI. A list of such equipment/machinery items will be submitted by the Ministry of Shipping to the Ministry of Finance in advance so as to facilitate levying of minimum custom duty.

7. **TAX / FISCAL CONCESSIONS**

   Concession under Section-33 and 33 AC of the IT Act 1986 to be applicable to the inland vessels as applicable to the sea going ships. Rate of depreciation of 25% applicable for inland vessels at par with sea going ships. Concessions under Section 80 IA-12(CA) of the IT Act 1996 would be available for investment in IWT infrastructure. Govt. would permit duty free import of plants, equipment and machinery for development of inland waterways. (Certification to be provided by IWAI).

8. **FOREIGN INVESTMENT**

   Government has decided to permit automatically Foreign Direct Investment upto 100% equity for infrastructure sector. This would be applicable to IWT infrastructure.

Central Sector Scheme (CSS)

This scheme has been launched for the development of IWT infrastructure in the States of North East India. Under this scheme provision for 100% subsidy is being provided by the Ministry of Shipping for development of Inland Water transport projects in North East States of the Country [34]. These projects are executed by respective State Governments.

Table 12: Projects are under progress in NER

Sl. No	Project	Project cost (Rs. In Cr)	Status
1	**Assam** Construction of 20 floating terminals along the Brahmaputra	4.5	Project completed in 2014
2	Construction of 15 floating terminals along the Brahmaputra	6.07	Project sanctioned in 2014 and scheduled to be completed in 2016
3	**Mizoram** Development of Tlawng river for IWT	5.28	Project completed in 2013
4	**Tripura** DPRs for development of IWT in Gumti & Haora rivers	0.83	Project completed in April 2015
5	Development of IWT in Gumti river as per DPR	12.59	Project recommended and under consideration in Ministry of Shipping
6	**Manipur** Development of Loktak lake for IWT	14.29	Project submitted on 31.08.15. Discussion held with Secretary (Transport) ,Manipur on 10.09.15, they will revise the project.

Source: IWAI presentation (2015), Importance of Inland Water Transport for North East, FICCI Summit, Shillong [35]

Jal Vikas Marg Project

The 'Jal Marg Vikas' (National Waterway-1) project envisages to develop a fairway with 3 meters depth between Allahabad to Haldia covering a distance of 1620 kms at an estimated cost of Rs. 4200 crore to be completed in six years from 2014-2020. This would enable commercial navigation of at least 1500 ton vessels. Construction of multi modal terminals, jetties, river information system, channel marking, navigational lock, river training and conservancy works are to be undertaken as part of the project. The project is being implemented with technical and investment support from World Bank [36].

The following are the key projects undertaken under Jal Vikas Marg Project [1]

a) Jal Marg Vikas Project for capacity augmentation of navigation on National Waterways – I (Allahabad – Haldia stretch) with Least Availability Depth (LAD) of up to 3.0 meter for commercial navigation

b) Construction of Multimodal terminal at Haldia, Varanasi, Sahibganj

c) Construction of new navigational lock at Farakka.

d) Least Assured Depth on Farakka-Kahalgaon Stretch

Ro-Ro Barge service

International Container Transhipment Terminal (ICTT) has been commissioned on year 2011 at Vallarpadam Island under Cochin Port Trust (CPT). IWAI in collaboration with CPT has established two IWT terminals at Bolgatty and Willingdon Island for feeding containers to ICTT

at Vallarpadam and to reduce the congestion on road traffic in Cochin City [37]. RORO services are also being implemented at various points in NW2 [1].

Kaladan Multi-modal Transit Transport Project

The Kaladan Multi-Modal Transit Transport Project is a project that will connect the eastern Indian seaport of Kolkata with Sittwe seaport in Myanmar by sea; it will then link Sittwe seaport to Paletwa in Myanmar via Kaladan river boat route and then from Paletwa on to Mizoram by road transport [38].

The main objective of the project is to provide alternate connectivity to North Eastern India from mainland India. This project will reduce the need to transport good through the narrow Siliguri corridor, also known as Chicken's Neck.

The project is being piloted and funded by the Ministry of External Affairs (India). The preliminary feasibility studies were carried out by Rail India Technical and Economic Services (RITES).

Skill Development

Indian Government recognizes that trained and skilled manpower are essential for IWT operations. Trained manpower in the IWT sector is required in various fields, like hydrography, navigation, civil engineering, mechanical engineering, naval architecture and transport economics for the development and management of the waterways and operation of various supporting infrastructural facilities [11]. Accordingly The National Inland Navigation Institute (NINI) has been set up by Inland Waterways Authority of India (IWAI) at Patna, Bihar in February 2004 with a view to develop human resource for the Inland Water Transport sector including development, maintenance and management of waterways. The institute imparts quality training on various aspects of inland water transportation namely development & management of waterways, surveying & dredging of waterways, design & construction of terminals, design & construction of vessels, Technical & commercial operation of vessels, running of vessels, terminal management, and traffic management. The institute provides refresher and upgradation education to existing professionals in river engineering, dredging, surveying, Hydrography, repair & maintenance of inland vessels [18].

Creation of logistic hubs with rail connectivity

A Memorandum of Understanding (MoU) was signed in 2015 between the Inland Waterways Authority of India (IWAI) and the Dedicated Freight Corridor Corporation of India (DFCCIL) for creation of logistic hubs with rail connectivity at Varanasi and other places on National Waterways [39]. The joint development of state-of-the-art logistics hubs at Varanasi and other places would lead to convergence of inland waterways with rail and road connectivity. This would provide a seamless, efficient and cost effective cargo transportation solution particularly for containers [39].

Creation of new 106 National Waterways

Indian Parliament in March 2016 gave a nod to a bill to convert 106 rivers across the country into National Waterways. The bill provides for enacting a central legislation to declare 106 additional inland waterways as the national waterways in addition to five existing national waterways [20].

Integrated National Inland Waterways Transport Grid (INWTG)
IWAI engaged RITES Ltd (earlier known as Rail India Technical and Economic Service, is an engineering consultancy company, specializing in the field of transport infrastructure) to conduct detail study on creation of a transportation Grid to connect various important Waterways to important Highways and Railways to boost the overall transportation network in the country. INWTG identified 27 terminals on NW1 to 6 to develop this grid and the nearest Railhead and National/State Highway to build connectivity. The report also suggested infrastructure development costs for fairway development, Terminal construction and establishing Rail and Road connectivity [40]. Based on the outcome of the study a Cabinet Note to undertake and implement the project for setting up of Integrated National Waterways Transportation Grid was prepared and an EFC Note for the proposal has been circulated among the concerned Ministries for their concurrence [1].

Incentive Scheme for Modal shift
Ministry of Shipping has launched a Scheme called "Scheme for Incentivizing Modal Shift of Cargo" or "SIMSC" [41] [42]. The Scheme broadly covers the following:-

The incentives under SIMSC will be provided to the beneficiaries for undertaking transportation of the following categories of cargo through Indian flag vessels, River Sea Vessels or barges on coastal shipping and inland waterways routes, namely:-

1. Transportation of bulk or break – bulk cargo pertaining to seven commodities viz. Fertilizers, food grains, marbles, tiles, sugar, edible salt and over – dimensional cargo, shall be eligible for an incentive @ Re. 1 per tonne per nautical mile upto a maximum of 1,500 nautical miles in each trip starting from origin and ending at the destination. The number and type of commodities under this head are subject to revision by the Government from time-to-time.
2. Transportation of any commodity in containers in Full Container Load (FCL) shall be eligible for an incentive @ Rs.3000/- per TEU. Thus transportation of any commodity through forty feet or other larger sized containers shall be incentivised based on number of times the said container size can be converted into TEUs.
3. Transportation of vehicles through Ro-Ro Vessels shall be eligible for the following incentives:
a) Incentive @ Rs. 300/- per two-wheeler vehicle;
b) Incentive @ 600/- per three-wheeler vehicle; and
c) Incentive @ Rs.3000/- for other vehicles.

A COMPARISON OF INDIAN IWT WITH US, EU AND CHINA
The following table provides a brief comparison of IWT progress in India with US, EU and China [43, 1]

Table 13

	US	EU	China	India
Waterways Length in KMs	Designated Waterways - 40,000; Commercially Significant - 16,000	Designated Waterways - 35,000; Commercially Significant - 8,000	Designated Waterways - 61,000; Commercially Significant - 24,000	Designated Waterways - 4,400; Commercially Significant - 2,900*
Freight Utilization in Million MT and Billion Ton KM	566, 400 (Year 2005)	440, 138 (Year 2006)	1160, 303 (Year 2006)	70, 4.77 (Year 2011-12)
IWT share on total Ton KM (2006)	8.30%	5.60%	8.70%	<0.5%
Main Commodity Types Using IWT	Coal & coke 22% Oil and oil prods.14% Food, grains, farm 25 % (Year 2005) Crude materials 18% Chemicals 11% Manufactures 9% Others 1%	Coal & coke 11.6% Oil & oil products 16.2% Agriculture & food 14.6% (Year 2005) Building materials 20% Chemical and fertilizers 11.1% Manufact. & Iron/steel 16.6%	Coal & coke 17% Oil & oil products 8% Metallic & non-met. ores 19% (Year 2006) Building materials 34%# Steel 7% Containers 6% Others 9%	Coal, cement, bauxite, iron ore pellets, stone, HR steel, project cargo and related raw material, Sulphur, rock phosphate, cement, lime stone & clinker (Year 2011-12)
Containers handled at inland ports	Negligible	About 2 million TEU trips/year (2005)	7.82 million TEU handled/year (2006)	Negligible

Main Policy and Administrative Institutions in IWT Sector	1. Maritime Administration of the US Department of Transportation (MARAD) 2. US Army Corps of Engineers (USACE)	European Union 1 River Commissions set up by international treaty 2 National Governments 3 United Nations Economic Commission for Europe (UNECE) (harmonization of pan-European navigation rules)	1 Ministry of Water Resources 2 Ministry of Transport (MOT) 3 Yangtze and Pearl River Navigation administrations (report to MOT) 4 Provincial Governments and their navigation authorities.	1. Ministry of Shipping 2. Inland Waterways Authority of India
Strategic objectives.	1. USDOT transport objective to alleviate transport congestion by increasing use of IWT and intermodal transport using IWT 2. Main sector objective stated by MARAD is to protect the industry and preserve it for US operators/ships/crews	1. To promote and strengthen the competitive position of IWT to help create a more sustainable transport system overall 2. To overcome bottlenecks and increase connectivity of waterways of EU-wide significance	1. To increase the utilization of IWT by substantially upgrading the waterway system by 2020: -increase Class III+ from 8,687km to 14,300km -increase Class V+ from 24,000 to 36,000 km; 2. To promote a more efficient and effective fleet of vessels	Vision: The vision/objective of development of inland waterways of the country is their increased utilization for transportation of cargo to about 20 billion tonne km by 2020. Mission : To develop all potential inland waterways with adequate IWT infrastructure both through public and private funding to make them a commercially viable mode for transportation of goods to act as supplementary mode of transport with respect to rail and road modes [44]

Programs being run	1. USDOT Strategic Plan 2005-2011 and MARAD Strategy 2003-2008 2. Coastal and River Information Services development and implementation (CRIS)	1. National programs, plus 2. Navigation and Inland Waterway Action and Development Plan in Europe (NAIADES) 3. Marco Polo Program · Trans European Network program (TEN-T) : 2 IWT projects 4. Harmonized River Information Services (RIS)	Long-term Waterway 1. Development Plan to 2020 2. 11th 5-year plan to 2010 3. Vessel standardization program 4. Early framework design for an integrated river information service	1. IWT Policy 2. Indo Bangladesh Protocol 3. Kaladan Multi-modal Transit Transport Project 4. Integrated National Inland Waterways Transport Grid (INWTG) 5. Jal Vikas Marg Project

* Sum of NW1,2,3 and Goa and Mumbai Waterways

BARRIERS AND CHALLENGES TO GROWTH OF IWT

In spite of carrying so many advantages, the development of IWT has been unsatisfactory in India. Following are the key reasons which have been impeding the growth

Natural Barriers: River is a natural medium. There are some nature related constraints which limit the use of rivers for navigation in India:

a) Geography of India: There are no very large rivers in India which flow across length and breadth of the country. Like Yangtze in China which flows a very large distance across the length of the country covering many provinces. Most of the Indian rivers are locational, cover small geography and undergo huge seasonal fluctuations rendering them unsuitable for navigation.

b) Alluvial nature of rivers: Ganga and Brahmaputra, the two largest rivers in India are alluvial in nature. They bring large amount of siltation with them and need to be continuously dredged to allow navigation [45].

Policy and Regulatory

a) Priority of IWT: In water resources development agenda of India, navigation is relegated at the end after issues of drinking water, irrigation and power (hydel) sector [46]. This is perhaps the single biggest reason for lack of development of IWT in India. Water is a scarce resource in India. It has to first meet the basic requirements before it can be used for navigation. The rivers are dammed for water to be first used for drinking and irrigation before it can be used for any other purpose [47]. There were no long term visions for development of IWT which lead to building of dams without locks, bridges without adequate clearances for barges to move. Retro fitting these things are turning about to be almost impossible tasks for the Government.

b) Poor fund allocation: Lack of priority for IWT is also reflected by poor allocation of funds for this sector. The following table indicates the funds allocated for the sector. This is meagre compared to other developing countries like China. IWT never enjoyed

funding anywhere close to that allocated to Railways or Road. The most unfortunate part is that the funds allocated are also not completely used every year.

Table 14 : Year wise Expenditure on National Waterways by IWAI

YEAR	EXPENDITURE (INR in Crore (Ten million))			
	NW-1	NW-2	NW-3	TOTAL
1986-87	1.67			
1987-88	1.34			
1988-89	2.83			
1989-90	1.21	0.56		
1990-91	1.44	1.04		
1991-92	2.59	1.81		
1992-93	10.58	4.22		
1993-94				
1994-95			1.43	
1995-96			1.1	
1996-97			7.93	
1997-98	6.47	2.59	8.75	
1998-99	11.8	5.83	9.62	
1999-2000	7.91	3.22	12.9	
2000-01	16.11	5.26	1.77	
2001-02	17.6	8.79	7.27	
2002-03	23.52	15.43	2.31	
2003-04	31.36	20.7	5.77	
2004-05	13.74	24.8	7.69	
2005-06	24.76	35.61	4.86	
2006-07	42.24	35.61	10.35	
2007-08	41.85	19.47	17.92	
2008-09	52.77	32.18	10.3	
2009-10	38.75	55.1	26.71	
2010-11	49.59	37.51	21.62	
2011-12	45.98	57.51	25.93	
2012-13	58.89	45.05	20.59	
2013-14	48.74	51.45	21.25	
2014-15	62.58	40.68	10.35	
2015-16 (Dec 15)			3.84	
TOTAL	**616.32**	**504.42**	**240.26**	**1361**

Source: IWAI

c) Lack of industrializatic. Lack of Industrialisation on river banks: Studies emphasise that the geographical advantage that IWT possesses is strongest if the entire movement is on a river [12]. In other words, this mode is most attractive for a river based project activity [2]. In China Industrial parks have been developed along the river banks [43]. However, in India no such planning had been done and there are hardly manufacturing hubs close to river banks.

d) Lack of Private participation: There are many potential areas where private sector can participate in IWT. Terminal and warehousing facilities, mechanization of the cargo-handling system, installation of the new navigational aids, deploying low draft barges and vessels and maintenance of the existing fairways [11]. Varieties of possible Public-Private-Participation framework have been deployed by the Government. However the private participation has been lukewarm till date. The private sector still does not see the expected return on investment in IWT sector. Some of the policy initiatives have been inconsistent like withdrawing the vessel capital subsidy after 5 years.

e) Governance structure in India: The structure consists of Ministry of Shipping under whom IWAI is responsible for development of IWT mode. The participation from State governments is meagre. The entire onus is on IWAI only. In Europe there is separate Rhine and Danube River Commissions, in China there are Yangtze and Pearl River Navigation Administration. These are bodies which are responsible for development of the rivers under their jurisdiction. In India no separate bodies were created for managing Ganga or Brahmaputra. With 5 earlier NW and new 106 NW to be developed, IWAI has its hands full.

Technical Challenges

a) Lack of LAD: Another very large reason for poor development of IWT in India has been inability to offer a consistent LAD of 2.5m to 3m round the year [48]. Even after 30 years of declaration of NW1, IWAI is still not able to provide a consistent depth of 2.5 to 3m on NW1. The stretch from Allahabad to Patna still remains a challenge to the Government.

b) Navigational Aids: Lack of navigational aids does not allow 24 hours navigation and round the year movement. IWT is a slower mode as compared by Rail and Road by its very nature. Improper navigational aids further hurt its competitiveness vis-à-vis other modes [49].

c) Terminals: IWT is not an independent mode like Road. It needs Road to provide first mile and last mile connectivity. Non-availability of permanent terminals with adequate infrastructure for loading /unloading and storage is another impeding factor. (s) Most of the terminals in India are still floating terminals. Very few of them are permanent in nature. Further there is lack of mechanised handling at terminals [49]. Very few terminals are truly intermodal. Government has neither been able to encourage private participation nor able to rope in agencies like CONCOR to manage terminals.

d) Barges and Vessels: Unavailability of low draft high technology vessels is another limiting factor which is perhaps hurting the most 2]. There are shortage of IWT vessels as this is highly capital intensive and faces difficulties in obtaining Project Final from Banks/FIIs since it does not enjoy "infrastructure" status currently. With lack of adequate cargo and two way loads the vessels buying is not turning out to be a profitable venture for any Bank to lend.

e) MRO: Maintenance, Repair and Overhaul facilities are very poor at IWT terminal and hence lot of time and money is wasted in taking the vessels for repair up to the main port. There is no MRO facility on NW2.

f) Inadequate Air draft: There are road and rail bridges with low vertical clearance which impede passage of bigger IWT vessels on the waterways [2].

g) RIS system: The government did deploy state of the art RIS system. However till date it has not been implemented across all NWs. It is still operating in parts of NW1.

FUTURE DIRECTIONS AND RECOMMENDATIONS

The authors would like to make following recommendations to increase the share of IWT in India:

a) Focused Approach: The Indian Government should focus all its efforts and funds on development of "commercially significant" waterways. We have not been able to fully operationalize five declared waterways, declaration and development of another 106 waterways will further dilute IWAI attention. NW1 is the most important waterway and need to be strongly focused followed by NW2 and NW5.

b) LAD of 3m: IWT as a mode will not commercial sense unless we ply more than 1000 DWT vessels. This requires a minimum LAD of 2.5 to 3m round the year with night navigation facilities. IWAI should spend funds and make all possible efforts to train Ganga and Brahmaputra River to achieve desired LAD.

c) Governance Structure: The way NHAI (National Highway Authority of India) is responsible for development of National Highways and State Govt for State Highways and other roads, similarly IWAI should be responsible only for development of National Waterways and State Govt for other state waterways. This will help to develop feeder routes and help create "fish bone model". Currently State Govts hardly participate in the development of IWT. Govt may also consider creating a separate commission for rivers Ganga and Brahmaputra. This commission would be responsible for overall management of the river. The commission will be responsible for holistic development of the river integrating various uses like drinking water, irrigation, hydel power, fishing, tourism and navigation.

d) Intermodality: IWT being a dependent mode, there is a strong need to provide effective rail, road and costal connections from the waterways for the emergence of multi-modal logistics solutions. The terminals should be located close to industrial hubs or consumption centres and should provide connectivity with both rail and Road. Connectivity with Coastal shipping is possible at all National Waterways. Kolkata and Paradip port on eastern side. Cochin and Goa port on western side can be seamlessly connected with IWT. The integration of inland waterways with coastal shipping is dependent on Infrastructural linkages, Vessel and Terminal Operational aspects and Regulatory framework allowing the inter-modal (sea-river-waterway) flow of the vessels [50].

e) Vessel Availability: Strong steps need to be taken to encourage vessel availability in India. Revival of Vessel Building Subsidy scheme [51], abatement of service tax, granting of vessel building an "infrastructure' status", guaranteeing two way cargo to vessel operators, round the year LAD availability, viability gap funding, Special Purpose Vehicle for vessel leasing, multiple MRO facilities are some of the possible steps which can be taken to ensure vessel availability on Indian waters.

f) Modal Shift Incentives: Incentivise modal shift to IWT. Government can either offer cash incentives for modal shift to IWT. Alternatively Govt can monetize the environmental advantages of IWT by offering Renewable Energy Certificates (REC). Government can also perhaps take a target of modal split. The current modal split in India is heavily skewed towards road and there is urgent need to correct this towards better modes like IWT, Coastal and Rail.

g) Cargo focus: Govt should target specific cargo like Coal [52], Cement, fly ash, Fertilizers, Food grains and ODC. All the users of these cargo close to National Waterways need to be met, their requirements to be understood and specific solutions to be developed for them on long term basis.

h) Larger Allocation of funds: The allocation of funds to IWT has been meagre compared to Road and Rail. The cost of developing and maintaining IWT is much less compared to

Road and Rail. A same quantum of fund allocated to all three modes will result in development of much larger KM of IWT. It is high time that there is a quantum jump in the funds allocated to IWT in 12th and 13th Five Year Plans.

i) Speed of Implementation: The pace of project implementation is far from desired. Even after 30 years of its declaration we are still not able to provide LAD of 3m on whole stretch of NW1. There is lot to learn from China in this regard. The projects need to be time bound and implemented with urgency.

j) Targets for IWT mode: There should be specific target for cargo carried on IWT by year 2025 indicated in terms of BTKM. All planning should be done backwards to achieve this BTKM target.

k) International Cooperation: The Indo Bangladesh Protocol should be extended for minimum 10 years to avoid any uncertainty to the users and encourage long term planning. India should continuously provide support to Bangladesh for the dredging activity and maintenance of fairway.

l) RIS on all Waterways: RIS should be implemented on all National Waterways.

CONCLUSION

IWT continues to be an insignificant mode in India in spite of various efforts being made by IWAI in last 30 years. As compared to other countries including China there is lot of catching up to being done. The awareness of IWT as a mode with shippers continues to be low and does not figure in the scheme of supply chain planning for them. The success of NTPC Farakka project or Goa Iron Ore Transportation system brings a lot of learning. IWAI should:

a) Focus its energy on one National Waterway preferably NW1,
b) Identify the potential commodities on the National Waterways,
c) Develop commodity specific solutions,
d) Provide consistent LAD of 2.5 to 3m with round the clock and round the year services and
e) Create two way loads or provide assurance for return cargo.

The development of additional 106 more National Waterways may not fetch the desired results. It will rather dilute the efforts of IWAI.

At the policy level navigation has to be accorded adequate consideration while deciding on the use of river water. The construction of dams, barrages, bridges should consider navigation as an important requirement and make provisions for it.

The governance structure of IWT is too centralised with all efforts being made at Central level with no involvement and support of States. State Governments should be encouraged to create an IWT department in each state and try to develop State Waterways in line with State Highways. This will provide impetus to National waterways and create feeder routes and feeder cargo.

Use IWT as a supplementary mode of transportation. A tie up with industrial location policy to drive would be essential.

The compartmented approach which Govt has been following may not be effective. We have separate ministries for various modes of transport from shipping, Road and Rail. There is need to have a holistic view of the transportation needs in the country and a holistic solutions combining all modes including IWT and Coastal shipping.

Jim Watkins has said 'A river cuts through a rock, not because of its power, but because of its persistence'. India too need to persist with IWT, overcome the rocks on the way and someday realise the true power of Inland Waterways.

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Determinants of Non-Performing Loans in Nigeria's Deposit Money Banks

EL-Maude, Jibreel Gambo
Department of Accountancy, MAUTECH Yola

Abdul-Rahman, Ahmad
Postgraduate Student of the Department of Accounting
Bayero University Kano

Ibrahim, Muhammad
Department of Accounting
Nuhu Bamalli Polytechnic Zaria, Kaduna State

Abstract

The study examines the relationship between bank specific and macroeconomic determinant of non-performing loans in Nigerian deposit money banks over the period of 5 years (2010 to 2014). A sample of 10 banks out of 15 quoted by the Nigerian Stock Exchange (NSE) was considered on a cross sectional basis. The study adopted non-survey research design and secondary data was used, generated from the bank's annual reports and accounts, Central Bank of Nigeria (CBN) and Nigerian Stock Exchange fact book respectively. The data were analysed using descriptive statistics, correlation coefficient and multiple regressions. As thus, Stata (version 12) was used as a statistical tool for data analysis. The findings reveal positive significant relationship between Non-Performing loans and Loan to deposit and Bank size; whereas relationship between capital adequacy ratio and Inflation reveals a positive insignificant relationship; whereas Return on asset had negative insignificant relationship with the rate of non-performing loans. Based on the findings, it is recommended that CBN for policy purposes should frequently assess the lending habit of deposit money banks in Nigeria. Finally, strengthening securities market will have a positive impact on the general improvement of the banking institutes' thereby increasing the effectiveness of the financial sector.

Keywords: Bank specific factors, Macroeconomic factors, Non-performing loans & Deposit Money Banks.

INTRODUCTION

Banking business focuses largely on the acceptance of money in the form of deposits from members of the public (i.e. bank customers) and turning the deposits accessible to borrowers in the form of loans for investments, consumptions, and other purposes best known to the borrower. The loans may be in the forms of overdraft, loan and advances, business funding arrangements and local purchasing order financing, amid others. In consequence, lending is one the fundamental functions of Commercial Banks.

Loans symbolize investments and typically constitute the lengthened assets of banks. Individuals and organizations request for loans. The households seek loanable funds from

banks when their excess of income over expenditure is negative (Mbat, 1995). Besides, individual business firms especially small scale enterprise request for loans from deposit money banks for working capital drives and re-investment. In granting loans to individuals, households, and/or business firms and other establishments, banks take into consideration factors such as liquidity risk, repayment method, and source of repayment and the purpose of such loans (Mbat, 1995).

Bank loans and advances are habitually short-term in nature. Mostly, in deposit money banks in Nigeria, the worth of loan portfolio rest on credit analysis carried out by the loan officer. The credit expert's role is to make sure that loans granted have a decent qualitative composition. The qualitative features of bank loans include high liquidity quotient, minimum risk and appropriate maturity structure. These qualitative elements are necessary to guarantee repayment on demand or maturity (Akpan, 2013). Though, in some instances, there may be default (i.e., the customer may fail to pay the interest and principal as they mature or as they fall due within the specified period as agreed between the lender (creditor) and borrower (debtor)). Once there is default and the debtor defaults as scheduled or retrieval is highly doubtful or it is probable to be protected, the loan turns out to be a non-performing loan which at last leads to bad debts.

Bad debt stems from either authorized facilities or unauthorized facilities given to customers. It is hard to remove bad debt entirely in the banking business, but it can be reduced to a manageable level. The risk assets such as total loans and advances form the key portion of the assets of a bank. The moment they are about to go bad, the well-being of the bank becomes negatively affected and that may be termed the sign of the end of the banks commercial activities. However, it is generally accepted that the proportion of non-performing loans is mostly associated with bank failures and financial crises in both developed and underdeveloped countries. In fact, profuse evidence depicts that the financial/banking crises in Nigeria were preceded by high level of non-performing loans.

One of the major causes of bank failure among other things in the Nigerian banking industry is the continuous deterioration of the quality of risk assets held by them (Akpan, 2013). The 2012 end of the year reports of Nigeria Deposit Insurance Corporation (NDIC) pointed out that in every #1.00 loan granted by the Nigerian Deposit money banks, only 57/kobo was capable of being recovered. The injuries suffered as a result of losses prompted by bad debts have lessened the capital position of many of the banks. That is, their capital base has been worn by huge amount of non-performing loans. It is not refuting to endorse that high level of bad debts can cripple bank operations and survival. In sight of this, timely detection and management of non-performing loans cannot be underscored.

Consequent upon this, the paper seeks to examine the determinants of non-performing loans in Nigerian deposit money banks; specifically it addressed the objective: To examine the relationship between bank specific and macro-economic determinants and non-performing loans in Nigeria's deposits money banks. As such the rest of the paper is organize into four sections, starting from the conceptual frames and literature review as section two, where the relevant concepts on non-performing loans and lending as well as literatures were reviewed with a view to expose loopholes of the studied variables. Methodology form part of the third section, results and discussions as section four and finally conclusion and recommendations.

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

This section presents the concept of Non-performing loans and review of related on determinants of Non-performing loans in Nigerian money deposits banks.

The Concept of Non-Performing Loans

The concept of Non-performing loans differs from one country to another. A loan maybe considered non-performing in one country and might not be considered as such in another country. However, opinions in some cases do match. As such, the following is the definition suggested by the International Monetary Fund's (IMF) Compilation guide on financial soundness indicators (2015):

> *"A loan is non-performing when payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons—such as a debtor filing for bankruptcy—to doubt that payments will be made in full."*

According to Basel Committee on Banking Supervision (2001) as cited in Kargi (2011), loan is considered default when bank declares that a borrower (that is, debtor) cannot meet his/her obligation and repay the loan, or similarly to the first definition, the borrower past due more than 90 days on any payment of the bank credit. These definitions offer a sensible framework for identifying non-performing loans, which the repose of the report is based on.

In addition, the Nigerian banking regulation also defines NPL as follows: Nonperforming loan and advances are a loan whose credit quality has deteriorated and the full collection of principal and/or interest as per the contractual repayment terms of the loan and advances are in question (CBN, 2015).

By and large, NPLs are loans that are outstanding both in its principal and interest for a long period of time disagreeing to the terms and conditions under the loan contract as noted by (Gesu, 2014). Any loan facility that is not current in terms of repayment both on principal and interest conflicting to the terms of the loan agreement is NPLs. Thus, the amount of non-performing loan measures the quality of bank assets (Tseganesh, 2012).

Classification of Non-Performing Loans

A loan is categorized as non-performing when the principal or interest is due and unpaid for six months or more from the first day of default (Prudential Financial Policy Department, 2014). However, 2010 CBN prudential guidelines for money deposit banks in section 15.1, classified non-performing loans facilities into three distinct categories as sub-standard, doubtful and lost on the basis of the following criteria.

On sub-standard facilities as defined by 15.1(e) subsection 1 of the 2010 prudential guidelines for money deposits banks considers unpaid principal and/or interest remain outstanding for more than 90 days but less than 180 days as objective criteria. Whereas such loan facilities which display well defined weaknesses which could affect the ability of borrowers to repay such as inadequate cash flow to service debt, under-capitalisation or insufficient working capital, absence of adequate financial information or collateral documentation, irregular payment of principal and/or interest, and inactive accounts where withdrawals exceed repayments or where repayments can hardly cover interest charges as subjective criteria.

Doubtful facilities are considered objective when unpaid principal and/or interest remain outstanding for at least 180 days but less than 360 days and are not secured by legal title to leased assets or perfected realisable collateral in the process of collection or realisation. It is subjective where in addition to the weaknesses associated with sub-standard credit facilities

reflect that full repayment of the debt is not certain or that realisable collateral values will be insufficient to cover bank's exposure.

Loan lost facilities on the other hand were considered objective when unpaid principal and/or interest remain outstanding for 360 days or more and are not secured by legal title to leased assets or perfected realizable collateral in the course of collection or realization. However, facilities which in addition to the weaknesses associated with doubtful credit facilities, are considered uncollectible and are of such little value that continuation as a bankable asset is unrealistic such as facilities that have been abandoned, facilities secured with unmarketable and unrealizable securities and facilities extended to judgment debtors with no means or fore closable collateral to settle debts.

However, paragraph (f) of the 2010 prudential guidelines specify that, banks are required to adopt the criteria identified in paragraphs 15.1(e) to classify their loan portfolios in order to show the true accounting principles of their loans facilities. As such, licensed banks should note that the Central Bank of Nigeria reserves the right to object to the classification of any credit facility and to prescribe the classification it considers appropriate for such credit facility.

Provisions for Non-performing Loan other than "Specialized loans" as defined by the 2010 prudential guidelines for money deposits banks, licensed banks are mandated to make sufficient provisions for apparent losses based on the loan portfolio arrangement system set in paragraph 12.1 of CBN prudential guidelines (2014) in order to reveal their true financial condition. Two types of provisions (that is specific and general) are considered sufficient to achieve this objective. Specific provisions are made on the basis of apparent risk default on specific loan facilities while general provisions are made in respect of the fact that even performing loan facility harbours some risk of loss no matter how small. Thus, all licensed banks shall be mandated to make specific provisions for non-performing loan as identified below:

For facilities categorized as Sub-Standard, Doubtful, or Lost. According to CBN (2014:12):

> *"Interest unpaid for more than 90 days should be postponed and accepted on cash basis only and the principal to be refund that are unpaid by more than 90 days must be fully provided for and accepted on cash basis only."*

For principal repayments not hither to due on non-performing loan facilities, provision should be made as follows: Sub-Standard Credit Facilities: 10% of the outstanding balance; Doubtful Credit Facilities: 50% of the outstanding balance; Lost Credit Facilities: 100% of the outstanding balance. Provisioning and classifications specified in section 12.1 and 12.2 of CBN Prudential Guideline (2014) relate to commercial-money deposit banks, commodities financing, corporate loans, retail and consumer credits and facilities granted to federal, state and local governments and their parastatals. Other loans not specifically categorized as specialized loans are also subject to provisioning in section 12.1 and 12.2. Banks are, however mandated by the CBN prudential guidelines to disclose total loans unpaid in each specialized loan at the year end and made provision against such loans as possible. The banks shall also disclose non-performing loans by loan categories in the financial statements and the proportion and/or percentage to total loans along with measure of specific provision under each classification.

Concept of Bank Loans and Lending

Money Deposits banks are depository institutions that are somewhat unrestricted in their ability to provide loans and that is why they are legalized mostly to issue checking accounts. Money deposit banks are the most important of all commercial depository institution (Leroy and Vanhoos, 2006) as cited in (Gesu, 2014). They create money through lending and purchasing securities (Thomas, 2006). Money deposit banks spread-out loans to diverse categories of borrowers for numerous dissimilar purposes.

One of the key functions of any money deposit bank is provision of loan to individuals, business people in the market, companies operating in various sectors of the economy and corporate bodies as mentioned earlier. As thus, Banks amass money from those individual who have excess and lend it to those in need for varied purposes. Consequently, banks' transitional function plays a vibrant role in the commercial activity. Banks accept customer deposits and use those funds to give loans to other customers or invest in other assets that will yield a return higher than the amount bank pays the depositor (Zewdu, 2010).

It however shows that customers' deposit is the major source of bank loan and therefore, amassed deposits have a direct positive effect on lending. Hence, bank credit is the main source of accessible debt financing for most customers while good loans are the most lucrative assets for banks. The major profit making goings-on in money deposit banks is generating loans to its customers. For that reason, similar to all other debt instruments, loan involves redistribution of financial assets eventually, among the lender and the borrower. The borrower at first receives a sum of money from the lender with the intention to refund, occasionally not in consistent portions, to the lender. This service is normally provided at a cost, well-known as interest on the debt. As one of the main obligations of financial institutions is to provide loans, it is usually the central source of income to banks. In addition, bank loans and credit also constitute one of the ways of increasing money supply in the economy (Felix and Claudine, 2008).

Loans are the major single source of income for banks. Bank loan embroils personal relationships concerning the bankers and borrowers when it goes well till the end. It has a highest possibility of default risk than other bank assets. Loans yield the higher rate of return among bank assets in compensation for lower liquidity and higher risk (Thomas, 2006). A loan composition greatly varies among banks based on their size, location, trade area and lending experts (MacDonald, 2006).

According to Zewdu (2010), lending is the provision of resources (granting loan) by one party to another. The second party doesn't reimburse the first party immediately there by generating a debt, and instead arranges either to repay or return those resources at a later date. Banks function as financial intermediaries, collecting funds from savers in the form of deposit and then supplying to borrowers as loans. Those functions benefit both the banks and the borrowers. Lending represents the heart of the industry and Loans are the dominant asset and represent 50-75 per cent to total amount at most banks, generate the largest share of operating income and represents the bank`s greatest risk exposure (MacDonald, 2006) as cited in (Nkurranah 2014).

Factors Affecting Banks Loan

According to Zewdu (2010), the sources of fund for lending are reserve, deposits and capital. All these sources may be affected by different factors and would have a direct influence on lending. Hence, lending is one of the main function of money deposit banks, the bank

managements should pay more attention, to analyse and take all the necessary measures as soon as possible concerning both internal and external factors that may hinder/distress and/or limit the their bank lending process. Short of lending, may cause banks' incomes especially interest income highly weaken and affect bank continued existence. In this case, since nonperforming loans (NPLs) has a direct reflection of poor asset quality, the factors that influence banks loans have their own impact on NPLs (Rawlins et al. 2012).

According to Zewdu (2010), capital position, profitability, stability of deposits, economic conditions, influence of monetary and fiscal policies, ability and experience of bank personnel and credit needs of the area served has great influence on bank loans which might have impact on NPLs. These contravene the views of Black and Daniel (1989) as cited in Zewdu (2010) that interest rate, liquidity of fund and Tax rate affect bank lending and investing activities. These however goes in line with what Aleman (2012), has identified as factors affecting bank loans in his studies. These however corresponds to what Haneef et.al (2012) found to be the factors affecting bank loans. Besides, Ngoc, Trien and Diep (2014), were of the opinion that inflation, consumer price index, interest rate, exchange rate were factors affecting banks loans. Contrary to these views, Korankye (2014) opined that late disbursement of the loan, business failure, unfavourable payment terms, high interest rate, and inadequate loan sizes, unforeseen contingencies, for instance illness and death of a family member, lack of training for the clients before and after disbursement as the factors affecting loans. This however, shows that factors affecting bank loans depends on the country where one belongs to and as such these factors to some extend are positive in one country and negative to another.

Five C's of Non-performing loans
As noted by (MacDonald, 2006; and Gesu 2014), there are five C's considered as bad credits which represent the disputes used to guard against/avert bad loans. These are as follows:

Complacency: refers to propensity to which one assumes that things were good in the past, so they will be good in the future. For instance, Supposing the past loan settlement success since things have incessantly worked out previously.

Carelessness: indicates the poor endorsing typically showed by scant loan documentation, lack of up-to-date financial information or other relevant information in the credit records, and lack of protective arrangements in the loan agreement. Each of these makes it hard to monitor a borrower`s improvement and detect problems before they are uncontrollable.

Communication ineffectiveness: failure to visibly communicate the bank`s objectives and policies. This is when loan delinquency can arise. Therefore, the bank management need to clearly and effectively communicate and impose the loan policies and loan officers should make the management conscious of specific problems with existing loans as soon as they appear.

Contingencies: refers the lenders` tendency to play down/ignore circumstances in which a loan might be default. It focuses on trying to make a deal work rather than identifying down side risk.

Competition: involves following the competitors` action rather than monitoring the bank`s own credit standards. Banks, however, still have required expertise, experiences, and customer focus to make them the preferred lender for many types of loan. Lending is not just a matter of making loan and waiting for repayment. Loan must be monitored and closely supervised to prevent loan losses (MacDonald, 2006).

Empirical Literature

There are many evidences which identify key determinants of bank loans in relation to macro-economic determinants on non-performing loans. Some selected studies were reviewed; many scholars have conducted a lot of studies on determinants non-performing loans, as a result of its impact on bank's failure. There are many variables that affect non-performing loans in deposit money banks. As such, the researcher focused on both bank specific and macroeconomic variables in determining NPLs of deposit money banks in Nigeria. However, multiple variables that got more attention are involved in this study, loan to deposit ratio, capital adequacy/solvency ratio, profitability (ROA & ROE), lending rate, inflation and effective tax rate.

Louzis, Vouldis and Metaxas (2010) conducted a study to examine the determinants of NPLs in the Greek financial sector using fixed effect model from 2003-2009 periods. The variables included were ROA, ROE, solvency ratio, loan to deposit ratio, inefficiency, credit growth, lending rate and size, GDP growth rate, unemployment rate and lending rates. The finding reveals that loan to deposit ratio, solvency ratio and credit growth has no significant effect on NPLs. However, ROA and ROE has negative significant effect whereas inflation and lending rate has positive significant effect on NPLs. It justifies that performance and inefficiency measures may serve as proxies of management quality.

Djiogap and Ngomsi (2012) investigated the determinants of bank long-term loan in the Central African Economic and Monetary Community (CEMAC). They used the panel data of 35 commercial banks from six African countries over the period 2001-2010. They used fixed effect model to examine impact of bank size, GDP growth and capital adequacy ratio on NPLs. The study found negative significant impact of CAR on the level of NPLs. Their finding justifies as more diversified banks and well capitalized banks are better able to withstand potential credit. However, inflation variable is statistically insignificant in explaining the total business loans ratios of banks.

In the work of Saba, Kauser and Azeem (2012) where they examined "Determinants of Nonperforming Loan on US banking sector" also investigate the bank specific and macroeconomic variables of nonperforming loans from 1985 to 2010 period using OLS regression model. They considered total loans, lending rate and Real GDP per capital as independent variables. The finding reveals as real total loans have positive significant effect whereas interest rate and GDP per capital has negative significant association with NPLs. Similarly, Mileris (2012) on the title of "macroeconomic determinants of loan portfolio credit risk in banks" was used multiple and polynomial regression model with cluster analysis, logistic regression, and factor analysis for the prediction. The finding indicates that NPLs are highly dependent of macroeconomic factors.

However, Swamy (2012) conducted a study to examine the macroeconomic and indigenous determinants of NPLs in the Indian banking sector using panel data a period from 1997 to 2009. The variables included were GDP growth, inflation rate, per capital income, saving growth rate, bank size, loan to deposit ratio, bank lending rate, operating expense to total assets, ratio of priority sector`s loan to total loan and ROA. The study found that real GDP growth rate, inflation, capital adequacy, bank lending rate and saving growth rate had insignificant effect; whereas loan to deposit ratio and ROA has strong positive effect but bank size has strong negative effect on the level of NPLs.

Beside, Farhan et al. (2012) on the title of "Economic Determinants of Non-Performing Loans: Perception of Pakistani Bankers" utilized both primary and secondary data in 2006 years. The data was collected from 201 bankers who are involved in the lending decisions or handling nonperforming loans portfolio. Correlation and regression analysis was carried out to analyse the impact of selected independent variables. The variables included were interest rate, energy crisis, unemployment, inflation, GDP growth, and exchange rate. The study found that, interest rate, energy crisis, unemployment, inflation and exchange rate has a significant positive relationship whereas GDP growth has insignificant negative relationship with the non-performing loans.

Skarica (2013) also conducted a study on the determinants of NPLs in Central and Eastern European countries. In the study, Fixed Effect Model and seven Central and Eastern European countries for 2007-2012 periods was used. The study utilized loan growth, real GDP growth rate, market interest rate, Unemployment and inflation rate as determinants of NPLs. The finding reveals as GDP growth rate and unemployment rate has statistically significant negative association with NPLs with justification of rising recession and falling during expansions and growth has an impact on the levels of NPLs. This shows as economic developments have a strong impact on the financial stability. The finding also reveals as inflation has positive impact with justification as inflation might affect borrowers' debt servicing capacities.

In addition to this, Tomak (2013) conducted study on the "Determinants of Bank's Lending Behaviour of commercial banks in Turkish" for a sample of eighteen from 25 banks. The main objective of the study was to identify the determinants of bank`s lending behaviour. The data was covered 2003 to 2012 periods. The variables used were size, access to long term funds, interest rates, GDP growth rate and inflation rate. The finding reveals that bank size, access to long term loan and inflation rate have significant positive impact on the bank`s lending behaviour but, interest rates and GDP are insignificant.

Ali and Iva (2013) who conducted study on "the impact of bank specific factors on NPLs in Albanian banking system" considered Interest rate in total loan, credit growth, inflation rate, and exchange rate and GDP growth rate as determinant factors. They utilized OLS regression model for panel data from 2002 to 2012 period. The finding reveals a positive association of loan growth and real exchange rate, and negative association of GDP growth rate with NPLs. However, the association between interest rate and NPL is negative but week. And also inflation rate has insignificant effect on NPLs.

An Empirical Study made on Commercial Banks in Pakistan by Badar and Yasmin (2013) on the title of "Impact of Macroeconomic Forces on Nonperforming Loans" the long and short run dynamics between nonperforming loans and macroeconomic variables covering the period from 2002 -2011 of 36 commercial banks in Pakistan were assessed. In the study, inflation, exchange rate, interest rate, gross domestic product and money supply were included as macroeconomic variables. They applied vector error correction model. The study found that as there is strong negative long run relationships exist of inflation, exchange rate, interest rate, gross domestic product and money supply with NPls.

Ranjan and Chandra (2013) analysed the determinants of NPLs of commercial banks' in Indian in 2002 the study utilized panel regression model and found that lending rate also have positive impact on the NPLs justifying that the expectation of higher interest rate induced the changes in cost conditions to fuel and further increase in NPLs. Besides, loan to deposit ratio had negative significant effect on NPLs justifying that relatively more customer friendly bank is

most likely face lower defaults as the borrower will have the expectation of turning to bank for the financial requirements.

Aregawi (2015) examined the causes of non-performing loans and its provision in development bank of Ethiopia. The study sampled 60 firms from both performing and non-performing clients' and 14 employees using primary data collected through questionnaire and unstructured interview. The findings of the study revealed that demographic characteristics of the clients and employees have significant effect on the repayment of loans. The study concluded that the causes of the non-performing loans are diversion to the other business, marketing problems, inflation condition, lack experts on the business, due to shortage supplies to their business and asymmetric information between the bank and employee. The study recommends that government should extend their Growth and Transformation Plan (GTP) to five years to enable the bank to recognize and reduced the causes of non-performing loans and their provision as a policy on regional level.

However, a number of researchers found significant relationship (i.e,. both positive and negative) between bank specific variables (capital adequacy ratios, loan to deposit ratios, return on assets, total loans and bank size) and macro-economic variables (inflation, lending rate, exchange rate, gross domestic product, unemployment, energy crisis and money in supply) on non-performing loans such as Louzis, Vouldis, and Metaxas, 2010; Joseph, 2011; Sakiru, 2011; Konfi, 2012; Saba, Kauser and Azeem, 2012; Skarica, 2013; Ahmad and Bashir, 2013; Badar and Yasmin, 2013; Tomak, 2013; and Gesu, 2014. This contravene the findings of Djiogap and Ngomsi, 2012; Swamy, 2012; Furhan et al. 2012; Ali and Iva, 2013; and Ranjan & Chandra, 2013., whose findings were insignificant on non-performing loans in relation to lending rate, inflation, loan to deposits ratio, ROA and GDP.

RESEARCH METHODOLOGY

The study employed non-survey research design. This is as a result of the fact that, all banks variables are pull out from annual reports and accounts of the sampled money deposit banks. The population of the study involves all the quoted money deposit banks in Nigeria as at 31st December, 2014 which were fifteen (15) in total (NSE, 2014). In other to take appropriate samples we put this checklist for any bank to be eligible as sample of the study, firstly it must be registered in and owned by the Nigerians. Secondly, must have been in operation for at least forty five (45) years from the date of listing in the Nigerian Stock Exchange. Thirdly, it must be an active player on the floor of the Nigerian Stock Exchange as at 31st December, 2014. As a consequence, five banks were disqualified for not fulfilling the above requirements.

The study use two set of variables: dependent, explanatory variables as well as the control variables. The dependent variable is non-performing loan ratio. It is measured in terms of non-performing loans to gross loan (i.e, total loans).The explanatory and control variables are bank profitability (bank specific variables) and macro-economic determinants which form the independent variables for the study. The study used three techniques for the purpose of data analysis which are descriptive statistic, correlation and multiple regressions (OLS). STATA software version 12 was used.

NPL = f (ROA, LTD, CAR, ALR, INFL, and BZ)………… (1)
$NPL = \beta_0 + \beta_1 (ROA) + \beta_2 (LTD) + \beta_3 (CAR) + \beta_4 (ALR) + \beta_5 (INFL) + \beta_6 (BZ) + \varepsilon$…. (2)

Where: β_0…., β_k is the regression model coefficients of the independent variables
NPL = Nonperforming loan ratio of bank.

ROA = Return on asset ratio of bank.
LTD = Loan to deposit ratio of bank.
CAR = Capital Adequacy ratio of bank.
ALR = Average lending rate of bank.
INFL = Inflation rate of bank.
BZ = Bank Size.
ε = Random error.
Thus, this model is expressed in line with the one used by Gesu (2014).

RESULTS AND DISCUSSIONS

This section presents, analyse, interprets and discuss the result obtained from the data generated from annual report and accounts of the sampled deposit money banks for the period of the study. The data was analysed using descriptive statistics, correlation matrix of the dependent and explanatory variables and regression analysis. The descriptive statistics explains the various statistics such as mean and standard deviation and correlation matrix was employ to examine the relationship between the explanatory variables while regression coefficients with the purpose of testing the relationship between variables of the study as well as model estimate presentations. Table 4.1 provides such statistics.

Table 4.1: Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Npl	50	.5088449	.313826	.021011	.97174
Roa	50	.0362961	.0480645	-.0225464	.2620823
Car	50	.2659156	.338092	.0092536	1.511769
Ltd	50	.6643522	.1638253	.2039892	.9751711
Alr	50	.23824	.0129403	.2239	.2574
infl	50	.10644	.0218131	.0806	.1372
BZ	50	9.0213	.3967162	8.033913	9.702472

Source: Generated by the Researcher from the Annual Reports and Accounts of the sampled companies using Stata (Version 12).

Table 4.1 reveals that non-performing loans deposit money banks over the period of five years ranged from a minimum of 21% to a maximum of 97% and with an average of 51% and standard deviation values of 0.313826 indicating lack of considerable variation. Other variables which are independent from the table also indicate some level of variability. On the overall bank size has the highest standard deviation with about 0.3967162 followed by capital adequacy ratio with 0.338092 while average lending rate has the lowest standard deviation which account for only 0.0129403. These indicate that the average lending rate and inflation account for 24% and 11% of the non-performing loans of deposit money banks in Nigeria.

In order to examine the level of relationship between the dependent and explanatory variables, correlation matrix is used. Variance Inflation Factor (VIF) test is carried out also to find out whether or not multi-collinearity exists as a result of the relationship between the studied variables. The correlation matrix in Table 2 provides some insights into which of the independent variables are related to the Return on Assets (ROA) (i.e., the dependent variable).

Table 4.2: Correlation Matrix of the Variables

```
            |     Npl      roa      car      ltd      alr     infl       BZ
------------+-----------------------------------------------------------------
        Npl |   1.0000
        Roa |  -0.3385   1.0000
        Car |  -0.3751   0.7215   1.0000
        Ltd |   0.4843  -0.2267  -0.1272   1.0000
        Alr |  -0.0016   0.0980   0.1867   0.1573   1.0000
       Infl |   0.0806  -0.1223  -0.2539  -0.0172  -0.7995   1.0000
         BZ |   0.4885  -0.3610  -0.6891   0.0498   0.0935  -0.1037   1.0000
```

Source: Generated by the Researcher from the Annual Reports and Accounts of the sampled companies using Stata (Version 12).

From the above table, the values are in diagonal, all 1.0000 which indicate that every single variable is perfectly correlated with itself. Return on asset (ROA), capital adequacy ratio (CAR) and average lending rate (ALR) are inversely correlated with non-performing loans (NPLs) with correlation coefficient values of -0.3385, -0.3751 and -0.0016 which implies that as these variables(ROA, CAR and ALR) increases, non-performing loans (NPLs) decreases. On the other hand, total loan to deposit (LTD) and inflation (INFL) as well as Bank size (BZ) are positively correlated with non-performing loans (NPLs). The positivity nature of the correlations implies that as the rate loan and deposits, inflation and bank size increases, so does the rate non-performing loans increases with a correlation coefficient value of 0.4843, 0.0806 and 0.4885 respectively. The study advanced further by measuring the validity of multi-collinearity from the correlation matrices, by the use of Tolerance Value (TV) and Variance Inflation Factor (VIF). Table 4.1 presents the results of TV and VIF as the determinants of Non-Performing loans.

Table 4.3: Multi-collinearity Test

```
    Variable |       VIF       1/VIF
------------+---------------------
         car|      4.80     0.208436
        Infl       3.25      0.307541
        Alr |      2.96      0.337982
         BZ |      2.55      0.391930
        Roa |      2.46      0.405955
        Ltd |      1.13      0.886496
-----------+---------------------
    Mean VIF |      2.86
```

Source: Generated by the Researcher from the Annual Reports and Accounts of the sampled companies using Stata (Version 12).

Table 4.3, shows that TV ranges from 0.208436 to 0.886496 which proposes non multi-collinearity feature. Multi-collinearity feature subsists when the value of TV is less than 0.2 (Sabari, 2012 as cited by Kurawa and Kabara, 2014). VIF is simply the reciprocal of TV ranges from 4.80 to 1.13 which shows absence of Multi-collinearity, with the average VIF of 2.86 for all the variables. VIF displays Multi-collinearity where the value surpasses 10 (Sabari, 2012 as cited by Kurawa and Kabara, 2014).

Table 4.4: Regression Result

```
---------------------------------------------------------
     Npl |      Coef.    Std. Err.       T     P>|t|
---------+-----------------------------------------------
     Roa|  -1.464943   1.109098     -1.32    0.194
     Car |   .3161088   .2200453      1.44    0.158
     Ltd |   .8612726   .2201983      3.91    0.000
     Alr |  -.1929473   4.514837     -0.04    0.966
     infl|   2.986235    2.80779      1.06    0.293
      BZ |   .5079054   .1367569      3.71    0.001
     Cons|  -4.948084   1.877915     -2.63    0.012
---------------------------------------------------------
Prob > F       =   0.0000
R-squared      =   0.4963
Adj R-squared  =   0.4260
```

Source: Generated by the Researcher from the Annual Reports and Accounts of the sampled companies using Stata (Version 12).

Table 4.4 presents the regression results of the dependent variable (NPLs) and independents as well as explanatory variables (ROA, CAR, LTD, ALR, INFL and BZ). The coefficient of "R-squared" shows 49.63% which indicate that the variables used in the model accounts for about 49.63% variation on NPLs as the dependent variable, whereas the remaining of the variation accounts for the outcome of other variables which were not considered by this model. However, the whole probability is significant at 1% level of significance. As such, the model of the equation can be inscribed as: NPLs = - 4.948084 - 1.464943β1 + .3161088β2 + .8612726β3 - .1929473 β4 + 2.986235β5 + .5079054 + ε

In assessing the model of the regression equation, the results shows that, the relationship between NPLs and ROA is negative while CAR and INFL is positive, but all insignificant, which can be justified with "t" values of – 1.32, 1.44 and 1.06 and P>|t| 0.194, 0.158, and 0.293 respectively with the following coefficients result -1.464943, 0.3161088 and 2.986235, which means deterioration of profitability ratio measured by ROA leads to riskier activities of banks and then raise the level of NPLs. Hence, ROA represents efficiency in asset utilization, poor utilization of assets indicates higher NPLs for the banks which is in line the findings of Boudriga et a., 2009; and Selma & Jouini, 2013 and conflict with that of Gesu, 2014; Ahmed & Bashir 2013; and Makri, Tsagkanos and Bellas, 2014 whose findings were positive significant relationships between ROA and NPLs.

As to that of CAR means that the degree of banks solvency, ability to absorb risk, to protect depositors and to encourage stability as well as efficiency of financial systems has no significant relationship on NPLs. This is consistent with the findings of Djiogap and Ngomsi, 2012; Swamy, 2012; Skarica, 2013 and Ali and Iva, 2013., which on the on the hand contravene the findings of Saba, Kauser and Azeem, 2012; Konfi, 2012; Furham et al., 2012; Tomak, 2013 and Badar and Yasmin, 2013.

So also the relationship between ALR and NPLs is insignificant and negative, which is can be justified with negative "t" value of -0.04 and P>|t| 0.966 which also has a negative coefficient of -0.1929473, this implies that, lending rate affect performing assets in banks but does not increase the cost of loans charged on the borrowers which is consistent with the findings of Tomak, 2013 on interest rate. These results contravene the views of louzis, Vouldis and Metaxas, (2010); Sakiru, (2012); and Joseph, (2011).

LTD has a positive and statistically significant relationship with NPLs. Justifiable with "t" value of 3.91 and P>|t| 0.000 as well as a positive coefficient of 0.8612726, meaning that bank liquidity has a significant relationship with NPLs, that is, increase in LTD by 1 unit leads to

same increase in NPLs, as banks used deposits collected from the customers for loans as the normal banking business. The result is consistent with the findings of swammy (2012); and Gesu (2014) and conflict with that of Ranjan and Chandra, (2013) who maintained that loan to deposits ration has a negative and insignificant impact on non-performing loans. Finally, the result of bank size indicate positive with a significant relationship at 1% level of significance on non-performing loans of the sampled money deposit banks in Nigeria with a coefficient value of 0.5079054 and P>|t| 0.001 standard deviation of 0.1367569 with a "t" value of 3.71, which indicate that the size of the bank has something do with it the rate of non-performing loans which is consistent to that of swamy, (2012).

CONCLUSION AND RECOMMENDATIONS

The paper examines the impact of non-performing loans on bank specific and macro-economic variables in the Nigerian deposit money banks. From the result of the findings in the study, it can be inferred that non-performing loans does not decreases bank performance as; There is no statistically significant relationship between NPLs and ROA this because ROA represents efficiency in asset utilization, poor utilization of assets indicates higher NPLs for the banks, there is no significant causal relationship between NPLs and CAR as banks solvency, ability to absorb risk and to encourage financial stability as well as efficiency has nothing do with NPLs as shown by the regression results and also there is statistically positive insignificant causal relationship between NPLs and INFL this is because when other things remain constant, inflation has on effect on NPLs in the Nigerian money deposit banks as well as insignificant relationship between ALR and NPLs which is because lending rate affect performing assets in banks but does not increase the cost of loans charged on the borrowers.

The study also found positive significant relationship between LTD and NPLs; this is because customer's deposits are mostly used for loan which variably turns up to NPLs. There is also significant relationship between Bank size and NPLs as revealed by the regression result, thus, the higher the deposit and bank size, the higher the loans, and NPLs.

Based on the findings, the paper recommends for a sound management of non-performing loan to achieve economic growth in Nigeria and CBN for policy purposes should frequently assess the lending habit of deposit money banks in Nigeria. It is also suggested that the supervisory authorities should take part actively in capacity building to enhance supervisory and regulatory functions effectively. Finally, strengthening securities market will have a positive impact on the general improvement of the banking institutes' thereby increasing effectiveness in the financial sector.

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Under-Pricing of IPOs in Indian Capital Market and Determinants of Under-Pricing

Dr.M.Appala Raju
Department of Management Studies
Christ University

Abstract

Organisations in their endeavour to expand diversify and to meet other strategic investment initiatives aim at IPOs (equity) as important source finance. Organisations approach Investment Bankers for pricing the issue which is expected to be well taken by the prospective investors in the market. Equity valuation given by investment bankers very often tend to be overestimated. The equity after the issue tend to be under-priced as the price fixed by the investment bankers is not based on true fundamentals and intrinsic value of the business, but on the inflated values of the company. Irrational investors, keeping the base on the valuations given by the investment bankers tend to lose the value of their investments

Key words: Investment banker, Initial Public Offer, Intrinsic Value, Irrational investors, Business valuation .Sources of Finance

INTORDUCTION

The pricing of an initial public offering (IPO) below its market value. When the offer price is lower than the price of the first trade, the stock is considered to be underpriced. A stock is usually only underpriced temporarily because the laws of supply and demand will eventually drive it toward its intrinsic value.

It is believed that IPOs are often underpriced because of concerns relating to liquidity and uncertainty about the level at which the stock will trade. The less liquid and less predictable the shares are, the more underpriced they will have to be in order to compensate investors for the risk they are taking. Because an IPO's issuer tends to know more about the value of the shares than the investor, a company must underprice its stock to encourage investors to par

All firms need to raise capital at one time or another to finance new projects, expand operations, or in many cases, just to start up their business. One of the best ways that newer and less established companies have found to raise quick capital is to make a stock offering. Initial public offerings (IPOs) have historically had very large initial first day gains compared to the performance of the rest of the market. If we assume that the market price of the stock, dictated by supply and demand, is representative of the company's value, then the large gain reflects the fact that the IPO issuing price agreed upon by the underwriter and the firm making the offer is under the actual value of the firm anticipate in the IPO.

Consequently, many firms make IPOs before they have any basis on which investors can judge them. They have no past revenue records to look at and many have yet to turn a profit before their stock is trading on the exchanges. This is especially true in today's rapidly emerging sectors such as the Internet and technology sectors, where investors do not even have the luxury of looking to the past performance of the industry or finding information about the

quality and real value of the firm. There exists huge informational asymmetries in the IPO markets, and various economic theories about such markets still argue over who does and does not have the correct information regarding the value of a firm

The most prominent factor in the degree of underpricing has been the uncertainty that exists about the firm making the issue. The information about the firm available to the firm itself, the investors, and the investment bank is key in deciding the degree of underpricing that the IPO will receive. As uncertainty about the firm increases, so does the amount of underpricing, and consequently the initial first day gains are affected by it. To test for this effect, variables will be entered into the empirical model to represent the uncertainty about the firm. Most of the past literature has proclaimed both deal size and issuing firm size as a valid proxy for this. However, actually determining the issuing firm size before an initial public offering can be a problem because of the question of how a firm should be evaluated. Most Internet companies have yet to turn a profit when they make an IPO. In a market with even minimal efficiency, deal size should be a valid proxy for issuing firm size and so only the known deal size variable will be used. As the deal size goes up, the uncertainty involved should go down along with the degree of underpricing.

The underwriters, however, need the uninformed investors to bid since informed investors do not exist in sufficient number. To solve this problem, the underwriter reprices the I.P.O. to bring in these investors and ensure that uninformed investors bid. The consequence is underpricing. This theory has found empirical support in papers that have found that when investment banks can allocate shares in greater measure to informed investors, the underpricing is reduced since the compensation needed to draw uninformed investors is lower. Underpricing has also been found to be lower when information about the issuer is more freely available so that uninformed investors are at less of a disadvantage.

Another informational-based theory for I.P.O. underpricing is known as informational revelation. This theory centers on the book-building process, the mechanism by which an underwriter builds a book of potential investors and the prices and number of shares they are willing to purchase. The book-building process is intended for the underwriter to assess demand and obtain information from potential buyers about what price buyers are willing to pay. In order to incentivize investors to disclose sufficient information about the price they believe is appropriate, underwriters allocate fewer shares to potential purchasers who bid low.

But underwriters still discount the stock to incentivize aggressive bidding and to ensure that the bids are not even lower since the more bids there are, the more information is revealed about the appropriate price for the stock. Issuers accept this underpricing because it allows underwriters to better gauge a higher sale price. This theory too has found empirical support in the academic literature.A third strand of the informational asymmetry theory asserts that underpricing is associated with the weakness of the issuer. The underpricing is intended to compensate the purchasers for this weakness. This theory has found weak evidential support.

The company, meanwhile, received national publicity for its Web site, something that may be worth the tens of millions of dollars alone, if not more.

IPO is considered as an investment tool for the stock market investors. Many investors believe that IPO earn excess returns on the first day of the listing as compared to market returns. Contradictory views are recorded in the literature as few researchers argue that many IPO are overpriced in the market. We assume that the price of IPO is based on demand and supply forces which are achieved through book building process. On this backdrop researchers wants

to evaluate the pricing efficiency of India IPO's. This examines if IPO's are overpriced, underpriced or fairly priced. It was found that market was not efficient in the period of study. Most of the IPO's were underpriced. Strong relation was found within market condition and return on IPO's. Over scribed shares and IPO return also shows positive relation.

Companied raised capital for new projects, expansion and diversification. IPO's are the one of the popular way to raise the capital through primary market. Many investors believe that IPO earn excess returns on the first day of the listing as compared to the market returns. Contradictory views are recorded in the literature as few researchers argue.

The central question surrounding the IPO underpricing puzzle is why issuers are willing to sell their shares at a price that is less than what the market is willing to pay. This paper shows that a major reason why managers are willing to underprice shares at IPO is that they use options and stock grants to protect themselves from the dilution to their existing shares. Underpricing can have a large positive tax effect for options they hold in addition to making new options more valuable. It show that underpricing shares can increase the tax advantage of paying employees with options. Managers can also use underpriced shares as currency to strengthen strategic alliances and customer loyalty. A major finding of this paper is that the use of options is directly related to IPO underpricing and explains a substantial amount of the variation in firm underpricing.

DETERMINANTS WHICH LEAD TO IPO UNDERPRICING

Age of the firm
We assume that an older firm can provide longer operating history than a new firm hence investors can have more trust in the performance of an older firm which in turn reduces the risk and signal a high value of the firm.

Pre IPO leverage
They measure the market value of the firm a sum of the market value of debt and the market value of equity. The levered and unlevered firms in the same risk class with the same expected return are of the same market value in the equilibrium. Undervalued firm moves up and the overvalued firm share price goes down due to selling pressure thereby making the value of these two firms equal in the equilibrium. Pre IPO leverage indicated high financial distress costs. High agency costs, and also that the firm is not having enough internal financing or profit. Therefore this paper assumes that the value of the highly levered firm is low at the time of IPO.

Issue size
Issue size was taken as the total number of shares issued in the IPO. Larger issues are subject to regulatory attention and analysed by many analysis therefore they are less risky an so under-pricing is low for larger issues. The model takes issue size as a proxy of supply of the issued shares. The larger issue size increases the supply; therefore in equilibrium the price remains lower.

Promoters holding post issue
If the promoter holding is high it has less liquidity because promoters holding are the subject of lock in of one year. If the promoter holding is lower, then the issue has higher liquidity. Therefore IPO firms which are having high promoters holding low liquidity are expected to under-price more to attract the investors,

INDEX RETURN AND INDEX VOLATILITY

Where good market condition leads to lower under-pricing because good market does not need discount to the investors in terms of under-pricing where good market condition leads to higher under-pricing motivate us to re-examine the market conditions in the Indian IPO market. Therefore the present study takes the index returns and index volatility before the IPO opening as a proxy for market condition. If market return is high then it shows good market condition and if the index volatility is high then it shows high uncertainty in the market.

Sample Size and Sampling Techniques
Sampling Method
Stratified random sampling method was used. A strata was made from the Indian companies who have issued IPO's after 2012 till present.

Sampling Size
This study employs a data set of 17 companies which consists of the total number of companies who have issued IPOs after 2012.

Sampling Technique
Regression model: - This model helps in knowing the relationship between the dependent variables and the independent variables.

REVIEW OF LITERATURE

(Padmavathi, 2012)This article talks about the determinants of underpricing. The study was conducted using models of regression using SPSS tool. IPO's are underpriced under book building mechanism. The results of this research is that investors high willingness to pay, high demand for the issue, high firm value and high fluctuations in the market returns have contributed towards firms underpricing of its IPO's.(Rajib, 2010) This article talks about the two phases of IPO's. Performance has been calculated by adopting two methodologies they are wealth relative technique and buy and hold market adjusted return. Issue price is taken as the base for there calculation.(Rohit Bansal, 2009): The result from the multiple regression implied that there is 48% variations in the underpricing caused due to age of the firm, issue size, pre ipo leverage, post holdings. The study has more prominent implications for investors who subscribe to different IPOs for listing day gain as this study would help them in understanding which type of firms are more likely to under-priced. (Michelle Lowry, 2008) While significant relations between such characteristics and the initial return have been interpreted as supportive of information asymmetry theory, it is difficult to similarly explain the predictability of the price update. (Ghosh, 2012):-It was found in this research that unceertainity played a very important factor in underpricing.Large issue size and seasoned offerings had very little influence on underpricing.Underpricing was more during the high volume periods of the firm. (DAWSON, 2013):-This article states that an ipo is underpriced on issue. The studies basially studies the difference between the offer price and the issue price. Only a few studies refer to as issuer oriented measures of underpricing. IPOs do not simply have a cost with the opposite sign of the investors' return. Rather, underpriced new shares create a dilutive effect that may make their real cost or wealth transfer much different. (Garfinkel, 2005) Model IPO underpricing is a mechanism for signalling firm quality. The idea behind these theories is that high quality firms have favorable private information about their future prospects that will be at least partially revealed at some future date. (Ritter, 2010):-The changing issuer objective function hypothesis argues that, holding constant the level of managerial ownership and other characteristics, issuing firms became more willing to accept underpricing. (Cook & T., 2010):- The purpose of this research is to provide additional evidence on the underpricing signaling models by examining the reissuance behavior of

'second initial public offerings of reverse leveraged buyout (LBO) firms. (CHAMBERS & DIMSON, 2012):-Central measure of the efficiency of the Initial Public Offering (IPO) market is the extent to which issues are underpriced. We present new and comprehensive evidence covering British IPOs. During the period from 2000 to 2009, public offers were underpriced by an average of only 3.80%, as compared to 9.15% in the period from 2009 to 2013. (Ellul & Pagano, 2010):-The underpricing of initial public offerings (IPOs) is generally explained with asymmetric information and risk. We complement these traditional explanations with a new theory where investors worry also about the after-market liquidity that may result from asymmetric information after the IPO. (Philip J. Lee & Walter*, 2012):- Initial Public Offers (IPOs) made on the Stock Exchange of Singapore routinely provide sufflciently detailed data to allow reconstruction of both the application and allocation schedules. Its show that large investors tend to preferentially request participation in IPOs with higher initial returns, consistent with these investors being better informed.

DATA ANALYSIS AND INTERPRETATION
Bharat Infratel limited
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.968[a]	.936	.936	9.08465	.936	3025.374	2	412	.000

a. Predictors: (Constant), index volatility, Index. Return

This table shows the relationship between the dependent and the independent variables. R shows that there is 96.8 % correlation between the dependent and the independent variables. R square which is 93.6% shows that in Bharat Infratel ipo under-pricing there is a close influence by independent variables towards dependent variables i.e., under-pricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVAa

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	499373.375	2	249686.688	3025.374	.000[b]
	Residual	34002.706	412	82.531		
	Total	533376.081	414			

a. Dependent Variable: Underprice

b. Predictors: (Constant), index volatility, Index. Return

This table talk about the level of significance the dependent variables are related It has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return.

The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-86.701	2.307		-37.576	.000
	Index.return	.937	.012	.967	77.482	.000
	Index volitality	9.075	23.272	.005	.390	.697

a. Dependent Variable: Underprice

The findings of the study indicate that the under-pricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions under-price more for signalling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Bharat infratel ipos is affected by market condition therefore leads to underpricing.

Just Dial

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.965[a]	.931	.931	103.17834	.931	2049.615	2	302	.000

a. Predictors: (Constant), pre ipo leverage, index volitality

This table shows the relationship between the dependent and the independent variables. R shows that there is 96.8 % correlation between the dependent and the independent variables. R square which is 93.6% shows that in Just dial under-pricing there is a close influence by independent variables towards dependent variables i.e., under-pricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	43639451.776	2	21819725.888	2049.615	.000[b]
	Residual	3215022.668	302	10645.770		
	Total	46854474.444	304			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), pre ipo leverage, Index.volatility

This table talk about the level of significance and it is less than 0.05 percent therefore which states that the model used is appropriate.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-163.055	20.374		-8.003	.000
	Pre ipo leverage	1.045	.016	.965	63.978	.000
	Index volatility	31.274	149.557	.003	.209	.835

a. Dependent Variable: Underpricing

This tables says that underpricing is caused due to two conditions of the firm i.e., the market and the liquidity conditions. Market conditions involve index volatility and liquidity conditions involve pre ipo leverage. Both do not reflect a high percentage of risk involved to it.

Wonderla Holidays

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.922[a]	.850	.846	14.91438	.850	209.036	2	74	.000

a. Predictors: (Constant), Index. Volatility, Index. Return

This table shows the relationship between the dependent and the independent variables. R shows that there is 92.2 % correlation between the dependent and the independent variables. R square which is 85% shows that in Wonderla's IPO underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	92995.457	2	46497.729	209.036	.000[b]
	Residual	16460.469	74	222.439		
	Total	109455.926	76			

a. Dependent Variable: Underprice

b. Predictors: (Constant), Beta, Index.return

This table talk about the level of significance the dependent variables are related it has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-47.177	8.574		-5.502	.000
	Index .return	.770	.039	.912	19.755	.000
	Index volatility	46.696	51.276	.042	.911	.365
a. Dependent Variable: Underprice						

The findings of the study indicate that the underpricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Wonderla holidays is affected by market condition therefore leads to underpricing.

V Mart

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.990[a]	.981	.981	10.33951	.981	9643.082	2	372	.000

a. Predictors: (Constant), promoters holding, pre ipo leverage.

This table shows the relationship between the dependent and the independent variables. R shows that there is 99 % correlation between the dependent and the independent variables. R square which is 98.1% shows that in V-MART underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2061797.422	2	1030898.711	9643.082	.000[b]
	Residual	39768.853	372	106.906		
	Total	2101566.275	374			

Dependent Variable: Underprice

Predictor constant: promoters holding, pre ipo leverage

This table talk about the level of significance the dependent variables are related It has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-93.284	1.738		-53.671	.000
	Promoters holding	.978	.007	.990	138.175	.000
	Pre ipo leverage	4.104	18.115	.002	.227	.821
a. Dependent Variable: Underprice						

The findings of the study indicate that the underpricing increases with significant variables like liquidity factors such as promoter's holdings and pre ipo leverage. It can now be stated that in capital market, liquidity conditions influence underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. V MART is affected by liquidity which ultimately leads to underpricing.

PC. Jewellers

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.954[a]	.911	.910	7.11293	.911	2105.860	2	413	.000

a. Predictors: (Constant), index volatility, Index. Return

This table shows the relationship between the dependent and the independent variables. R shows that there is 95.4% correlation between the dependent and the independent variables. R square which is 91.1% shows that in PC Jewellers underpricing, there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	213086.979	2	106543.490	2105.860	.000[b]
	Residual	20895.248	413	50.594		
	Total	233982.227	415			

a. Dependent Variable: Underprice

b. Predictors: (Constant), index volatility, Index. Return

This table talk about the level of significance the dependent variables are related it has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-91.794	1.569		-58.523	.000
	Index.return	.935	.014	.954	64.549	.000
	Index volitality	4.088	9.944	.006	.411	.681

a. Underpricing- dependent variable

The findings of the study indicate that the underpricing increases with significant variables related to market conditions such as index return and index volatility. It can now be stated that in capital market, market conditions influence underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. PC Jewellers is affected by market condition which ultimately leads to underpricing.

National Building Construction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.999[a]	.999	.999	3.39629	.999	195524.415	2	562	.000

a. Predictors: (Constant), age of the firm, index return

This table shows the relationship between the dependent and the independent variables. R shows that there is 99.9 % correlation between the dependent and the independent variables. R square which is 99.9% shows that in national building constructions limited underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4510671.519	2	2255335.760	195524.415	.000[b]
	Residual	6482.560	562	11.535		
	Total	4517154.079	564			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), age of the firm, index return

This table talk about the level of significance the dependent variables are related it has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-98.125	.299		-328.175	.000
	Age of firm	.997	.002	.999	622.877	.000
	Index.return	1.518	4.612	.001	.329	.742

a. Dependent Variable: Underpricing

The findings of the study indicate that the under-pricing increases with significant variables related to market condition such as index return and liquidity factor such as age of firm. It can now be stated that in National Building Llimited, market condition and liquidity factor influence underpricing more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing and National Buildings Constructions Limited is affected by market condition which ultimately leads to underpricing.

M T Educare

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.985^a	.970	.970	2.50044	.970	8902.123	2	558	0.000

a. Predictors: (Constant), age of the firm, pre ipo leverage

This table shows the relationship between the dependent and the independent variables. R shows that there is 98.5 % correlation between the dependent and the independent variables. R square which is 97% shows that in M T Educare underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	111315.347	2	55657.674	8902.123	.000^b
	Residual	3488.716	558	6.252		
	Total	114804.063	560			

a. Dependent Variable: Underprrice

b. Predictors: (Constant), age of the firm, pre ipo leverage

This table talk about the level of significance the dependent variables are related It has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.High amount of F value shows that the model is good.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-97.092	.741		-130.997	.000
	Age of firm	.985	.007	.985	132.644	.000
	Pre ipo leverage	-2.803	3.971	-.005	-.706	.481

The findings of the study indicate that the underpricing increases with significant variables related to value of the firm such as age of firm and pre IPO leverage. It can now be stated that in capital market, value of firm influence underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. M T Educare is affected by value of firm which ultimately leads to underpricing.

Repco Home Finance Limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.698[a]	.487	.484	70.51072	.487	151.436	2	319	.000

a. Predictors: (Constant), Index. Return, pre ipo leverage

This table shows the relationship between the dependent and the independent variables. R shows that there is 69.8 % correlation between the dependent and the independent variables. R square which is 48.7% shows that in Repco home finance limited underpricing there is a close influence by independent variables towards dependent variables i.e., under-pricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1505810.702	2	752905.351	151.436	.000[b]
	Residual	1585991.747	319	4971.761		
	Total	3091802.449	321			

a. Dependent Variable: Underprice

b. Predictors: (Constant), index return, pre ipo leverage

This table talk about the level of significance the dependent variables are related it has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.High amount of F value shows that the model is good

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-72.872	17.009		-4.284	.000
	Index.return	.892	.051	.698	17.399	.000
	Pre ipo leverage	29.043	201.617	.006	.144	.886

a. Dependent Variable: Underprice

The findings of the study indicate that the underpricing increases due to factors of liquidity and market condition like index return and pre ipo leverage. Index return has a very high risk involved to it but pre ipo leverage has just 1 percent more than the normal risk ratio. Investors take underpricing as a signal of liquidity and market condition because a low value firm cannot afford leaving money on the table or underpricing. Repco home finance limited is affected by market condition which ultimately leads to underpricing.

Powergrid co. limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.998[a]	.996	.996	1.07789	.996	20699.639	2	179	.000

a. Predictors: (Constant), Index. Volatility, Index. Return

This table shows the relationship between the dependent and the independent variables. R shows that there is 99.8 % correlation between the dependent and the independent variables. R square which is 99.6% shows that in Powergrid company limited underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	48099.779	2	24049.890	20699.639	.000[b]
	Residual	207.971	179	1.162		
	Total	48307.751	181			

a. Dependent Variable: Under-price

b. Predictors: (Constant), index volatility, Index. Return

This table talk about the level of significance the dependent variables are related It has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.High amount of F value shows that the model is good.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-97.028	.550		-176.550	.000
	Index. Return	.985	.005	.998	203.280	.000
	Index volatility	2.008	5.221	.002	.385	.701

a. Dependent Variable: Underprice

The findings of the study indicate that the underpricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Powergrid Company ipos are affected by market condition therefore leads to underpricing

Tara jewels limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.921[a]	.848	.847	17.98373	.848	1187.183	2	425	.000

a. Predictors: (Constant), promoters holdings, pre ipo leverage

This table shows the relationship between the dependent and the independent variables. R shows that there is 92.1% correlation between the dependent and the independent variables. R square which is 84.8% shows that in Tara jewels limited under-pricing there is a close influence by independent variables towards dependent variables i.e., under-pricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	767904.298	2	383952.149	1187.183	.000[b]
	Residual	137451.121	425	323.414		
	Total	905355.420	427			

a. Dependent Variable: Under-price

b. Predictors: (Constant), promoters holding, pre ipo leverage

This table talk about the level of significance the dependent variables are related It has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.High amount of F value shows that the model is good.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-92.149	2.552		-36.106	.000
	Promoters holding	.935	.019	.921	48.727	.000
	Pre ipo leverage	-13.744	26.167	-.010	-.525	.600

a. Dependent Variable: Under-price

The findings of the study indicate that the underpricing increases with significant variables like promoters holding and pre ipo leverage which constitutes market conditions. It can now be stated that in capital market, high market conditions underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Tara jewels limited IPOs are affected by market condition therefore leads to underpricing.

VKS Project limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.974[a]	.949	.949	17.16159	.949	4806.959	2	519	.000

a. Predictors: (Constant), index volatility, Index.return

This table shows the relationship between the dependent and the independent variables. R shows that there is 97.4 % correlation between the dependent and the independent variables. R square which is 94.9%   shows that in VKS Project limited underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2831493.778	2	1415746.889	4806.959	.000[b]
	Residual	152856.026	519	294.520		
	Total	2984349.805	521			

a. Dependent Variable: Under-price

b. Predictors: (Constant), index volatility, Index. Return

This table talk about the level of significance the dependent variables are related it has 0.000 degree of significance which states that this model is significant because it is less than 0.05. In this two constraints are kept constant namely Beta and Index return. The degree of frequency is slightly to be above normal i.e., 2 because normal is considered as 1.High amount of F value shows that the model is good.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-95.970	.864		-111.076	.000
	Index. Return	1.009	.010	.974	97.704	.000
	Index volatility	-2.169	9.706	-.002	-.223	.823

a. Dependent Variable: Under-price

The findings of the study indicate that the under-pricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions under-price more for signalling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. VKS Project limited ipos are affected by market condition therefore leads to underpricing.

Speciality Restaurants limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.957[a]	.917	.916	7.92838	.917	3056.057	2	556	.000

a. Predictors: (Constant), pre ipo leverage, promoters holding

This table talks about the relationship and impact each causes between the dependent and the independent variables. R shows that there is 95.7% relationship between the dependent and the independent variables i.e., impact of underpricing caused due to age of the, issue size, pre ipo leverage, promoters holding post issue, index return and index volatility. R square shows that independent variables have 91.7% impact on dependent variables.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	384202.335	2	192101.167	3056.057	.000[b]
	Residual	34949.686	556	62.859		
	Total	419152.021	558			

a. Dependent Variable: Under-price

b. Predictors: (Constant), pre ipo leverage, promoters holding

This analyses shows that the model is significant because it has a significance value of 0.00 which is less than 0.05. The F value shows a high value which states the overall variables relationship with the dependent variables.

Correlation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-98.428	1.988		-49.515	.000
	Pre ipo leverage	.993	.013	.958	78.064	.000
	Promoters holding	-14.542	13.926	-.013	-1.044	.297

a. Dependent Variable: Under-price

This table shows clearly that the market conditional factors that are contributing to underpricing of the firm. Liquidity factors include pre ipo leverage and promoters holding in post issue equity. Therefore the result here is that the liquidity condition of the firm contributes to the underpricing of speciality restaurants limited.

CARE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.907[a]	.823	.822	81.99156	.823	960.316	2	413	.000

a. Predictors: (Constant), index volatility, Index. Return

This table talks about the relationship and impact each causes between the dependent and the independent variables. R shows that there is 90.7% relationship between the dependent and the independent variables i.e., impact of underpricing caused due to age of the, issue size, pre ipo leverage, promoters holding post issue, index return and index volatility. R square shows that independent variables have 82.3% impact on dependent variables

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12911674.785	2	6455837.393	960.316	.000[b]
	Residual	2776440.199	413	6722.615		
	Total	15688114.984	415			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), index volatility, Index. Return

This analyses shows that the model is significant because it has a significance value of 0.00 which is less than 0.05. The F value shows a high value which states the overall variables relationship with the dependent variables.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-90.286	18.025		-5.009	.000		
	Index.return	.984	.023	.908	43.648	.000	.990	1.010
	Index volatility	-106.277	203.875	-.011	-.521	.602	.990	1.010

a. Dependent Variable: Underpricing

The findings of the study indicate that the underpricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions underprice more for signalling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Bharat Infratel IPO are affected by market condition therefore leads to underpricing.

Tribhovandas bhimji zaveri

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.998[a]	.997	.997	2.70937	.997	91748.663	2	571	.000

a. Predictors: (Constant), index volatility, Index. Return

This table talks about the relationship and impact each causes between the dependent and the independent variables. R shows that there is 99.8% relationship between the dependent and the independent variables i.e., impact of underpricing caused due to age of the, issue size, pre ipo leverage, promoters holding post issue, index return and index volatility. R square shows that independent variables have 99.7% impact on dependent variables.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1346992.021	2	673496.011	91748.663	.000[b]
	Residual	4191.519	571	7.341		
	Total	1351183.540	573			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), index volatility, Index. Return

This analyses shows that the model is significant because it has a significance value of 0.00 which is less than 0.05. The F value shows a high value which states the overall variables relationship with the dependent variables.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-99.996	.406		-246.345	.000		
	Index.return	1.005	.002	.999	427.839	.000	.997	1.003
	Index volatility	-4.589	3.246	-.003	-1.414	.158	.997	1.003

a. Dependent Variable: Underpricing

The findings of the study indicate that the underpricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. Tribhovandas bhimji zaveri is affected by market condition therefore leads to underpricing.

L&T Finance Holdings

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.843[a]	.711	.710	8.68489	.711	810.295	2	659	.000

a. Predictors: (Constant), age of the firm, pre ipo leverage

This table talks about the relationship and impact each causes between the dependent and the independent variables. R shows that there is 84.3% relationship between the dependent and the independent variables i.e., impact of underpricing caused due to age of the, issue size, pre ipo leverage, promoters holding post issue, index return and index volatility. R square shows that independent variables have 71.1% influence on dependent variables.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	122236.849	2	61118.425	810.295	.000[b]
	Residual	49706.647	659	75.427		
	Total	171943.496	661			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), age of the firm, pre ipo leverage

This table shows the area of significance which is less than 0.05 which proves to be a significant model. F value being high shows that all the variables have significant relationship with each other.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-93.854	1.525		-61.530	.000
	Age of firm	.931	.023	.843	40.220	.000
	Pre ipo leverage	2.380	14.670	.003	.162	.871

a. Dependent Variable: Underpricing

Table shows that value of the firm has played a significant role in this company for underpricing. Age of the firm and pre ipo leverage represents the value of the firm therefore it signifies that high value or high quality firm underprices more than the low value or low quality firm because the latter cannot afford underpricing.

Multi commodity exchange of India

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.877[a]	.769	.768	187.21237	.769	1017.061	2	612	.000

a. Predictors: (Constant), index volatility, index. Return

This table shows the relationship between the dependent and the independent variables. R shows that there is 87.7 % correlation between the dependent and the independent variables. R square which is 76.9% shows that in V-MART underpricing there is a close influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000.

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	71292886.885	2	35646443.443	1017.061	.000[b]
	Residual	21449665.229	612	35048.473		
	Total	92742552.114	614			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), index volatility, index. Return

This table tells that this is an apt model used because the degree of significance is below 0.05. F value is also 1017.061 which states that all variables are interdependent to each other.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-73.356	19.889		-3.688	.000
	index.return	.953	.021	.877	45.101	.000
	Index volatility	-118.424	228.628	-.010	-.518	.605

a. Dependent Variable: Underpricing

The findings of the study indicate that the underpricing increases with significant variables like high return on opening and the beta value. It can now be stated that in capital market, high market conditions underprice more for signaling their high market to their investors. Investors take underpricing as a signal of high market conditions because a low value firm cannot afford leaving money on the table or underpricing. CARE IPO is affected by market condition therefore leads to underpricing

Manappuram Finance limited

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.320[a]	.102	.092	29.93596	.102	10.206	2	179	.000

a. Predictors: (Constant), issue size, Index.volatility

There is very less percent of relationship between variables involved. R shows that there is only 32% relationship between the dependent and the independent variables. R square which is 10.2% shows that in Manappuram finance limied ipo under-pricing there is a very less influence by independent variables towards dependent variables i.e., underpricing is closely influenced by age of the firm, issue size, pre IPO leverage, promoters holding post issue, Index return and Beta. This model is significant because it has a significance value less than 0.05 i.e., 0.000

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18291.989	2	9145.994	10.206	.000[b]
	Residual	160412.993	179	896.162		
	Total	178704.982	181			

a. Dependent Variable: Underpricing

b. Predictors: (Constant), issue size, index volitality

The table talks about the significance level that the model is appropriate because it has a significance of 0.00 which is less than 0.05.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.155	16.614		.130	.897
	Issue size	-3.642	.808	-.322	-4.507	.000
	Index volatility	19.784	60.496	.023	.327	.744

a. Dependent Variable: Underpricing

Findings of the study indicate that the under-pricing increases with significant variables like supply and market condition. Issue size is a component of supply and index volatility is a component of market condition. Therefore Manappuram ipos is affected by market factorrs and supply factors which ultimately leads to underpricing

CONCLUSION

It has been observed from the analysis that value of the firm, liquidity and market condition factors play an important role in influencing underpricing. It has been concluded that market condition factor has played an important role in influencing underpricing of IPO's in most of the firms who has issued IPO's after 2012.Second factors which determine the firms underpricing is the liquidity factor. Third influential factor is a mix of both the market and liquidity factors.

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Stress Management Strategies: An Approach for Productive Employee Performance in the Nigerian Banking Organizations a Survey of Commercial Banking Firms in Nigeriaa

Joseph Teryima Sev
Department Of Business Management
Faculty of Management Sciences, Benue State University
Makurdi, P.M.B. 102119, Makurdi, Nigeria, West Africa.

Abstract
The objective of the study is to determine the impact of stress management strategies on the performance output in the commercial banking organization in Nigeria. The population of the study comprises of all the operational twenty one (21) commercial banking firms in Nigeria as at December, 2016, totaled at 64,846 employees. The sample size for the study is 398 and is determined using Taro Yamane's formula. Bowley's allocation formula is used in determining respective commercial banks sample size. Both primary and secondary sources of data collection are employed in this research, confirmatory factor analysis with Varimax rotation has been performed to examine whether the classification of the variable into the specific factors is valid or not. In this case individual approaches, organizational approaches for managing stress and consequence of stress on performance output. Kaiser-Meyer-Oikin (KMO) test is used to measure sampling adequacy accepting a weak threshold of 0.5 and Bartlett's test of Sphericity is also adopted and Total Variance Explained (TVE) score is used to measure how data is distributed within a range and also how much response differs (accepted threshold is 0.6). Cronbach Alpha (α) reliability test is performed to assess internal consistency of measurement adopting a weak threshold of 0.6. Multiple regression test is used in the test of two (2) formulated hypotheses. The findings of the study revealed that strategies/approaches adopted for the management of stress in the banking organizations such as realistic goal setting, placement of employees in appropriate jobs, time management, prioritizing activities and schedules amongst others will have a positive impact on performance of employee in banking organizations. Another finding reveals that consequences of stress symptoms have a significant effect on performance output of employees in the commercial banking firms in Nigeria (i.e, increase height blood pressure, anxiety, irritability, job turnover, sleep disorder, insomnia, and heart attacks amongst others). The study recommendation are that employee that are assigned responsibilities and task for performance be experienced and skillful enough to live up to expected standards of job performance so that stress will not catch up with them. Again, proper delegation of authority and responsibilities, proper job descriptions, determination of objectives of the organization, proper job designs to suit the skills and needs of the employee, establishment of employee wellness programs, proper communications amongst others, are good strategies to adopt in managing stress in banking organizations for optimal growth and performance.

Keywords: Stress, Stress Management, Strategies, Employee Performance, Stressors, Stress Consequences.

INTRODUCTION

There appears little doubt that one of the major adverse influences of job satisfaction, work performance and productivity, and absenteeism and turnover is the incidence of stress at work. Stress is a complex and dynamic concept. It is a source of tension and frustration, and can arise through a number of interrelated influences on behaviours, including the individual, group, organizational and environmental factors [21]

According to [19] for example; in human terms any situation that is seen as burdensome, threatening, ambiguous or boring is likely to induce stress. This is the type of situation that would normally strike the individual as deserving immediate attentive or concern and is viewed unfortunate or annoying. There tends to be the feeling that the situation should not exist, but because of it, the person feels disappointed or annoyed and eventually is prone to anxiety, depression, anger, hostility, inadequacy and low frustration tolerance.

One potential major source of work stress arises from role incongruence and role conflict. Empirical surveys suggested that although a certain amount of stress may arguably be seen as a good thing and helps to promote a high level of performance, it is also potentially very harmful. Role stress can lead to difficulties in communication and interpersonal relationships and can have an adverse effect on morale, performance and effectiveness at work, and health.

Demands for improved business competitiveness and lower operating costs have frequently led to restructuring of banking, manufacturing, organization and reduction of staffing levels. This has placed greater pressures or remaining staff and resulted in a growing number of work-related health problems, work stress and a less efficient work force.

Suggests five organizational situation that are likely to create role problems and therefore resulting to stress for the individual employee in an organization. They include;

a) Responsibility for the work of others – Reconciling overlapping or conflicting objective of groups and organizations of groups and individuals, of self and superiors.

b) Innovative functions – Conflicting priorities and different psychological demands between the routine and administrative aspects of the job and the creative side.

c) Integrative or boundary functions – The particularly stressful role to the coordinator, link persons or outside contact, perhaps due to the lack of control over their demands or resources.

d) Relationship problems – Difficulties with a boss, subordinates or colleagues. For some people, particularly those with a technical orientation, the need to work with other people is a worrying complication.

e) Career uncertainty – If future career prospects become doubtful the uncertainty can quickly become stressful and spread to affect the whole of a person's work.

It is important to emphasis that, employees and managers of banking and manufacturing firms viewed the major source of stress as the incompetence of their superiors, poor internal communication, office politics, time pressures and deadlines, unrealistic business objectives, constant interruptions and securing access to the right information. This is a view from an empirical research findings conducted by the institute of management and personal performance consultants, UK limited (1993, December).

Stress is viewed as state of tension experienced by individuals facing extraordinary demands, constraints, or opportunities in a work environment. [24] Observed that stress has both negative and positive influence on the lives of employees. The two faces of stress can be termed as constructive stress and destructive stress.

Defined constructive stress or eustress as acts in a positive way. It occurs at moderate stress levels by prompting increased work effort, stimulating creativity, and encouraging greater diligence. This stress may be known as the tension that causes you to study hard before examinations, pay attention, and complete assignments on time in a difficult class. Destructive stress or distress is a dysfunctional for both the individual and the organization. One form of it is "Job burnout" that shows itself as loss of interest in and satisfaction with a job due to stressful working conditions. [2] Noted that, when a person is "burned out" he or she feels exhausted, emotionally and physically, and thus unable to deal positively with work responsibilities and opportunities. Too much stress can overload and breakdown a person's physical and mental systems resulting in absenteeism, turnover, errors, accidents, dissatisfaction, reduced performance, unethical behavior and even illness. [2, 25] maintains that, the common typical symptoms of stress include;

- Excessive alcohol intake	- Temper tantrums
- Tiredness	- Loss of concentration
- Headaches	- Excess worrying
- High blood pressure	- Heavy cigarette smoking
- Pounding heart	- Stomach upset and ulcers
- Low energy	-Irritability
- Sleeping problems	- Anxiety
- Aggression	- Dizziness
- Feelings of inadequacy	- Bad breath
- Hyperventilation	- Over eating
- Moodiness	- Memory loss
- Inability to relax	

Noted the importance of demonstrating a relationship between personality and health. Negative emotional states such as depression, hostility and anxiety appear to be linked to heart diseases, respiratory disorders such as asthma and headaches and ulcers. Health risks are greater where negative states are chronic, particularly where they are one an aspect of personality.

Maintains that, there are a number of other causes of stress that arise from individual factors: difficulty in coping with change, lack of confidence and assertiveness in relationships, poor time management, and poor stress management skills.

In an organizational context, typical stressors that are likely to emerge include;
  i.   Inadequate physical working environment - Noise, bad lighting, inadequate ventilation, lack of privacy, extremes of heat and cold, old and unsuitable and unreliable equipment.
  ii.   Inappropriate job design – Poor coordination, inadequate training, inadequate information, rigid procedures, inadequate staffing, excessive workloads, no challenge little use of skills, no responsibility or participation in decision making, role ambiguity.
  iii. Poor management style – Inconsistent, competitive, crisis management, autocratic management, and excessive time pressures placed on employees.
  iv.   Poor relationships – With superiors, with colleagues, with particular individuals, lack of feedback, little social contact, racial and sexual harassment.
  v.   Uncertain future – Job insecurity, fear of unemployment or redeployment, few promotions, opportunities, low statue job.
  vi.   Divided loyalties - Conflicts between personal aspirations and organizational requirements, conflict between job and family and social responsibilities.

It will be important to emphasis that stress can be exciting and arousing and can enhance our sense of satisfaction and accomplishment and lead to improve our performance. In this sense is "Eustress", used to describe positive aspect of stress. In contrasts, it will be distress, which means the unpleasant, debilitating and unhealthy side of stress. [23] Stress can be episodic. When dealing with life's problems, we get anxious, cope with the problem, and then relax again. Some events can be extremely stressful, such as the death of a close relative or a term in prison. Other experiences can also be stressful, such as getting a poor examination grades, being fired for speeding, or arguing with a parent, but trigger a less extreme response. Each of these episodes on its own is unlikely to cause lasting damage. However, when several of these episodes occur around the same time, the health risk is increased.

Stress can be chronic. This happens when employee face constant stress, with no escape and can lead to exhaustion and burnout. This may be due to the unfortunate coincidence of several unrelated episodes. However, chronic stress also arises from the enduring features of our personal, social and organizational circumstances. In situation where we are faced with been under pressure, always facing multiple and unrealistic demands, always having difficulties with our work, our colleagues and our relationships, then the health risk from stress is likely to increase.

The working environment, the crowded responsibilities, schedules and demanding expectations from bank customers have always placed strenuous demands on bank workers in a bid to carry out their work task inorder to attain goals of the banking firms. This has caused exhaustion, tiredness, anxiety, aggression, feeling of inadequacy, headaches, and moodiness to employee, causing havoc and devastation situation to banking firm. Devising effective management strategies to curb the devastating effect of stress in bank has been a problem to contend with by bank management. Infact if not properly managed, it will affect profit attainment and high performance trends of the banks. The researcher is therefore interested to empirically search for viable strategies manager will use to address this epidemic.

RESEARCH PROBLEM
There exist instances of job dissatisfaction, job burnout, high blood pressures, tensions, anxiety, irritability, boredom, procrastination among employees leading to low performance output and trends in banking firms in Nigeria. In most cases these have resulted to absenteeism to work by employees and high job turnover. The demanding nature of the banking tasks have called for a critical diagnosis to establish whether responsibilities and tasks assigned to bank officers is over demanding leading to role incompatibility, role ambiguity, role overload and role under-load, creating anxiety, frustration, anger, depression, hostility amongst staff, hence the epidemic symptoms are usually stressful to employee. The concern is therefore to establish how chief executive officers of bank have put in place management strategies to tackle the mess of stress which if not effectively addressed will affect performance of the organization.

OBJECTIVES OF THE STUDY
  i.   To determine the extent to which the strategies for management of stress will impact on the performance of the commercial banking firms in Nigeria.
  ii. To evaluate the extent to which the consequences of stress will affect the performance output of employees of the commercial banking firms in Nigeria.

RESEARCH QUESTIONS
  i.   To what extent have the strategies for management of stress impacted on the performance of the commercial banking firms in Nigeria?

ii. To what extent have the consequences of stress affected the performance output of employees of the commercial banking firms in Nigeria?

RESEARCH HYPOTHESES

HO1: Strategies for management of stress have not significantly impacted on the performance of the commercial banking firms in Nigeria.
HO2: The consequences of stress have no effect on the performance output of employees of the commercial banking firms in Nigeria.

REVIEW OF RELATED LITERATURE

View stress as a dynamic condition in which an individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important. Constraint is viewed as the forces that prevent individuals from doing what they desire while demand is the loss of something desired.

Noted that one potential major source of work stress arises from role incongruence and role conflict. Role incongruence arises when a member of staff is perceived as having a high and responsible position in one respect but a low standing in another respect. Difficulties with role incongruence can arise from the nature of grouping and formal relationships within the structure of the organization. For example, there are a number of work related relationships, such as doctor and nurse or senior manager and personal assistant, which can give rise to a potential imbalance of authority and responsibility.

See role conflict as arising from inadequate or inappropriate role definition and needs to be distinguished from personality clashes. These arise from incompatibility between two or more people as individuals even through their roles may be defined clearly and understood fully. [21] Observed that, in practice, the manner in which a person actually behaves may not be consistent with their expected pattern of behaviours. This inconsistency may be a result of role conflict. He further stressed that, role conflict can include;

i. Role incompatibility
ii. Role ambiguity
iii. Role overload
iv. Role under-load

Role incompatibility – arises when a person faces a situation in which simultaneous different or contradictory expectations creates inconsistency. Compliance with one set of expectations makes it difficult or impossible to comply with other expectations. The two role expectations are in conflict. A typical example concerns the person "in the middle", such as the supervisor or section head, who faces opposing expectations from workers and from management. Another example, might be the situation of a manager who believes in a relaxed participative style of behavior more in keeping with a theory Y approach, but who's superior believes in a theory X approach and expects the manager to adopt a more formal and directive style of behavior. This can cause stress.

Role ambiguity – This occurs when there is lack of clarity as to the precise requirements of the role and the person is unsure what to do. The person's own perception of their role may be differ from the expectation of others. This implies that insufficient information is available for the adequate performance of the role. Role ambiguity may result from a lack of formally prescribed expectations. It is likely to arise in large, diverse groups or at times of constant change. Uncertainty often relates to such matters as the method of performing tasks, the extent

of the person's authority and responsibility, standards of works, and the evaluation and appraisal of performance.

Role overload – This occurs when a person faces too many separate roles or too great a variety of expectations. The person is unable to meet satisfactorily all expectation and some must be neglected in order to satisfy others. This leads to conflict of priority. Role overload can be seen in terms of the total role set and implies that the person has too many separate roles to handle. This may cause stress to the employee.

Role under-load – This can arise when the prescribed role expectations fall short of the persons own perception of their role. The person may feel their role is not demanding enough and that they have capacity to undertake a larger or more varied role, or an increased number of roles. Role under-load may arise, for example, when a new member of staff is first appointed or from the initial effects of delegation.

Defined stress as an adaptive response mediated by individual characteristics and/or psychological processes. In other words, it is a consequence of any external action, situation or event that places special, physical and or psychological demand on the person. Stressors are the wide variety of things that cause stress for individuals. Some of the stressors can be traced directly to what people experience in the workplace; where as other derives from non-work place and personal factors. In another way, stressors can be grouped as individual level stressor, group level stressors, organizational stressor, and extra organizational stressors [25].

Work Stressors – These can arise from many sources, from excessively high or low task demands, role conflict s or ambiguities, poor interpersonal relations or carrier progress that is either too slow or too fast. A list of common stressors include the following;
  i.   Task demands – When an employee is asked to do too much or being asked to too little.
 ii.   Role ambiguities – Not knowing what one is expected to do or how work performance is evaluated.
iii.   Role conflicts – Feeling unable to satisfy multiple, possibly conflicting, performance expectations.
 iv.   Ethical dilemmas – Being asked to do things that violate the law or personal values.
  v.   Interpersonal problems – Experiencing bad relationships or working with others with whom one does not get along.
 vi.   Career developments – Moving too fast and feeling stretched, moving too slowly and feeling stock in a plateau.
vii.   Physical setting – Being bothered by noise, lack of privacy, pollution, or other unpleasant working conditions.

Life Stressors – A less obvious, though important source of stress for people at work is the "spillover effect" that results when forces in their personal lives "spill-over" to affect them at work such life stressors as family events (e.g the birth of a new child, economic difficulties, the sudden loss of a big investment) and personal affairs (e.g a separation or divorce) can all be extremely stressful. Since is often difficult to completely separate work and non-work lives, life stressors can affect the way people feel and behave on their job as well as in their personal lives.

Another set of stressors include personal factors such as individual needs, capabilities and person ability. Stress can reach a destructive state more quickly for example when experienced by highly emotional people or by those with low self-esteem. People who perceived a good fit between job requirements and personal skills secures to have a higher tolerance for stress

than do those who feel less incompetent as a result of a person-job mismatch. Additionally, aspect of personality such as achievement orientation, impatience, and perfectionism of individual with type a personalities for example, often create stress for them in work setting that others find relatively stress free. Another classification of stressor proffered by [23] is as follows;

i.   Individual level stressors: - There are directly associated with a person's job duties e.g work overload, role ambiguity, role conflict, personal economic problems, and inherent personality characteristics.

ii. The Group-level stressors: - There are caused by group dynamics and managerial behavior, conflict power tussle and politics in organization. Managers create stress for employee by exhibiting inconsistent behavior by refusal to provide support, lack of concern for the employee, laying too much emphasis on high productivity, focusing on negatives while ignoring good performance.

iii. Organizational stressor: - These can affect large number of employees. These include the overriding management style, organizational leadership, task demands, role demands, interpersonal demand climate of the organization. The office designs and general office can induce stressful working condition if not adequately catered for. Empirical research has demonstrated that poor lighting, loud noise, improper placement of furniture, inadequate space and dirty or smelling environment can create stressful situation.

iv. Extra organizational stressor: - These types are caused by factors outside the organization. It range from factors such as balancing one's career and family life to one's socio economics status to political and economic instability, lack of mobility. Stress is quite higher for people with lower socio economics status. Status represents a combination of economic factors measured by income, social factor as measured by educational level, work status as indexed by one's type of occupation, [25].
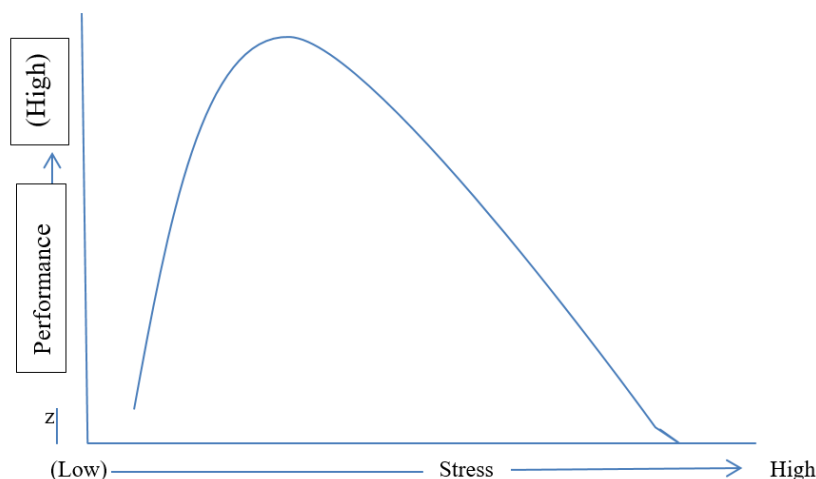
CONSEQUENCES OF STRESS

[12, 23, 25] in their different empirical research effort revealed that stress manifest in a number of ways in different individuals. An individual may develop high blood pressure, ulcer, irritability, conjunctivitis, exhaustion, and loss of appetite and eventually it may lead to accident as well. These manifest symptoms or consequences can be grouped into three (3) categories. These are:-

i.   Physiological symptoms:- Here stress quite often creates change in metabolism, increase heart and breathing rates, increase blood pressure, bring on headaches, induce heart attacks and create aguish in employee.

ii. Psychological symptoms: - Stress can cause dissatisfaction. Job related stress can cause job related dissatisfactions. Infact job dissatisfaction is the simplest and most obvious psychological effect of stress. The simplest symptom revealing in this case include tension, anxiety, irritability, boredom and procrastination.

iii. Behavioural symptoms:- The behavioral related stress symptoms include changes in productivity, absence and turnover, as well as change in eating habits, increased smoking or consumption of alcohol, rapid speech, fidgeting and sleep disorders, insomnia. The major significant research study in stress performance relationship is the inverted U relationship.

The logic underlying the inverted U is that low to moderate levels of stress stimulate the body and increase its ability to react. Individuals then often perform their task better, more intensely or more rapidly. But too much stress places unattainable demands or constraints on a person, which result in lower performance. This inverted U pattern may also describe the

reaction to stress over time, as well as to changes in stress intensity. That is, even moderate levels of stress can have a negative influence on performance over the long term as the continued intensity of the stress wears down the individual and saps his or her energy resources. In a nutshell, the longer time a stressful situation last, the poorer the performance as the continued intensity of the stress wears down the individual.

Inverted –U relationship between stress and job performance

Another consequence of stress is burnout a feeling of exhaustion that can develop when someone experience too much stress for an extended period of time. Burnout results in constant fatigue, frustration, and helplessness increased rigidity follows, as does a loss of self-confidence and psychological withdrawal. The individual dreads going to work, often puts in longer hours but get less accomplished than before, and exhibits mental and physical exhaustion. Because of the damaging effects of burnout, some firms are taking steps to help avoid it. For example, British Airways provides all of its employee with training designed to help them recognized the symptoms of burnout and develop strategies to avoid them [12]. Nigerian banking firms have also adopted this style of managing the stress syndrome for a productive result.

STRATEGIES FOR MANAGING STRESS BY ORGANIZATIONS

Given the devastating nature of stress and accompany consequences associated with it, managers of organization needs to device ways and strategies for its effective management in order to derive quality performance of the organization. [12, 2, 23, 25, 7] suggested various ways of managing stress in organizations. These are;

Emotional – focused strategies which improve individual resilience and coping skills. These include;
  i. Consciousness – Rising to improve self-awareness.
  ii. Exercise and fitness programmes.
  iii. Self-help training, in bio feedback, meditation, relaxation, coping strategies.
  iv. Time management training
  v. Development of other social and job interests.

Problem – focused strategies deal directly with the stressors and include;
  i. Improved selection and training mechanisms.
  ii. Staff counseling programmes.
  iii. Improved organizational communication.

iv.   Job redesigned and enrichment strategies.
v.   Development of team working systems.

Identified the most and least stressful jobs as follows;

Ten most stressful Jobs	Ten Least-stressful Jobs
1. Inner-city high school teacher	1. Forester
2. Police officer	2. Book binder
3. Miner	3. Telephone line worker
4. Air traffic controller	4. Tool maker
5. Medical intern	5. Millwright
6. Stockbroker	6. Repair person
7. Journalist	7. Civil engineer
8. Customer-service/compliant worker	8. Therapist
9. Secretary	9. Natural scientist
10. Waiter	10. Sales representation
o	

They emphasized that; an employee can take personal responsibility for reducing his or her stress level. Individual strategies that have proven effective include time management techniques, physical exercise, relaxation techniques and a close social support network. [15].

Time Management – Many people manage their time poorly. The thing we have to accomplish in any given day or week are not necessarily beyond completion if we manage our time properly. The well-organized employee, like the well-organized student, can often accomplish twice as much as the person who is poorly organized. So understanding and using basic time management principles can help individuals cope better with tensions created by job demands. A few of the well-known time management principles are:-
   a) Making daily lists of activities to be accomplished.
   b) Prioritizing activities by importance and urgency
   c) Scheduling activities according to the priorities set and
   d) Knowing you daily cycle and handling the most demanding parts of your job during the high part of your cycle, when you are most alert and productive.

Physical Activity – Non-competitive physical exercise, such as aerobics, walking, jogging, swimming, and riding a bicycle, has long been recommended by physicians as a way to deal with excessive stress levels. These forms of physical exercise, increase heart capacity, lower at-rest heart rate, provide a mental diversion form work pressures, and offer a means to "let off steam".

Relaxation Techniques – Here individuals can teach themselves to reduce tension through relaxation techniques such as mediation, hypnosis, and biofeedback. The objective is to reach a state of deep relaxation, where you feel physically relaxed, since what detached from the immediate environment and detached from body sensation. Empirical evidence revealed that, 15 to 20 minutes a day of deep relaxation release tension and provides a person with a pronounced sense of peacefulness. Importantly, significant changes in heart rate, blood pressure, and other physiological factor result from achieving the deep relaxation condition.

Building social support: – Having friends, family, or colleague to talk to provide an outlet when a stress level becomes excessive. Expanding your social support network, therefore, can be a means for tension reduction. It provides you with someone to listen to your problems and too often a more objective perspective on the situation. Other organizational approaches or strategies may include; improved processes for choosing employees, placement of employee in appropriate jobs, realistic goal setting, designing jobs with employee needs and skills in mind, increased employee involvement, improved organizational communication, offering employee sabbaticals and establishing of corporate wellness programs, creating jobs that give employees more responsibility, more meaningful work, more autonomy and increased feedback can reduce stress because these factors give the employee greater control over work activities and lessen dependence on others. All these strategies can help curb menace of stress in organization.

METHODOLOGICAL FRAMEWORK

A total of 398 questionnaires were distributed to employees of 21 commercial banking firms in Nigeria. The research design technique adopted was quasi-experimental which place premium on survey sample. The population for this study comprises of 21 licensed commercial banks employee in Nigeria operational as at December, 2016. All the categories of staff are considered in the research. The employee population in details in the 21 commercial banks is stated as follows:- Access Bank Plc, 800, Diamond Bank Plc, 4568, Eco Bank Nigeria Plc, 2410, Enterprise Bank Ltd, 1120, Fidelity Bank Plc, 2120, First Bank of Nigeria Plc, 6610, Firstcity Monumental Bank Plc (FCMB), 2000, Guarantee Trust Bank plc (GTB), 10000, Heritage Banking Company Ltd (HBCL), 657, Keystone Bank Ltd, 2233, Mainstream Bank Ltd, 2250, Sky Bank Plc, 821, Stanbic IBTC Holding Plc, 2077, Standard Chartered Plc, 1220, Sterling Bank Plc, 3034, Union Bank Nigeria, 6210, Wema Bank Plc, 1317, Zenith Bank Plc 6616, Jaiz Bank Plc 525. These all together make a total employee population size of 64,846. (Annual statement and Account reports of various commercial banks, 2010).

This selection will enable us study the commercial banking firm base on size (i.e bigger, moderate and smaller in size), age and asset base, quality and scope of operations. The choice of these banks employed the use of disproportionate stratified sampling technique in which the banks are classed into three (3) strata.

The first category of commercial banking firms is bigger in size in terms of employees, scope of operations and asset base. They have population of staff above 3500.

The second category of banking organization is moderately bigger in size in terms of employee, scope of operations and assets base. They have (staff/employee) population of between 2000-3449.

The third category banking of firms is smaller in size in terms of employee, scope of operation and asset base. They have (staff/employee) population below 2000.

Both primary and secondary sources of data are used. The primary sources of data collection employed the use of questionnaire using 5-point likert rating scale questionnaire of strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and strongly Disagree (SD) is administered to obtain viable information on the subject matter of stress management strategies by commercial banking firms in enhancing employee performance in the Nigerian commercial banking firms.

To scientifically generate a sample size, the [26] formula was applied. According to [1] this formula can be used for a homogeneous population like the one in this research.

The formula is stated below;

$$n = \frac{N}{1 + N(e)^2}$$

Where n = Sample size

1 = Constant value

N = Population size

e = Porportion of sampling error in a given situation. The researcher assumed 95% confidence level having 5% to error.

In this case, the total population size of 64,846 was used to obtain the sample size of twenty one (21) commercial banking firms in the study at 0.05 level of significance or 5% margin of error as shown below;

$$n = \frac{64,846}{1 + 64,846(0.05)^2}$$

$$n = \frac{64,846}{1 + 64,846(0.0025)}$$

$n = 398$ This is the total sample size for the research.

From the total sample size, the individual commercial banking organization sample size is obtained. The formula adopted in this case is Bowley's allocation formula (1964) in [] as shown below;

$$nh = \frac{nNh}{N}$$

Where nh = the number of units allocated to each banking firm.

n = total sample size

NH = the number of employees in each banking firm.

N = the population size

Following the Bowley's allocation formula, the respective commercial banking sample size is determined as shown below;

For Guarantee Trust Bank plc $\qquad nh = \frac{398 \text{ X } 10,000}{64,846}$

$$nh = 61$$

For Zenith Bank plc $\qquad nh = \frac{398 \text{ X } 6616}{64,846}$

$$nh = 41$$

The procedure is applicable for the rest of the banks.

Table 1.0 Number of Commercial banks based on classification and allocation of sample size to each commercial bank

S/NO	Name of Commercial Bank	Population of staff/employee	Selected sample size
The first category of commercial banking firms (employee/staff size above 3000, bigger in size in terms of employees, scope of operations and Assets base).			
1.	Guarantee Trust Bank plc (GTB)	10000	61
2.	Zenith Bank Plc	6616	41
3.	First Bank Plc	6610	41
4.	Union Bank (Nigeria)	6210	38
5.	United Bank for Africa (UBA) Plc	5561	35
6.	Diamond Bank Plc	4568	28
Second category of commercial banking firms (employee/staff size between 2000- 3499, moderately bigger in size in terms of employees, scope of operations and Assets base).			
7.	Sterling Bank plc	3034	19
8.	Eco Bank Nigeria	2410	15
9.	Mainstream Bank Ltd	2250	14
10.	Keystone Bank Ltd	2233	14
11.	Fidelity Bank Plc	2120	13
12.	Stanbic IBTC Holding Plc	2077	13
13.	First City Monumental Bank Ltd	2000	13
14.	Unity Bank Plc	2072	13
Third category of commercial banking firms (employee/staff size below 2000 smaller in size in terms of employees, scope of operations and Assets base).			
15.	Standard Chartered Bank plc	1220	7
16.	Wema Bank Plc	1317	8
17.	Enterprise Bank Limited	1120	7
18.	Access Bank Plc	900	6
19.	Sky Bank Plc	821	5
20.	Heritage Banking Company Ltd.	657	4
21.	Jaiz Bank Plc	525	3

Source: Commercial banking firms record and field survey, 2016.

FACTOR AND RELIABILITY ANALYSIS

Confirmatory factor analysis with Varimax rotation has been performed to examine whether the classification of the variables into the specific factors is valid or not. In this case the individual approaches, organizational approaches/strategies for managing stress and consequences of stress as affecting performance output of employee is subjected to analysis. KMO (Kaiser-Meyer-Olkin) is used to measure the sampling adequacy, accepting a weak threshold (0.5) (Malhotra, 1999) and Bartlett test of sphericity is also adopted. The total variance explained (TVE) score is also used to measure how data is distributed within a range and also how much the response differs (accepted threshold, 0.6). Further, Cronbach Alpha (α) reliability test has been performed to assess internal consistency of measurement adopting the weak threshold 0.6 [22, 8, and 3].

Table 3: Factor Analysis

Factors	Statistics	Strategies for managing stress (Items)	Loading	No of items
Individual Approaches/Strategies	K.M.O. = 0.509 Sig = 0.00 (TVE) = 0.455 Cronbach Alpha() = 0.929 **Bertlett's test of Sphereity** Approx. Chi square = 26.82 Df = 28 Sig. = 0.00	1) Adoption of Time management principles is essential for stress management. 2) Making daily lists of activities to be accomplished is essential principle. 3) Prioritizing activities by importance and urgency is necessary. 4) Scheduling activities according to priorities set is important. 5) Knowing your daily cycle and handling most demanding part is important. 6) Physical activity i, e Noncompetitive physical exercise such as aerobics, walking, jogging, swimming and riding bicycle is necessary. 7) Relaxation techniques are essential for stress management. 8) Building social support i.e. having friends, family or colleague to talk to is necessary.	0.905 0.819 0.888 0.788 0.830 0.760 0.867 0.836	**8**
Factors	**Statistics**	**Strategies for managing stress (Items)**	**Loading**	**No of items**
Organizational Approaches/Strategies	K.M.O. = 0.533 Sig = 0.00 (TVE) = 0.472 Cronbach Alpha() = 0.907 **Bertlett's test of Sphereity** Approx. Chi square = 22.76 Df = 21 Sig. = 0.00	1) Redesigning jobs to give employees more responsibility, more meaningful work, more autonomy and increased feedback reduces stress. 2) Increases formal organizational communications with employees reduce uncertainty. 3) Placement of employees in appropriate Jobs reduces stress. 4) Setting realistic organizational goal is a strategy for stress management. 5) Increased employee involvement helps to reduce stress. 6) Offering employee sabbaticals and establishment of corporate wellness programs reduce stress. 7) Flexible work time is a strategy for stress management.	0.865 0.784 0.863 0.804 0.777 0.709 0.802	**7**
Consequences of Stress	K.M.O. = 0.495 Sig = 0.00 (TVE) = 0.461 Cronbach Alpha() = 0.935 **Bertlett's test of Sphereity** Approx. Chi square = 31.51 Df = 36 Sig. = 0.00	o 1). Unrealistic business objectives lead to anxiety. 2). Poor internal communication result to frustration. o 3). Office politics can cause stress. o 4). Time pressures and deadlines result to stress. o 5). Attending too many meetings is stressful. o 6). In competent senior management leads to depression. o 7). Poor relationship between colleagues can result to hostilities and stress. o 8). Constant interruptions can lead to stress. o 9). Managing staff problems can be burdensome and threatening.	0.870 0.776 0.849 0.776 0.834 0.797 0.890 0.700 0.850	**9**

Table 4.0 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.512
Bartlett's Test of Sphericity	Approx. Chi-Square	27.03
	Df	28
	Sig.	0.001
Overall Reliability Statistics : Cronbach's Alpha		**0.924**

KMO & Bartlett's Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. Also, the Bartlett's Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. We can see that we have good values for all variables for the MSA but the overall value is a bit low at 0.512, however Bartlett's Test of Sphericity has an associated P value (sig in the table) of < 0.05 as by default SPSS reports p values of less than 0.05 as 0.001, So from the above results we know that we can now continue and perform a valid factor analysis. It can also be seen that individual approaches/strategies, organizational approaches and consequences of stress amongst others were subjected to reliability test using Cronbach's Alpha but in all cases it was high.

The SPSS analysis gives us Cronbach's Alpha values for individual approaches/strategies, organizational approaches and consequences of stress amongst others as shown in the above table. This is an indication that our instruments are reliable. According to Everitte (2006), an alpha value of less than 0.60 is unacceptable; 0.60-0.65 is undesirable, 0.65-0.70 is minimally acceptable; 0.70-0.80 is respectable; 0.80-0.90 is very good and more than 0.90 means consider shortening the scale by reducing the number of items. As it is for all the banking firms under survey it shows that, the instrument is very reliable, hence our overall reliability statistics: Cronbach Alpha is 0.924. Multiple regression test is adopted for the testing formulated hypotheses.

DATA PRESENTATION AND ANALYSIS:

Table 1.0 Respondent views concerning strategies adopted by commercial banking firms for managing stress such as Individual Approaches and Organizational Approaches in Nigeria

Statement	Respondent category	Degree of Response					
		SA	A	U	D	SD	Total
The strategies adopted by commercial banking firms for managing stress of employee include individual approaches (i.e time management, e.g. Prioritizing activities, making daily list of activities, scheduling activities according to importance and urgency, knowing your daily cycle, physical exercise i.e. walking, jogging, swimming, relaxation techniques, building social support, placement of employee in appropriate jobs, realistic goal settings, designing jobs with employee needs and skills in mind, improvement in organizational communication and establishment of corporate wellness programs).	Top level Management	43	19	2	4	2	70
	Middle level Management	74	40	4	5	5	128
	Lower level Management	120	60	5	6	8	199
	Total	237	119	11	16	15	398

Source: Field survey (2016).

The data shown in Table 1.0 above, clearly revealed that strategies adopted by commercial banking firms for managing stress for employees include individual approaches such as time management by prioritizing activities, scheduling activities according to importance and urgency, making daily list of activities, knowing your daily cycle, physical exercise by employee by way of swimming, jogging, walking, relaxation techniques, building social support, placement of employee in appropriate jobs, realistic goal settings, designing jobs with employee needs and skills in mind, improvement in organizational communication amongst others.

In fact 237 of 398 representing 59.54% of the respondent strongly agree on the notion. About 119 out of 398 (29.89%) agree on this position, 11 out of 398 (2.76%) were undecided on the issue of managing stress.16 out of 398 representing (4.02%) disagree and finally 15 out of 398(or 3.76%) strongly disagree on this notion. On the whole one can derive that, there is overwhelming response that Nigerian commercial banking firm adopt several strategies to manage the menace of stress in order to have a productive organization.

Table 2.0 Respondent opinion pertaining how strategies for managing stress have enhanced performance goal attainment in commercial banking firms Nigeria

Statement	Respondent category	Degree of Response					
		SA	A	U	D	SD	Total
Effective application of strategies for managing stress such as time management strategies, relaxation strategies, jogging, swimming, designing jobs with employee needs and skills, placement of employee in appropriate jobs, realistic goal settings, increase organizational communication, corporate wellness programs amongst others have enhanced performance goal attainments of banking firms in Nigeria.	Top level Management	47	19	2	2	3	73
	Middle level Management	75	44	2	3	2	126
	Lower level Management	127	64	2	4	2	199
	Total	249	127	6	9	7	398

Source: Field survey (2016).

The table above 2.0 revealed the respondent opinion pertaining how strategies for managing stress such as time management strategies, relaxation strategies, jogging, swimming, designing of employee jobs to meet skills and needs, placement of employee on appropriate jobs, realistic goal settings, increase organizational communication, corporate wellness programs amongst others can facilitate and enhanced performance goal attainments of commercial banking firms in Nigeria.

Overwhelmingly, 249 out of 398 (or 62.56%) strongly agree that these strategies mentioned above were effectively applied and have led to productive goal attainment of profit, growth, survival etc. 127 out of 398 (31. 90%) also agree on the subject matter. 6 out of 398 (1.50%) were undecided on the issue. 9 out of 398 representing (2. 26%) disagree and finally 7 out of 398 representing 1.75% strongly disagree on the fact that, they are not aware of the application of stress management strategies in enhancing performance outcome of the banking firms in Nigeria.

Hypothesis 1
H01:   Strategies for Management of stress have not significantly impacted on the performance of the commercial banking firms in Nigeria

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.839[a]	.704	.650	.333

The value of 0.839 indicates Strategies for Management of stress have significantly impacted on the performance of the commercial banking firms in Nigeria. The R square is the coefficient of determination which is 0.704 with 70.4% proportion of variance in the dependent variable.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	8.733	6	1.455	13.098	.000[b]
1	Residual	3.667	33	.111		
	Total	12.400	39			

The table shows that the independent variables are statistically significantly, $F_{(6, 33)}$ = 13.098, $P < 0.05$. We reject the hypothesis which states that Strategies for Management of stress have not significantly impacted on the performance of the commercial banking firms in Nigeria.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.188	.464		2.561	.015
	Time Management	.233	.068	.408	3.416	.002
	Relaxation Strategy	.136	.047	.292	2.917	.006
1	Employment Needs	.285	.074	.425	3.879	.000
	Realistic Goal Setting	.049	.066	.075	.748	.010
	Placement of Employee	.021	.088	.042	.236	.045
	Increase Communication	.083	.110	.150	.753	.047

a. Dependent Variable: Performance of Commercial Bank

Interpretation.
y = X1 +X2 + X3 + X4 +X5 +X6 where C is the constant.
Predicted y = 0.233X1 + 0.136X2 + 0.285X3 + 0.049X4 + 0.021X5 + 0.083X6 +1.188
Strategies for Management of stress have a positive relationship on the performance of the commercial banking firms in Nigeria.

Table 3.0 Respondent opinion concerning the consequence of stress as having negative effect on the performance output of employees in commercial banking firms in Nigeria

Statement	Respondent category	Degree of Response					
		SA	A	U	D	SD	Total
Employees of commercial banking firms suffer the consequences of stress affecting the performance output of employees in commercial banking firms in Nigeria. (E.g. the suffers from tension, heart attacks, increase high blood pressure, anxiety, irritability, absence from duty, job turnover, sleep disorders, insomnia amongst others)	Top level Management	47	19	2	2	3	73
	Middle level Management	75	44	2	3	2	126
	Lower level Management	127	64	2	4	2	199
	Total	249	127	6	9	7	398

Source: Field survey (2016).

There has been overwhelming view among the respondents as indicated in table 3.0 above pertaining the consequences of stress as having a devastating effect on the performance output of employees in commercial banking firms in Nigeria. These consequence range from heartbeat, tension, anxiety, insomnia, employee turnover, absenteeism, sleep disorders, heart attacks, irritability, high blood pressure amongst others.

Thus, out of 398 respondents, 249 representing 63.31% strongly agree on the subject matter that these stress symptoms and consequences have a devastating effect on the performance of employee. 127 subjects out of 398 representing 31. 90% agree on the issue. 6 subjects out of 398 representing 1.50% were undecided on the issue. 9 out of 398 (or 2. 26%) disagree on the information. About 7 out of 398 (1.75%) strongly disagree on the subject matter of consequence of stress as not affecting employees performance in the commercial banking firms in Nigeria.

Hypothesis 2
H02:   The consequences of stress have no effect on the performance output of employees in commercial banking firms in Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.834[a]	.696	.641	.338

The value of 0.834 indicates the consequences of stress have no effect on the performance output of employees in commercial banking firms in Nigeria. The R square is the coefficient of determination which is 0.696 with 69.6% proportion of variance in the dependent variable

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.632	6	1.439	12.600	.000[b]
	Residual	3.768	33	.114		
	Total	12.400	39			

The table shows that the independent variables are statistically significantly, $F_{(6, 33)} = 12.600$, $P < 0.05$. We reject the hypothesis which states that the consequences of stress have no significant effect on the performance output of employees in commercial banking firms in Nigeria.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.800	.452		3.979	.000
	Suffer from tension	.271	.064	.474	4.220	.000
	Heart attack	.137	.046	.298	2.999	.005
	High blood pressure	.300	.076	.447	3.954	.000
	Anxiety	.075	.056	.132	1.336	.019
	Irritability	.007	.045	.015	.150	.028
	Sleep disorder	.031	.049	.072	.640	.027

a. Dependent Variable: Performance of Commercial Bank

Interpretation.

$y = X1 + X2 + X3 + X4 + X5 + X6$ where C is the constant.

Predicted $y = 0.271X1 + 0.137X2 + 0.300X3 + 0.075X4 + 0.007X5 + 0.031X6 + 1.800$

The consequences of stress have a positive relationship on the performance of the commercial banking firms in Nigeria.

DISCUSSION OF FINDINGS

The findings from the test of formulated hypotheses revealed interesting results as follows;

For Hypotheses one (1), it was found that strategies for the management of stress adopted by commercial banking firms in Nigeria have impacted positive on the performance of the banks. These strategies include time management, relaxation strategies, placement of employee in appropriate jobs, realistic goal settings, designing jobs with employee needs and skills in mind, improvement in organizational communication, establishment of corporate wellness programs, delegation of authority, seeking for counseling and guidance, being happy and humorous, employment of workers that are suitable for the job.

This is also manifest in the value of 0.839 obtained in the regression analysis which indicates that strategies for management of stress here significantly impacted on the performance of the commercial banking organizations in Nigeria. The R square is the coefficient of determination which is 0.704 with 70.4% proportion of variance in the dependent variable.

Previous empirical researches from [4, 16, 6, 23] confirms that the key factors which represents potential sources of stress include external environment (i.e economic situation, technological development), organizational structure and culture (i.e nature of Job structure, management style etc), work relationships (i.e quality of relationship with colleagues, boss, own staff etc), Job characteristics (i.e challenge, power etc), personal factors (i.e personality, motivation, intellect, skills etc), domestic/social situations (i.e illness, bereavement, debt). All these factors can cause individual stress in organization. Steps that management can take to reduce the experience of stress among their work force can be considered as stress avoidance measures and stress reduction measures.

Enumerated stress avoidance countermeasures as follows;

a) Design jobs to permit maximum use of skills and discretion by job-holders and incorporate sufficient task variety and challenge to maintain employee interest.

b) Design work so as to permit exercise of responsibility by job holders, giving sufficient authority, and allowing job-holders to share in decision making process that affect his or her work and ensuring work goals that do not conflict with those of others.

c) Encourage superiors to develop participative management style, paying attention to individual needs as well as those of the task and the group.

d) Encourage team-spirit; where team-members support each other and individuals are valued for their role.

e) Encourage communication between departments/sections as well as vertically through the management chain and provide constructive feedback to individuals (by job results, staff appraisal, etc).

f) Ensure that decision-making is delegated so that people at every level are able to share in decision affecting their work and future prospects.

g) Develop an organization culture in which attitudes towards employees are positive and where attention to product/service quality is reflected in respect for employee's knowledge, skills and contribution, and where mistakes are seen as learning opportunities rather than grounds for criticism.

The stress reduction measure advanced by him includes;

a) Reduce the number of changes expected of any one individual or team.

b) Limit the procedural and other complexities associated with the execution of tasks.

c) Permit individuals to express their feelings and anxieties to someone else-boss, colleagues and trained counselors.

d) Provide sports and social facilities.

e) Provide adequate canteen and rest-room facilities.

The implication of the above scenario is that executive management of the commercial banks in Nigeria should endeavor to provide adequate training awareness and sensitization campaigns and workshop forums to properly educated employees of the enormous associated benefits that accompany stress management. Professional counseling in the workplace using techniques that can help individual employees take responsibility for and to manage their own decision making whether work related or personal is necessary. [9] maintains that skilled helpers through interactions are in a better position to manage problems situations that confronts employees and keep them develop mindset and opportunities of their lives more meaningfully that will make them to be productively oriented.

For Hypotheses two (2), it was revealed that the consequences of stress have a significant effect on the performance output of employees in commercial banking firms in Nigeria. Stress can cause high blood pressure, ulcer, irritability, difficulties in taking simple decision relate to work, loss of one's appetite, easy susceptibility to mistakes and accidents, anger and aggressiveness, headache, vomiting symptoms.

Maintains that, these symptoms have physiological effect, psychological effect and behavior effect. The physiological effect, includes increase heartbeat, obsession, constant headache and migraine, heart disease/cardiac arrest, changes in one metabolism etc. The psychological effect includes job dissatisfaction, tension, anxiety, boredom, procrastination, laziness, anger, emotional instability and lack of contraction etc. The behavior effect includes low productivity and profitability, absenteeism, low turnover rate, change in eating habit, stammering, disorder in one's sleep, aggression, hot tempered, quarreling etc.

The policy implication in this regard demands that the executive management should engage medical personnel/Doctors to give constant medical check-ups to employees to ensure that they are all right as they perform their task on the day to day basis to guarantee goal attainment of profit, growth, productivity, survival, continuity amongst others.

CONCLUSION AND RECOMMENDATIONS

It is important for organizations employees to know the potential sources of stress, their accompanying symptoms and consequences. This will facilitate its proper management in the organization either through stress-avoidance counter measures and stress-reduction measures. Proper understanding and identification of the individual stressors, group stressors causing stress and the personality traits possessed by employees either type A personality traits or type B personality traits will help executive management of commercial banking firms in Nigeria to deal with this ugly phenomenon in a better manner to yield productivity. This is pertinent because, type A personality employees experienced considerable stress than type B personality employees. Applying the right management strategies by organizations management with the understanding of the stress symptoms and consequences will help in addressing this ugly devastating occurrence.

Based on the above, the paper recommendations are as follows;
1. Assigning of responsibilities and tasks to employees for performance that are inexperienced and unskillful and those who will not live up to expectations of the job assignment leading to role conflict should be checkmated and avoided by organization management. Human resource department should endeavor to employ and assigned task to competent employees with requisite skills for a viable results.
2. Role ambiguity and lack of clarity to assigned tasks and responsibilities by the human resources departments of banking organization be avoided and discouraged to ensure organizational effectiveness.
3. Proper delegation of authority for specific tasks and responsibilities to employees of banking firms is important. This will enable them know their boundary of effective operation leading to avoidance of stress in organizations.
4. Proper job descriptions to employees is pertinent hence this will ensure effective commitment, loyalty, dedication to quality service delivery thus eliminating alienating stressful aspects of the job.
5. Strategies for effective management of stress such as proper time management, improvement of organizational communications, exercise and fitness programme, staff counseling, job design and enrichment strategies, improved selection and training mechanism, development of team working systems, relaxation technique, prioritizing activities by importance and urgency, expanding your social support network to reduce tension amongst others be adopted by employees of banking firms and awareness and sensitization campaigns by executive management of banks to guarantee direction on how best to manage stress in workshop forums will curb the menace of stress and facilitates attainment of organizational goals .
6. Determination of job objectives is a viable strategy for stress management and assignment of responsibility. Through this what is required to be achieved is established to be followed and pursued, making life easy for employees by avoiding and eliminating the stressful element that would have associated with the job.
7. Qualified medical personnel be employed by the commercial banking firms specifically to manage and treat stress related symptoms of the headache, increase blood pressure, increase breathing rates, induced heart attacks, tensions, anxiety, sleep disorders,

insomnia amongst others. Proper treatment will help reposition performance status of the organization.

8. Organization management should endeavor to determine the personality traits possessed by employees and ensure that they are appropriately advised, counseled to adopt the right posture to life as they go about on their work assignment and responsibilities. They have to realize that been patient and planning their responsibilities on daily basis will help reduce stress element associated with jobs.

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APPENDIX I
Department of Business Management
Faculty of Management Sciences
Benue State University,
Makurdi, Nigeria.
1st December, 2016.

Dear Sir/Madam,
You have been chosen as one of the respondent in this study. You are therefore humbly requested to supply honesty and sincere answers/responses to the questions by ticks (√) there is no right or wrong answers.

Questionnaire
Strategies adopted for managing stress by banking organization in Nigeria include individual approaches (i.e time management, relaxation techniques, building social support and organizational approaches (e.g placement of staff on appropriate jobs, realistic goal settings, designing jobs with employee needs and skills) amongst others.
   a) Strongly Agree (SA)
   b) Agree (A)
   c) Undecided (U)
   d) Disagree (D)
   e) Strongly Disagree (SD)

These strategies for managing stress have enhanced performance goals attainment in banking firm in Nigeria.
   a) Strongly Agree (SA)
   b) Agree (A)
   c) Undecided (U)
   d) Disagree (D)
   e) Strongly Disagree (SD)

The consequences of stress have negative effect on the performance output of employees in commercial banking firms in Nigeria. (E.g. Heart attacks increase blood pressure, tension, anxiety, irritability amongst others).
   a) Strongly Agree (SA)
   b) Agree (A)
   c) Undecided (U)
   d) Disagree (D)
   e) Strongly Disagree (SD)

Disclosure of Relevant Acts or Facts: A Study of Brazilian Companies Issuing American Deposit Receipts – Adrs at American Stock Exchanges

Ludmila Lavorato Loures
Professor FUMEC University
Professor of Public Accountability and Finance Management
Researcher in finances information. Brazil

Carlos Alberto Gonçalves
Full professor at Universities FUMEC e UFMG
Professor of Strategic Management and Innovation Performance
Coordinator of NUME - Research Center of Strategy and Innovation
Researcher in subjects Strategic Performance
factors that imply firms innovation growth. Brazil

Daniel Jardin Pardini
Full professor at FUMEC University
Professor of Strategic Management and Corporate Governance
Researcher on strategic themes in Policy and Strategic Public Governance. Brazil

Abstract

The aim of this article identifies, evaluates and describes relevant facts and acts' occurrences disclosed by Brazilian companies issuing ADRs - American Depositary Receipts. The analysis was made based on 1,125 information extracted from the Comissão de Valores Imobiliários – CVM's website, the regulatory commission organization empowered to regulate, standardize and supervise the activities of trade agents of public securities in Brazil. The research used information that was carried out from January 2006 to April 2012. It was evidenced that companies whose trade their depositary receipts in markets with high standards of corporate governance practices do not disclose a larger amount of information than the lower one governance practices. This research expands the knowledge about the content, frequency and timing of disclosure of relevant information by Brazilian organizations in international equity markets.

Key Words: Corporate Governance. Relevant organizational information. ADR. American Depositary Receipts.

INTRODUCTION

One of the great dilemmas in the literature dealing with the accounting data management relates to how and when to disclose them. Ansoff and McDonnell (1993) show that organizations are faced with complex situations when the decision of disclosing information or not is in play. There is often a need for safeguarding it, since exposing the business intention may undermine the strategy underlying the operation. On the other hand, it dictates the principles of good governance and the relevant legislation that the relevant facts must be reported promptly to the interested parties, being prohibited the retention of privileged information.

This research aims to increase knowledge about how the open capital Brazilian organizations structure and practice the disclosure of information of relevant acts and facts. Not much has been researched on the recurrence and the type of information that these organizations disclose to stakeholders in their activities. Although they are common studies relating to disclosure and the impact on the capital market, (BROWN, THEODORE; CHRISTENSEN; BROOKE, 2012; SILVA, FELIPE, 2010; LOPES; VALETIM, 2008) researches dealing with the narrative content of these reports and their timing are still incipient. (DAVIS; PIGER; SEDOR, 2012).

Some companies are reluctant to publish their information. Several may be the factors that lead companies not to disclose information completely. Often, such maneuvers are motivated by fear of having the strategic organizational objectives jeopardized. On the other hand, companies are faced with the need to follow the disclosure guidelines of the relevant facts, a situation which imposes the dilemma between the risk of informing the market and the principle of transparency. From the perspective of governance, this study aims to analyze the guidelines of the mandatory disclosure of information related to material facts and acts of Brazilian companies that trade securities on US stock exchanges.

The internationalization of capital markets and the increase of foreign capital in the domestic stock market have driven new thinking on how to disseminate information of interest to major public organizations. Open capital Brazilian companies that have chosen to internationalize their operations had to adapt to the legal guidelines of the domestic and international markets. In Brazil, the law of joint-stock companies, the instructions of the CVM - Brazilian Securities Commission and regulations and the listing segment at BM & FBOVESPA led companies to adopt a series of procedures in the provision of information to shareholders and the market. In the case of the conditions to negotiate ADRs - American Depositary Receipts, the guidelines issued by the Sarbanes-Oxley (SOX), the Security and Exchange Commission (SEC) and the recently established Dodd-Frank law meant that companies should also meet the US law requirements.

The intensification of international legal pressure on the disclosure of material information refers with the question whether, in fact, the regulatory requirements and inspection of national and international markets for equity have been complied. The objective of this article is then to identify, assess and describe the frequency and content of the relevant information disclosed by Brazilian public companies issuing ADRs - American Depositary Receipts.

It is intended to verify if there prevails a higher recurrence of disclosure of relevant events by those organizations that operate specifically in markets that require high level of transparency of information. The sectors that disclose relevant acts and facts and the possible relationships between the frequency of dissemination of information, the size of organizations and types of markets in which they operate should also be identified.

DISCLOSURE OF RELEVANT INFORMATION: CONTENTS, DECISION MAKING, AND LEGAL ASPECTS OF CORPORATE GOVERNANCE

In studies dealing with the disclosure of information to organizations' investors , some studied fields can be identified: research on the content of the texts published (Defond; HUNG; Trezevant, 2007; DAVIS; Piger; SEDOR, 2012; LOPES, VALENTINE, 2008 ; SILVA, FELIPE, 2010), research dealing with the decision to release or not the reports (BROWN, THEODORE; CHRISTENSEN; BROOKE, 2012; SON; CRABTREE, 2011; OLIVEIRA; LOPES, CUNHA, 2008) and works that address the governance principles that support the disclosure policy of publicly

traded organizations in the securities markets (Shleifer and Vishny, 1986; Lanzana; SILVEIRA; Fama, 2006; FRANCIS; SCHIPPER; VINCENT 2002). This topic covers these investigative cut-outs.

Relevant Information Content

Companies have three types of information flow (LESCA; ALMEIDA, 1994, p 07.): a) externally collected; b) the information produced by the company and intended for the company itself; and c) the data generated in the organization and disclosed to the market. Living with external actors and the publication of information to the outside world are strategic factors for the organization (FRANCIS; SCHIPPER; VINCENT 2002). In the capital market, a major recipient of organizational data, the explicit content of the information disclosed aims to bring the investor to the reality of the organization, so that we can identify investment opportunities and take forward decisions to the scenarios set out in communications (LOPES; VALENTINE, 2008).

Some of the research on the informational content announced to the market have focused on readability of the data provided and the impact that information has on the value of the shares (DAVIS; Piger; SEDOR, 2012; LOPES, VALENTINE, 2008; Bhattacharya; BLACK; CHRISTENSEN; Mergenthaler, 2007). The content of information to the market also finds relations with institutional protection levels assured. Research conducted in 26 countries shows evidence that the relevant information announcements are more informative in countries with strong protection for institutional investors (Defond; HUNG; trezevant, 2007).

Studies concerning the acts and facts of Brazilian companies, indicate that the information disclosed in the Brazilian market is still difficult to read and, over the years, have become more extensive and less widespread (SILVA; FELIPE, 2010). In another way, it is still clear the need for other administrative, strategic and financial communications, besides financial reporting, that support the real understanding of the company's situation (OLIVEIRA; LOPES; CUNHA, 2008).

To disclose or not to disclose relevant information? "That is the question"

It is one of the dilemmas that have supported the management of information dissemination and which relevant reports should or should not be disclosed to the market. What will determine the company's decision to communicate or fail to report a relevant fact are the possible consequences for their competitive niche (BROWN, THEODORE; CHRISTENSEN; BROOKE, 2012; LOPES, VALENTINE, 2008). To Oliveira ET. Al (2008) the relevant data announcement helps to reduce capital costs, increases credibility with the public and the liquidity of traded securities. Moreover, the publication of accurate, complete and timely information on important facts reinforces investor confidence and allows forming a more informed judgment of the performance and the assets of the organization (OLIVEIRA; LOPES, CUNHA, 2008).

Disclosure of information relating to relevant acts and facts acquire greater or lesser importance depending on the size and the company's emphasis on the capital market. Its importance can be measured by the liquidity of the shares and measured by turnover and daily movement of papers (Shleifer, Vishny, 1986). The range of information to the investor's disposal is important to weigh the risk and return on investment. Thus, companies must decide on disclosing any relevant act or fact, subject to cause surprises to the market.

In another direction, some authors also highlight the benefits of not disclosing the relevant statement. Lesca and Almeida (1994, p. 06) point out that some companies manage information as a strategic resource, but "have no desire to see their name written, as is

preferred to discreetly keep their strategic asset." The more detailed the information disclosure, the greater the chances of creating a competitive disadvantage (OLIVEIRA; LOPES, CUNHA, 2008). The development and dissemination of an information strategy should take into account the possible risks related to its publication on the competition. The option to decide not to disclose strategic information can be explained by the very secrecy that is often adopted in the strategy creation and development (BROWN, THEODORE; CHRISTENSEN; BROOKE, 2012). Including the strategic aspect, the disclosure incurs costs related to the processing of information, the cost of auditing and those expenditures that indirectly affect the company as trading with customers, employees, suppliers and government (SON; CRABTREE, 2011).

Regardless of the prevailing duality of the advantages of full disclosure of relevant information about the company and the reluctance to disclose strategic information, companies have tried to improve the mechanisms for providing information to its stakeholders (shareholders and other stakeholders) in order to reduce the apprehensions of those who depend on or participate in the daily activities of the organization. One of the areas of study that deals with the way and the effects of disclosures of organizational information is corporate governance that will be addressed in sequence.

A Corporate Governance and Information Disclosure

Corporate governance can be understood as a set of mechanisms to ensure the suppliers of capital that their investments will receive an adequate return; protection including creditors and minority shareholders (Shleifer, Vishny, 1986). Same position is shared by Grun (2003) by stating that the company's relations with the capital market, the exercise of good governance embraced by the accounting transparency and respect for the rights of minority shareholders.

In relation to the act of providing important information to the market, beyond the term transparency, two other terms are used in the literature: evidence and disclosure. Evidencing refers to information covered with quality, reliability and clarity; disclosure, the specific requirement of US law for companies listed on stock exchanges to disclose information, seeking greater ethics and transparency in business (FRANCIS; SCHIPPER; VINCENT 2002; Lanzana; SILVEIRA; Fama, 2006). Evidencing then is a way to achieve transparency. Disclosure will be obtained if there is clarity of the content to be provided at the ideal time of information dissemination to the interested public (Schrand; WALTHER, 2000).

The level of transparency in communication is nevertheless also an important indicator of good corporate governance practices (FRANCIS; SCHIPPER; VINCENT 2002). The requirements in relation to its exercise will depend on the relevant legislation to the locus of trading securities.

Legal Aspects of the Relevant Information Disclosure in Brazil and the United States

Some legal instruments are worth mentioning when the central theme is the relationship between companies and their public and the market: in Brazil, Law 6,385 / 76, which created the Comissão de Valores Imobiliários (CVM) and, in the international stock market, American laws Sarbanes-Oxley, of 2002 and the Dodd-Frank, of 2010. In the case of the Brazilian legislation, the regulations on information disclosure relating to relevant acts and facts are in charge of the Brazilian Securities Commission - CVM. The concept of relevant act or fact refers to any decision of the controlling shareholder; it involves the resolutions of the general meeting, the board of directors of the public company, or any other political-administrative,

technical, economic and financial information related to the organization's business (CVM, 2002).

In this paper it was also adopted the terminology relevant acts (emphasis added) and facts in order not to denote the exclusionary meaning of the conjunction. Relevant acts and facts refer to the decisions of investors to buy, sell or hold securities and exercise any rights inherent to the condition of holder of these securities (DAVIS; Piger; SEDOR, 2012). The Securities and Exchange Commission provides a list of 22 relevant acts or facts (CVM, 2009) to be research objects in this research.

For cases of non-disclosure of relevant information, the company must justify the procedures adopted for the maintenance of secrecy about those important data not disclosed. If disclosure of the relevant information put the organization at risk, or if the relevant act or fact is not mature enough to be disclosed, administrators can maintain confidentiality regarding such information. In these cases, companies must monitor the trading of securities issued by it, so that they can identify any atypical fluctuations in price, volume or amount of their business titles. (CODIM, 2008). In addition to the periodic financial statements that open capital companies must disclose, it is also required the communication of information of narrative content that transmits events not included in the financial information (BRAZIL, 1976).

At an international level, the US laws Sarbanes-Oxley (SOX), and more recently, the Dodd-Frank (2010) have been the subject of attention of the public companies. The SOX emerged from the need to organize the rules on disclosure and financial reporting that converge to good corporate governance practices. The purpose of SOX is to restore market balance, through mechanisms to ensure senior management responsibility for the reliability of the information provided (BOWEN, DAVIS; MATSUMOTO, 2005; Borgerth, 2007). The Dodd-Frank, among other important provisions, punishes bribery of politicians and rewards whistleblowers demanding unique information that proves fraud (POLK, 2010). Public companies whose shares are traded on US stock exchange market, specifically on the New York Stock Exchange (NYSE) and NASDAQ (National Association of Securities Dealers Automated Quotations) are all included in the law.

Therefore, foreign companies that have open capital in the United States should provide financial and other relevant information to organizational structure, risk factors affecting the operations of the organization and relating to shareholders and corporate governance. Monitoring the disclosure of such information is held by the SEC (Security and Exchange Commission). For the SOX requirements to be met, companies with registration in the US capital markets should have a clear and reliable communication process with investors, financers and other stakeholders in their performance.

As for Brazilian companies issuing ADRs - American Depositary Receipts, they are subject to the requirements of Sarbanes-Oxley, Dodd Frank and the rules of US stock markets. ADRs are securities representing shares or other securities representing rights and shares issued abroad by those institutions called depositories. Issued and traded on the US capital market (USA), the ADRs are backed by shares of a non-US company. In the specific case of this article, it is intended to check the frequency and content of the relevant acts and facts reported by Brazilian companies that operate in this market.

METHODS ADOPTED

To evaluate the disclosure of occurrences of relevant acts and facts of Brazilian public companies issuing ADRs descriptive statistics were utilized. The choice of method is due to the

provided statistical tools that make it possible to synthesize a series of related values, allowing them to have an overview of numerical data through tables and descriptive measures (GUEDES; MARTINS, 2010; MOSQUE, 2010). The group of companies chosen was composed by Brazilian companies registered with the CVM that had, in 2012, registration with the SEC - Securities and Exchange Commission. The analysis of the relevant facts covered the information available on the CVM website from January 2006 to April 2012, with the basic orientation to CVM Instruction 358/02.

Thirty-four (34) Brazilian organizations issuers of ADRs Levels 2 and 3 mandatorily deposit their information with the SEC on Form 20-F were identified. From the group companies subject to the requirements of the Sarbanes-Oxley Act (2002) and the rules of the major US stock exchanges, Telebras as a result of the company's exemption file the 20-F report was excluded. Banco Itau Holding Financeira S/A and Unibanco (União de Bancos Brasileiros S/A), due to the merger of these institutions, they were analyzed under the name of Itaú Unibanco Holding S/A. The same procedure was adopted for Perdigão S/A, after the corporate restructuring, it received the name of BRF - Brazil Foods S/A. Banco Santander Brazil that in 2011, joined this small group, was also added. Thus, from the group of organizations, 33 were part of the survey, distributed in five economic sectors: 10 of industry, 6 of natural resources, 5 of services, financial services account for 3 and 9 of telecommunications.

In the first stage of the research 1,125 relevant acts or facts of these 33 companies were collected and recorded from the CVM website. The second stage of work was the examination and classification of each of the 1,125 facts. Much of the information recorded in the CVM database does not match the items of normative instruction, which required interpretative analysis for classification. The list, then, shows the acts or facts used and the reasons for the incorporation of other events.

List of 23 items relating to relevant facts of CVM Instruction 358/02 and other facts framing justifications.
1. Signing of agreement or contract of transfer of control of the company, even if under suspensive or resolutory condition.
2. Change in control of the company, including through the execution, amendment or termination of shareholders agreement.
3. Execution, amendment or termination of shareholders agreement in which the company is a party or intervener, or has been entered in the company's records.
4. Entry or withdrawal of shareholders that hold, with the company, contract or operational, financial, technological or administrative collaboration.
5. Authorization for trading of securities issued by the company in any domestic or foreign market. Relevant acts or facts concerning the decision, approval, authorization, and other information were also considered in this item.
6. Decision to cancel the registration of a public company.
7. Incorporation, merger or spin-off involving the company or related companies. Relevant acts or facts concerning the acquisition, corporate restructuring and corporate reorganization were also considered in this item.
8. Transformation or dissolution of the company.
9. Change in the company's assets. Relevant acts or facts concerning the issue of shares, issuance of debentures, issue of promissory notes, and sale of equity interest were also considered this item.
10. Changes in accounting criteria;
11. Renegotiation of debts;

12. Granting plan approval of stock option purchase;
13. Change in the rights and advantages of securities issued by the company;
14. Split or reverse stock-split or bonus attribution;
15. Acquisition of company shares for holding in treasury or cancellation, and the sale of shares so acquired;
16. Profit or loss of the company and the allocation of cash dividends. Relevant acts or facts concerning the distribution of dividends and payments of interest on own capital - IOC, were also considered in this item.
17. Celebration or termination of contracts or the failure to execute when the expectation is of public knowledge;
18. Approval, alteration or abandonment of a project or delay in its implementation.
19. Beginning, retaking or suspending the manufacturing or sale of products or provision of service.
20. Discovery, change or development of technology or company resources.
21. Modification of projections disclosed by the company.
22. Filing for bankruptcy, petition or confession of bankruptcy, or any lawsuit that may affect the financial position of the company.
23. Other relevant acts or facts or different market communications.
Source: Instruction CVM nº 358/02 with adaptations by the authors (2012).

Some of the listed items were adapted and deserve the following clarifications:

- Regarding item 5 - authorization for trading of securities issued by the company in any market, domestic or foreign - if the company decides to go public in international markets and meets the prerequisites for, e.g., trading securities on US stock exchange, the company should disclose this information to the Brazilian market. These disclosures were also considered.

- On item 7 - incorporation, merger or spin-off involving the company or related companies - also took up the relevant facts relating to restructurings and corporate reorganizations. The increase in these restructuring operations in Brazil is noticeable, derived of globalization, the development of the capital market and the increasing volume of internal and external investments (CARDOSO, 2006), which justifies the increased disclosure.

- With regard to item 9 - changes in the company's assets - all information concerning the issue of shares, debentures, promissory notes and sales of shareholdings has been incorporated ; situations that characterize changes in organizational assets. The same justification proceeds to item 16 - profit or loss of the company and the allocation of cash dividends - for this item all information disclosed by companies related to payments of dividends and interest on equity was considered.

- The 22 relevant facts of CVM Instruction No. 358/02 item 23 was included - other relevant acts or facts or different market communications. As already described, the relevant information disclosure policy includes aspects related also to other content that complement its disclosure (CODIM, 2008). Thus, in paragraph 23, information relating to the accounts of administrative and specific management decisions of the senior management of the company has been considered.

After the classification of 1,125 relevant information the frequency of the relevant facts by company and by sector and occurrences of the disclosure of information by content of the material fact was calculated. The next step was analyzing the correlation between the number of relevant facts informed and the years and months of disclosure and sectors of the surveyed organizations. The results are discussed in the session that follows.

DESCRIPTIONS OF THE RELEVANT FACTS OF BRAZILIAN OPEN CAPITAL COMPANIES ISSUERS OF ADRS

The descriptive statistical analysis of the relevant acts and facts of Brazilian companies that trade ADRs are divided into two sessions. The first addresses the frequency of disclosure of such information by business and industry, taking into account also the occurrences of governance market segment. In the second stage it is analyzed the correlation between the frequency of the relevant facts announced to the market with the periodicity (annual and monthly), as well as sectors and categories referred to in the legislation. The first analysis refers to the frequency of relevant acts and facts by company disseminated by organizations surveyed from January 2006 to April 2012 (TAB. 1).

It is noted that Vale S/A is the company that most discloses relevant acts and facts, followed by Petrobras, Companhia Siderurgica Nacional and Itaú Unibanco Holding S/A together, the four companies account for 32.1% of all relevant acts and facts disclosed by Brazilian organizations in this period. Embraer, Gol and Copel are the companies that least disclose relevant information. Among the five companies with the largest frequency of relevant disclosures, two are listed in governance segment of the BM & FBOVESPA - S.A. Vale and Itau Unibanco Holding S/A (Level1). If we analyze the five companies that least disclose important information, interestingly, four organizations are also listed in governance levels of the Brazilian stock market - Embraer (New Market), Gol and Santander (Level2) and Copel (Level1).

TABLE 1- Frequency of relevant facts by company

Number of relevant facts by companies from 2006 to 2012			
COMAPANIES	FREQUENCY	PERCENTAGE %	ACCUMULATED
Vale S. A.	138	12,3	12,3
Petrobrás	110	9,8	22,1
Cia Siderúrgica Nacional	57	5,1	27,2
Itau Unibanco Holding S. A.	56	4,9	32,1
Tele Norte Leste Participações	49	4,4	36,5
Brasil Telecom	44	3,9	40,4
Brasken	42	3,7	44,1
Cemig	42	3,7	47,8
BR FOODS	38	3,4	51,2
Fibria	38	3,4	54,6
Bco. Bradesco	38	3,4	58,0
Brasil Telecom Participações	38	3,4	61,4
Gafisa	37	3,3	64,7
Aracruz	34	3,0	67,7
Sadia S A	28	2,5	70,2
Net Serviços de Telecomunicações	27	2,4	72,6
CPFL	26	2,3	74,9
COSAN	24	2,1	77,0
TIM	24	2,1	79,1
Ultrapar Participações	24	2,1	81,2
VIVO	24	2,1	83,3
Cia Brasileira de Distribuição	24	2,1	85,4
SABESP	23	2,0	87,4
Gerdau S.A.	21	1,9	89,3
Tele Norte Celular Participações	19	1,7	91,0
Telemig	18	1,6	92,6
TAM	17	1,5	94,1
Telesp	14	1,2	95,3
GOL	13	1,2	96,5
Embraer	12	1,1	97,6
AMBEV	12	1,1	98,7
Bco. Santander	11	0,9	99,6
Copel	3	0,4	100%
TOTAL	1.125	100%	

Source: Research Data (2012)

The TAB. 2 displays the frequency of relevant acts and facts by each company and sector.

Among the business sectors, the industrial sector and the natural resources sector have the largest concentration of listed companies in the fields of corporate governance, i.e. 5 companies in each sector. Of the 10 companies involved in the industrial sector, two are in Level1 and three in New Market. In the resource sector there is an inversion, where three companies listed in Level1 and two in New Market. All of the financial services sector companies appear listed in the segments of corporate governance, two companies in Level1 and Level2. Regarding the service sector, 60% of related companies are classified in governance Level, being a company in Level2 and two in New Market, in this group there is no incidence of companies in Level1. Of the 9 companies in the telecommunications sector, only Net Services and TIM appear listed in corporate governance segment, the first in Level2 and the second in New Market.

TABLE 2- Frequency of relevant facts by company and by sector

SECTOR	COMPANIES	FREQUENCY	PERCENTAGE	ACCUMULATED	GOVERNANCE LEVEL
Natural Resources	Vale	138	40,2	**40,2**	Level1
	Petrobrás	110	32,1	**72,3**	-
	Cemig	42	12,2	**84,5**	Level1
	CPFL	26	7,6	**92,1**	New Market
	Ultrapar	24	7,0	**99,1**	New Market
	Copel	3	0,9	**100**	Level1
	TOTAL	**343**	**100**		
Industry	CSN	57	18,6	**18,6**	-
	Brasken	42	13,7	**32,3**	Level1
	BR FOODS	38	12,4	**44,7**	-
	Fibria	38	12,4	**57,1**	New Market
	Aracruz	34	11,1	**68,2**	-
	Sadia	28	9,3	**77,5**	-
	Cosan	24	7,8	**85,3**	New Market
	Gerdau	21	6,9	**92,2**	Level1
	Embraer	12	3,9	**96,1**	New Market
	Ambev	12	3,9	**100**	-
	TOTAL	**306**	**100**		
Services	Gafisa	37	32,5	**32,5**	New Market
	Cia Brasileira de Distribuição	24	21,0	**53,5**	
	TAM	17	14,9	**68,4**	
	SABESP	23	20,2	**88,6**	New Market
	GOL	13	11,4	**100**	Level2
	TOTAL	**114**	**100**		
Financial Services	Itau Unibanco	56	53,3	**53,3**	Level1
	Bco. Bradesco	38	36,2	**89,5**	Level1
	Bco. Santander (Brasil)	11	10,5	**100**	Level2
	TOTAL	**105**	**100**		
Telecommunications	Tele Norte Leste Participações	49	**19,1**	19,1	-
	Brasil Telecom	44	**17,1**	36,2	-
	Brasil Telecom Participações	38	**14,8**	51,0	-
	NET SERVIÇOS	27	**10,5**	61,5	Level2
	VIVO	24	**9,3**	70,8	-
	TIM	24	**9,3**	80,1	New Market
	TELE Norte Celular	19	**7,4**	87,5	-
	TELEMIG	18	**7,0**	94,5	-
	TELESP	14	**5,5**	100	-
	TOTAL	**257**	**100**		

Source: Research data (2012).

Following the results regarding the nature of the relevant acts and facts are analyzed.

As shown in TAB. 3 items 7 - incorporation, merger or spin-off involving the company or related companies; 23 - other acts or facts identified and not listed in the normative instruction; 16 - Profit or loss of the company and the allocation of cash dividends; 5 - authorization for trading of securities issued by the company in any domestic or foreign market; 9 - change in the company's assets; 17 - celebration or termination of contracts or the

failure to execute when the expectation is of public knowledge and; 15 - acquisition of company shares for holding in treasury or cancellation, and the sale of shares so acquired, had, in that order, the highest incidence of facts reported by organizations, accounting for 82% of total items disclosed in the 2006 period to April 2012.

It is worth noting the sharp increase in disclosure of facts related to executive compensation in the 2011/2012 period, especially from Vale, which reflected the increased frequency of relevant information of item 23. This is also due to the rigor imposed by US law for the trading of ADRs (KPMG, 2012).

TABLE 3 - Cumulative Frequency of relevant facts published between 2006 and 2012

RELEVANT FACT	FREQUENCY	%	ACCUMULATED
7	321	28,5	28,5
23	219	19,5	48,0
16	107	9,5	57,5
5	93	8,3	65,8
9	88	7,8	73,6
17	53	4,7	78,3
15	42	3,7	82,0
3	36	3,2	85,2
12	31	2,8	88,0
13	20	1,8	89,8
18	20	1,8	91,6
14	20	1,8	93,4
1	16	1,4	94,8
20	15	1,3	96,1
21	11	1,0	97,1
11	10	0,9	98,0
19	6	0,5	98,5
10	5	0,4	98,9
6	4	0,4	99,3
2	3	0,3	99,6
4	3	0,2	99,8
8	1	0,1	99,9
22	1	0,1	100,0
TOTAL	1.125	100,0	

Source: Research data (2012).

The relevant fact for the item 7 - incorporation, merger or spin-off involving the company or related companies is the most reported by surveyed Brazilian companies, representing 28.5% of all the relevant information identified between 2006 and April 2012. The resources sector natural was the one that showed most incidence of these events (88), followed by the sectors of industry (83) and telecommunications (76). The three mentioned sectors accounted for 80.5% of the disclosures in the period. In 2009, there was a higher incidence of information takeovers, mergers, restructurings and corporate reorganizations. Of the 32 companies surveyed, Vale S/A was the one that reported facts relating to item 7, totaling 27 incidents in seven years.

All 33 companies analyzed in the period reported at least one relevant act or fact classified under item 23 - other relevant acts or facts or different market communications. The relevant fact 23, as explained above, was incorporated in this work to gather the information disclosed by companies that do not fit in any of the other 22 items provided for in CVM Instruction 358/02. These disclosures totaled 219 events in the period. The sectors that disseminated information on item 23 were telecommunications with 57 disclosures and industry, with 48. The natural resources sector in the last two years released 29 classified information in this item, and Vale is responsible for 19, Petrobras 9 and Cemig 1. The sector that least reported classified information under item 23 was financial services with 11 disclosures in the period.

The relevant information relating to item 16, profit or loss of the company and the allocation of cash dividends, are presented as the third most frequent fact of the data collected, with 107 incidents. In the past two years, the natural resources sector shows the largest number of incidences (24) followed by the financial services industry (21). The year 2006 represented the period of highest occurrence of disclosure permits for securities trading classified as item 5 by the CVM. Vale S/A, with 16 incidents, stands out as the company that disclosed the largest amount of this type of information to the market. With regard to the act or fact classified under item 9 - change in the company's assets - 88 information regarding this fact were released. In the last two years the sector that most reported asset composition changes was the industry.

Another stage of the statistical analysis was to check whether there is a correlation between the occurrence of the relevant facts with business, industry and periodicity (year and month) of its incidence. For the study population, it was not possible to assume the normality of the data, so the non-parametric tests were used. A nonparametric test is used when the sample is very small, when the assumptions for parametric tests are not met or if the data is coming from an unknown distribution (SIEGEL; CASTELLAN, 2006), a fact that occurred during the analysis of the data bank.

Analyzing the relevant acts and facts disclosed per year we can see a similarity in the number of reported facts. It can be said that there is not a big difference between the years studied and annual number of relevant acts and facts disclosed. This demonstrates that there is homogeneity between the relevant facts to numbers released annually in the period. The results of the Kruskal-Wallis test indicated a very high P-value, which shows the absence of a significant difference between the observed years and the number of events reported per year.

Examining the average number of relevant facts by sector, it was found out that there is a similarity between the means of industry, financial services and telecommunications sectors. The natural resources sector has the highest average of material facts disclosed and the financial services sector the lowest. Through the Kruskal-Wallis test it was possible to verify that there is no significant difference in the disclosure of facts between sectors.

FINAL CONSIDERATIONS

The goal that guided this article aims to identify and evaluate relevant information that Open capital Brazilian companies issuers of ADRs disclose to meet the legal guidelines of the agencies that regulate the securities market. The relevant facts with higher incidence of disclosure were the corporate restructuring operations, specifically those relating to the incorporation, merger or spin-off involving the company or related companies. This is due in part to the large volume of incorporation of companies has been moving the business sectors since the beginning of the century. It is worth noting the number of occurrences from Vale, a company that has chosen to become global through acquisitions strategies; and the telecommunications industry, which went through an intense movement of incorporations in the surveyed period.

The second highest incidence refers to the group - other relevant acts or facts and several announcements to the market - that is, those who do not meet the 22 items set out in normative instruction of the Securities and Exchange Commission. Under legal regulation, it has the list contained in CVM Instruction 358/02 does not restrict the chances of relevant acts or facts to be disclosed. As much as the normative text consider the legislation "not exhaustive" and "exemplary", the classification of the relevant facts, the diversity of the nature of the reported events affect the framework of those administrative character narratives and on

specific management decisions from senior management of the company . Brazilian sectors of natural resources and industrial are the ones who had the most impact on this information.

Profit or loss of the company and the allocation of earnings and authorization for securities trading are the two relevant facts that appear in the sequence in terms of the number of occurrences. In the case of the fact - profit or loss of the company and allocation of dividends - the disclosures of the natural resources account for over 50% of the information disclosed to the market. The good results of the sector, in particular, before the recent financial crisis that affected the world commodity market, contributed to the high number of reports on the distribution of dividends to the shareholders of these companies. No company made mention of the damage term in the disclosure of information to the market in the surveyed years. However, the industry sector, excluding only a report in the telecommunications industry, was the one who released information regarding debt renegotiations.

In relation to changes in equity composition the sectors of natural resources, industry and telecommunications accounted for almost 80% of the disclosure of these facts. The high volume of corporate restructuring disclosed to the market may explain the amount of information proceeded by these two sectors. With regard to the disclosure of acquisition of shares to be held in treasury operations that aim to influence, in a limited way, liquidity and share price, the CIA. Siderúrgica Nacional is the company that most reports on the use of the purchase mechanism of its own shares. In terms of sectors, the industry sector is the one the most disseminates information on the acquisition of their own securities.

If we consider the assumption that companies operating in markets where the exercise of good governance practices is demanded disclose more information than those listed organizations in traditional markets, we will see through the research's results that in the Brazilian securities market, not necessarily the companies that trade their securities in these markets, disclose a greater amount of information than other industry organizations. The principle of transparency, it is apparent that the larger the size of the company, the greater the Level of disclosure (disclosed information). This finding goes against the literature that indicates that large companies tend to have higher degree of disclosure in the disclosure of information (Shleifer, Vishny, 1986; DANTAS; ZENDERSKY; SANTOS; NIYAMA, 2005). The two largest Brazilian organizations in size and performance are the ones that most disclose relevant information.

The correlation between the occurrences of the relevant facts on periodicity that they are released showed no heterogeneity between the number of reported facts and the amount of information available on the market each year, that is, an annual consistency in disclosure prevails. The same cannot be said for the monthly. There is a concentration of disclosures in the months of April and December and a lower incidence in February and September. If we consider the average volume of relevant information disclosed to the market, the natural resources sector, followed by telecommunications sectors and industry were the ones that most provided information of their actions. Correlation tests ruled out significant relationship between the disclosure of a particular type of material fact with some sector or reporting period.

Some other observations can be performed on the collected data. The non-disclosure of relevant reports strategies mentioned by Oliveira, Lopes and Cunha (2008) can be identified in the fact - profit or loss of the company and the allocation of cash dividends. Among the 33 companies analyzed, only nine have explicitly declared that dividends or interest on capital

have been paid to shareholders in the analyzed period. According to the normative instruction, even if the company has not distributed cash dividends in the period, it must be shown for the annual results of operations; hence, in some cases, the prevailing duality of the benefits of full disclosure about the company and the reluctance to disclose strategic information. Information is relevant depending on its degree of importance and necessity.

This study is an overview of how companies that operate in the US stock market, which requires high Level of transparency in the disclosure of information, have complied with the guidelines determined by the regulatory agencies. Even with the large and complex volume of information made available by open capital organizations, there is a growing trend to increase supervision over the quality of information that have been provided. In particular, in the US stock market, with the advent of Dott-Frank Act, seems imminent the elevation of means of control over the dissemination of information of companies. The reflections on the survey results point to evidence that even with the legal pressure on the regular disclosure of relevant information from national and international stock markets, the volume of information provided is in a lower average than the organizations that operate in traditional securities markets.

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Logistics Processes Management in Supply Chain

Dr. Paweł Ślaski

Professor Assistant
Military University Of Technology
Department of Logistics, Institute of Logistics

Abstract

The aim of the article was to develop a model for managing logistics processes in the supply chain. The use of process analysis and integration of logistics processes in the supply chain enabled the continuity of power in the process of supply and in the production process and it also enables the effective and efficient distribution process management. Basing on the developed map of logistics processes author of the article described the place in the process where one can apply optimization methods of quantity and quality. By using statistical quality control it was possible to shorten the duration of the adoption process of delivery to the warehouse, thereby lowering the cost of quality control. Integration of supply processes and production logistics in the supply chain enabled the continuity of power of parts in the production process, however thanks to the combination of methods DRP (Distribution Requirements Planning), Kanban, VMI (Vendor Managed Inventory) and CPFR (Collaborative Planning, Forecasting and Replenishment) we obtain the effective and efficient distribution process management.

Keywords: Integration of logistics processes, statistical process control, process map

THE RESEARCH PROBLEM WAS PUT IN THE FORM OF A QUESTION:

How basing on the modern methods of logistics processes management to effectively manage the integrated supply chain?

Research methods used in this article:
1. Process analysis,
2. Mapping of processes,
3. Techniques: VMI (Vendor Managed Inventory), CPFR (Collaborative Planning, Forecasting and Replenishment), Kanban, DRP (Distribution Requirements Planning),
4. Statistical Quality Control.

INTRODUCTION

Supply chain management is a skillful combination of processes of supply, production and distribution of market needs and the way how to properly adapt to accelerating changes of these particular needs. The objectives of supply chain management, such as: minimizing costs, improving the quality of goods and services, increase of flexibility, diversity and the reaction time can be achieved by treating the chain as a whole, which consists of various processes and activities related to each other. The process approach leads to the conclusion that the objectives set for each process are the only components of the main objectives of the supply chain, rather than the existing goals for each other. "Integrated school" takes supply chain management as a paradigm, according to which the supply chain is not only a set of functional

blocks or organization that intersect flow of products and information, but divides these blocks horizontal to the single processes, which are then subject to optimization measures (Bechtel, Jayaram, 1997).

Improving supply chains should go in the direction of integration of key logistics processes from end users via the initial suppliers who provide products, services and information and add value for customers and other stakeholders of the chain. The starting point in improving the chain, striving to increase its efficiency and competitiveness should be a thorough analysis of customer needs, and the goal - optimization of four basic indicators: quality, cost, completion date and risk. This approach to improving the supply chain have a considerable impact not only on the general improvement but also on the growth of integration and coordination processes, and thus will improve the operation between cooperating downstream (Jacyna-Gołda, 2015).

Process management in modern supply chains is a response to the growing turbulence environment and individualization of customer needs and expectations. It involves optimizing the structure of the business components, by seeking to maximize participation in this structure elements which add value and minimize the share of inefficient operations.

The search for organizational structures of the new generation should take into account the conditions in which they carry out their mission, and their design should hover around the identified processes, the effects of which the customer will verify and accept (Grajewski, 2007).

CONSTRUCTION OF THE INTEGRATED MODEL OF SUPPLY CHAIN

The aim of the integrated supply chain model is consistent presentation and description of the main tasks of the chain linked in a sequential and logical way. A model of logistic processes is a description of a reality chain seen from a functional and dynamic point of view.

The developed model was based on the following assumptions:
1. Each link in the supply chain is considered from the point of view of basic processes.
2. Sequential system processes in the supply chain (input of the succeeding process is simultaneously the output of the proceeding one).
3. The use of modern information technology and appropriate methods and tools to synchronize the streams of supply and demand.

Analyzed logistic processes in the supply chain, ie. Supply, production and distribution are presented in a value chain, which is also the first stage of integration.

Fig. 1. Presents the 1st phase of the model of the integrated supply chain.
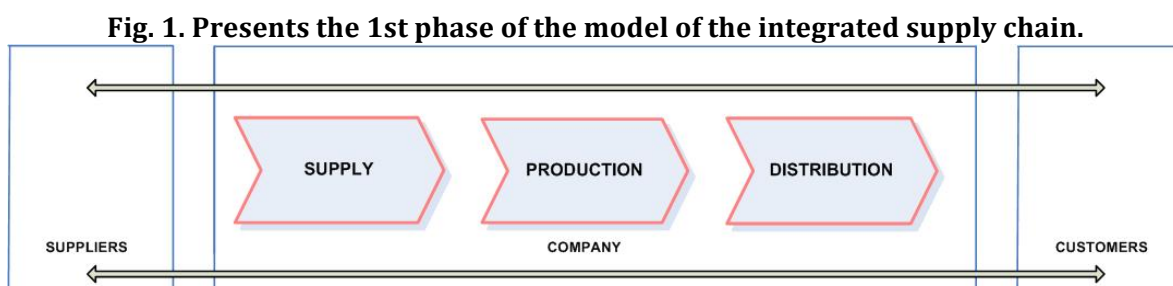
Fig. 1. The first phase of the integrated model of supply chain
Source: Bechtel Ch., J. Jayaram (1997), Supply Chain Management: A Strategic Perspective, The International Journal of Logistics Management, Vol. 8 Iss 1.

The second phase (basic) of the model are the maps of logistic processes: supply, production and distribution. Process maps are the basis on the way to their improvement and they are a graphic portrayal of the main value-added activities, linked in a sequential manner and logically implemented in a specific order. They also represent a temporal interpretation of specific activities involved in the flow of goods, services and information in the supply chain.

The first detailed map of the applicable procurement process. This process can be divided into nine basic actions which add value in a direct way.

Activity 1. Identification of needs
This effect was related to the determination result of the process, an output parameter. The need (the product) may be demand for the product, service or information that the customer accepts. The needs are reported to the department sourcing company based on a purchase order with a detailed specification of goods or services or methods of re-ordering.

The most commonly used method of re-ordering is based on:
1. Simulation methods, eg. Monte Carlo method,
2. Scenario analyzes associated with minimum cost inventory at optimum parameters ordering, eg. The size of supply and minimum levels of the administred stock.
3. Deterministic and stochastic methods based on the economic size of the delivery of information, the size of the safety stock and periodic inspection,
4. Methods of group procurement of goods,
5. Methods of ordering with limited capital and in terms of discontinuity demand.

Activity 2. Description
At this stage there is a detailed description of the product, which is a source of information for potential suppliers. There are several ways to describe a product or service, and they all must accurately convey information providers to the needs of customers. The basic methods of description of the product or service may include:
1. Description by genre or standard (standard products and services, supply chain partners aware of the needs of the market),
2. Description by brand (products and services from one preferred supplier),
3. Description by specification (required detailed description of the product or service, eg. the process of production, control systems, physical dimensions),
4. Description by the result (eg. technical support in the operation of the device).

Activity 3. Identification and assessment of suppliers
In this operation the organization defines the evaluation criteria of the identified potential external suppliers. These can be, eg. The ability of designing products, the level of management, the condition of the company, planning and cost structure, the opportunity to establish long-term cooperation, planning and control systems, etc.

Activity 4. Supplier selection
Completion of the identification and evaluation is another activity associated with the final choice of supplier. This selection can be made from a list of preferred providers or organizing a tender or conducting negotiations.

Activity 5. Preparation of contract
This action is related to the preparation of the document, which authorizes the supplier to deliver the product. It sets out the conditions, ie. The price, date and place of delivery and quality requirements. Very often at this stage the EDI technology is used (Ang. Electronic Data

Interchange). Basing on the Internet, the actual needs of customers go to the suppliers, often bypassing the intermediate links. The turnaround time is also shortened, it minimizes the volume of stocks and thus reduces logistics costs.

Activity 6. Control of accomplishment
This activity is related to the determination of the order status at each stage of the project.

Activity 7. Receiving and control
This activity includes the adoption of the product in accordance with the specifications of the contract and its verification quantitative and qualitative. You can use statistical methods of collection and quality control of goods. The use of statistical quality control by assessing alternative using small samples is described later in this article.

Activity 8. Approval of invoices and payment
After the receiving of the product the company usually makes electronic funds transfer to the bank account provider.

Activity 9. Data update
The process can be repeated, so after the completion of the orders there is the update of the database concerning the cooperation with the suppliers (Bozarth, Handfield, 2007, p. 392-400).

Basing on such specific activities the map of the procurement process developed using the diagram EPC (Extended Event Driven Process Chain) of ARIS architecture was created (Architecture of Integrated Information Systems). The main objects in this diagram are functions, events and logical operators that connect to each other in a logical sequence as a fundamental course of the process (Figure 2) (Aris 6, 2003).
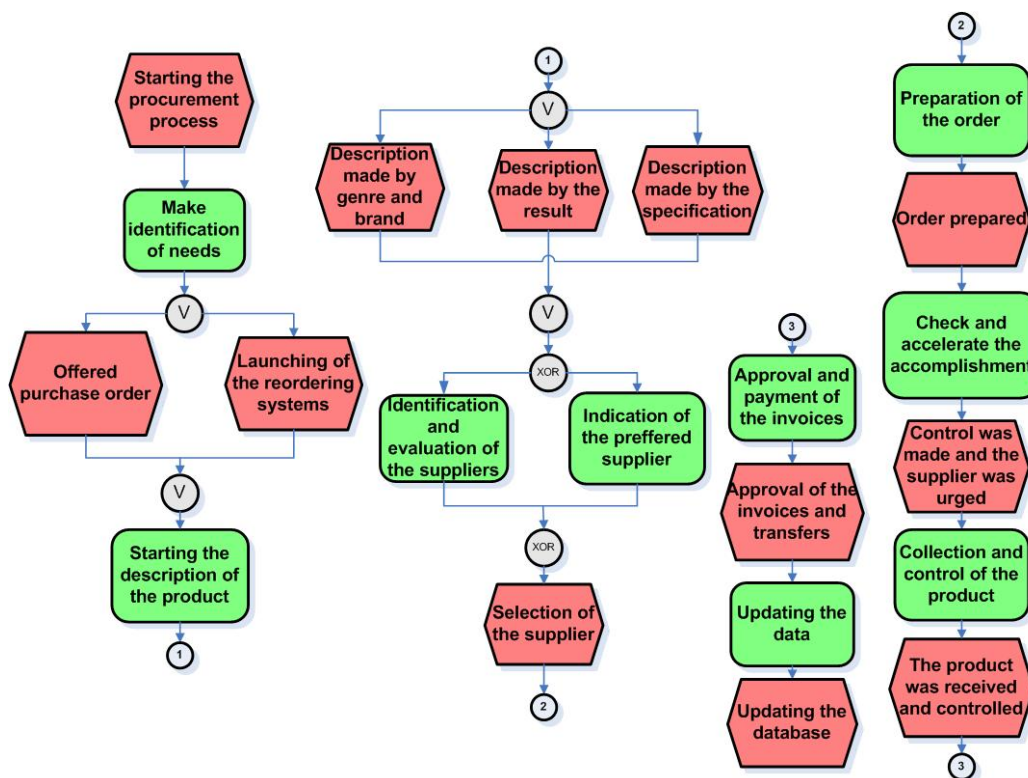
Fig. 2. Map of the procurement process
Source: Own. Based on (ARIS 6, 2003).

According to the author, to make the management of the integrated supply chain effective and efficient it is advisable to use creative solutions (innovative) adding value to the process. Therefore, when analyzing the procurement process the author suggested the use of statistical quality control during the inspection and testing supplies. It was assumed that between the supplier and the recipient the plan of the quality reception of large batches was made. Disqualifying defectiveness w1 = 0, 05, permissible defectiveness w2 = 0, 01 were determined, and risk: of the recipient α1 = 0, 05 acceptance of the defective batches and of the supplier α = 0.05 the rejection of the proper batches. These values mean the reception of the batch of allowable defectiveness 1% and 5% risk of rejection of the party providers of good and rejection of batches of disqualifying defectiveness equal to 5% and 5% of the risk of the recipient's acceptance of the defective batch. Delivery of goods numbering tens of thousands of stocks may be received and subjected to quality control based on a small sample that represents the entire batch.

A good way to determine the study plan m//n that is determining the size of a random sample of n and the acceptable number of bad pieces of a sample m is the solution of equations (Dziubiński, 1980; Szkoda, 2003):

$$P\left(D/m,n;w_1\right) = P\left(Z \le m; n, w_1\right) = \sum_{k=0}^{m} \binom{n}{k} w_1^k (1-w_1)^{n-k} = \alpha_1 \qquad (1)$$

$$P\left(D/m,n;w_2\right) = P\left(Z \le m; n, w_2\right) = \sum_{k=0}^{m} \binom{n}{k} w_2^k (1-w_2)^{n-k} = \alpha_2 \qquad (2)$$

These equations can be solved using an approximation to the binomial distribution by the Poisson distribution using the approximate formulas:

$$\sum_{k=0}^{m} \frac{\lambda_2^k e^{-\lambda_2}}{k!} = \alpha_2 \qquad (3)$$

$$\sum_{k=0}^{m} \frac{\lambda_1^k e^{-\lambda_1}}{k!} = \alpha_1 \qquad (4)$$

Where: λ1=nw1, λ2=nw2

For adopted α1 and α2, the parameters λ1 and λ2 and determined between the supplier and the recipient of the defectiveness w1 and w2 determine the n sample count. After determining the sample count, the decision to accept or reject the batch can be taken even before examining all the pieces. The study collected randomly one by one, and based on her research and previous, it takes a decision to accept, reject or examine the need for another art (Kahn, 1996). The decision regarding the acceptance or rejection of batches of goods shall be taken depending on the location, in which will be the curve of the study. Graph (Figure 3) shows the essence of the sequential research.
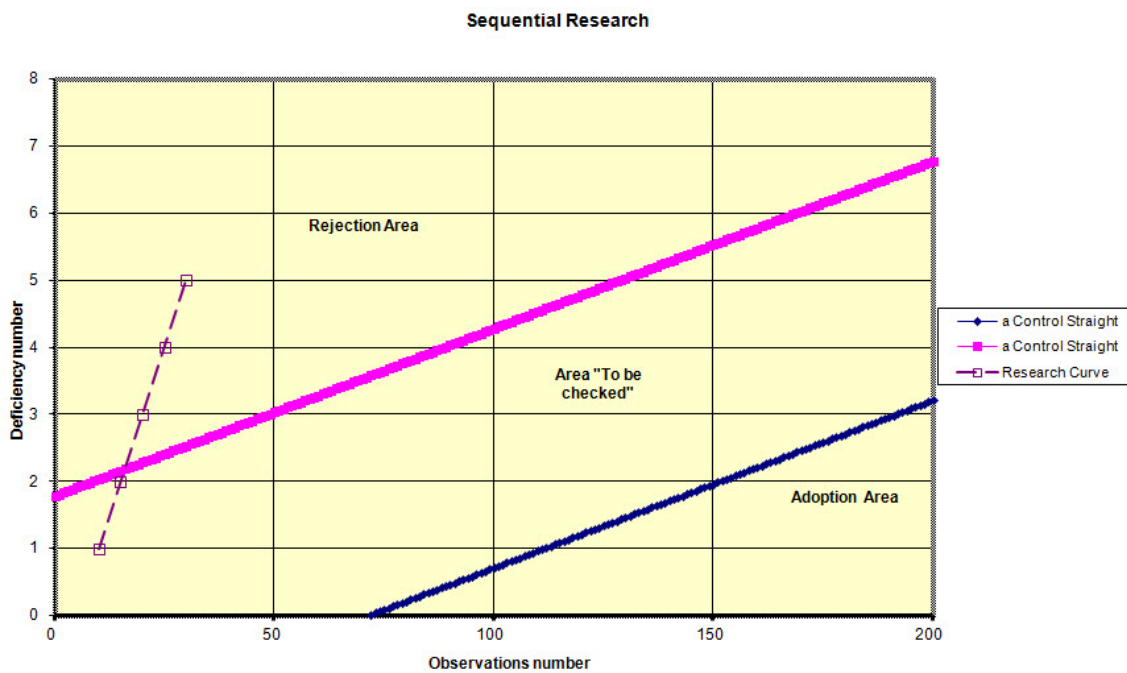
Fig. 3. Testing sequential goods
Source: Own. Based on (Firkowicz, 1970).

The study shows that the use of statistical quality control (SKJ) to manage supply process allows you to measure its effectiveness and efficiency and shortens the time for a large delivery to the warehouse, thus reducing the cost of the reception quality of goods.

Another process is connected with production logistics. The basis of this process is to determine the size of the independent demand in different periods and placing it in the production schedule. The size of this demand "forces" the need to determine the structure of the product, that is, the amount of components and components included in its composition. To properly identify the needs the essential information on stocks and planned supply is also needed. For a more complete analysis, the author of the article suggested combining this process with operational control kanban. Such integration in the planning process of production logistics enables continuity of supply components and materials on the production lines and the accumulation of optimal volume of stocks of materials used in the assembly process. Figure 4 shows a detailed map of the planning process of production logistics of using the combined methods of material requirements planning (MRP) and operational control kanban.
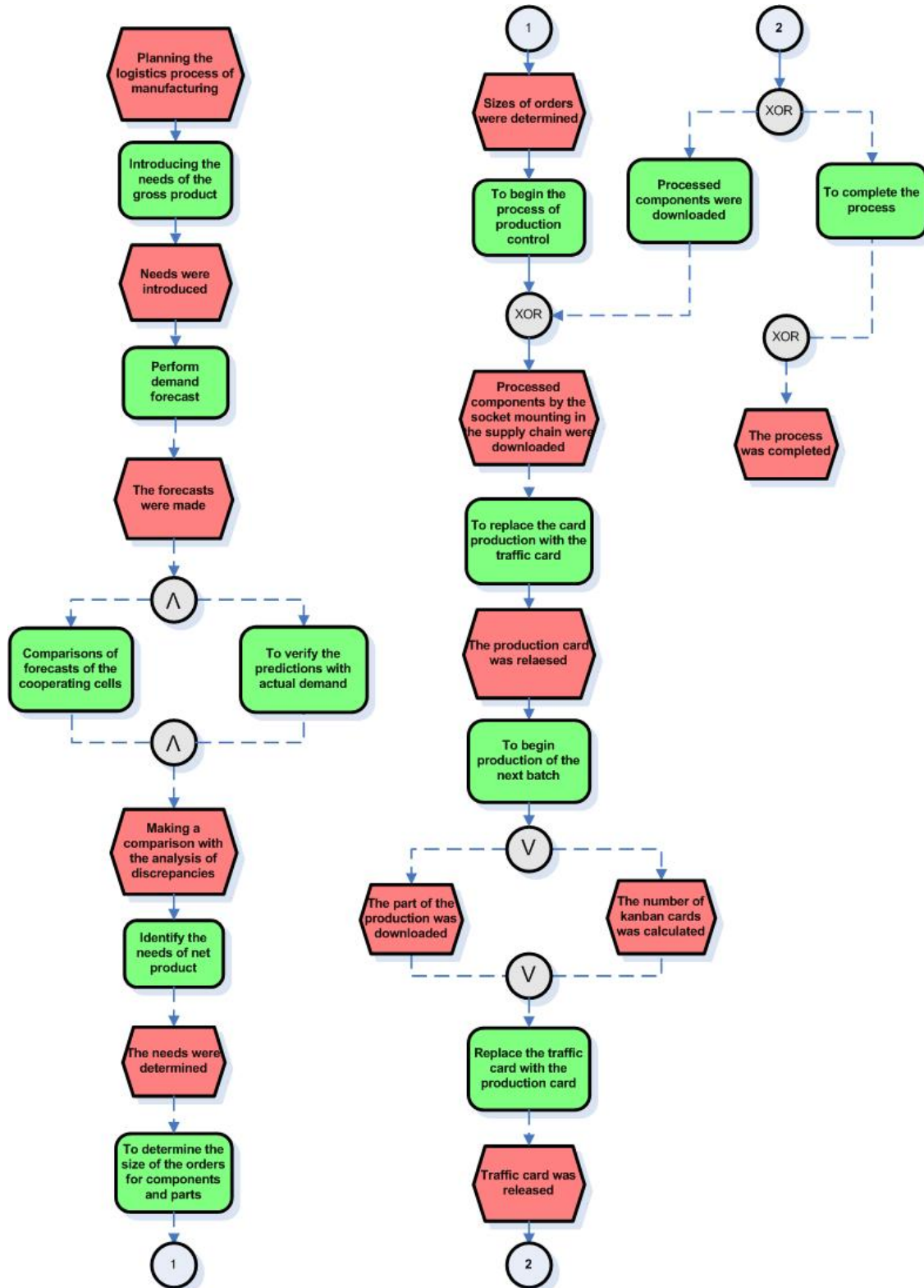
Fig. 4. Map of the planning process of production logistics
Source: Own. Based on (ARIS 6, 2003).

The last process is the distribution process. It was presented in the value chain as the optimal schedule for delivery of ordered goods. In the unified communication system of the customer with the provider, knowing the forecast of demand, you can plan the efficient distribution schedules in advance and keep them correct constantly, when there are delays in deliveries. It includes three phases:

1. Developing demand forecasts from customers and send them to the supplier along with other parameters of the procurement process (the states of stocks, the size of orders, replenishment cycle times, etc.).
2. Collecting data transmitted from the client at the provider's level and developing an initial delivery schedule;
3. Balancing the performance and developing the optimal delivery schedule.

Figure 5 shows the process map for planning the optimal delivery schedule
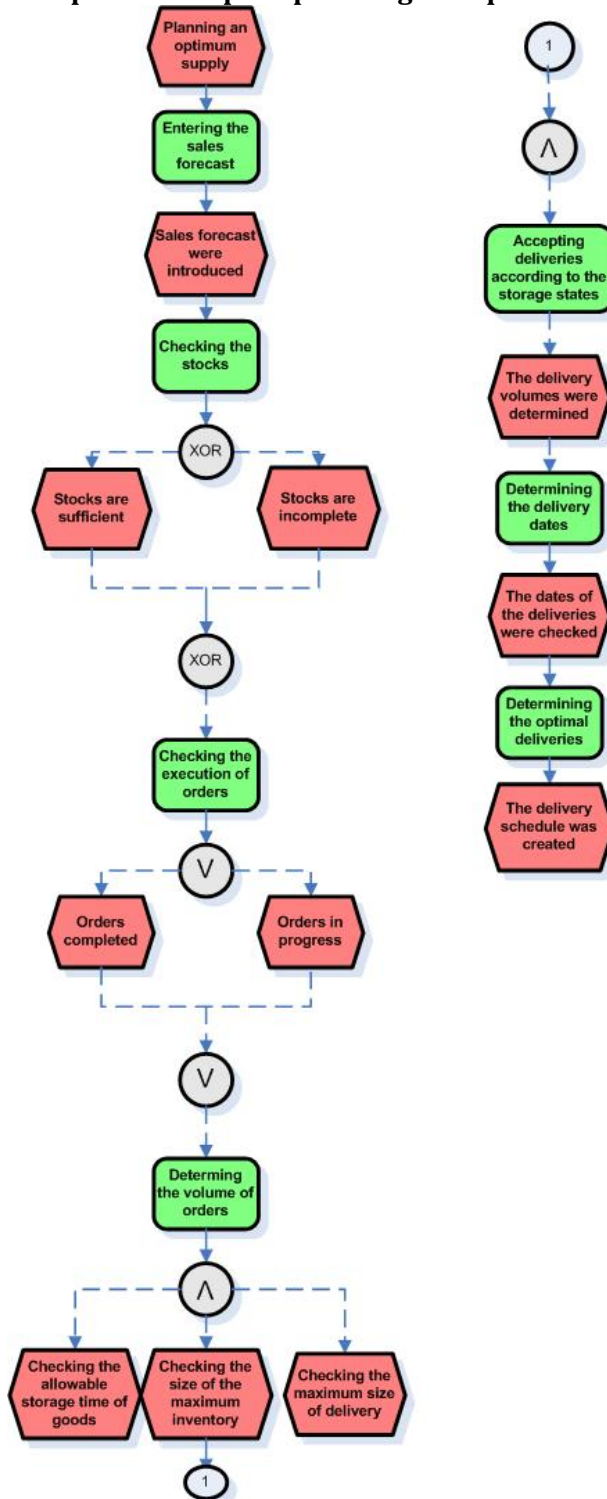
Fig. 5. Map of the planning of optimal supply
Source: Own calculations based on (ARIS 6, 2003).

Integration and joint production and sales planning in the supply chain were possible thanks to the use of VMI (Vendor Managed Inventory), CPFR (Collaborative Planning, Forecasting and Replenishment) techniques and EDI (Electronic Date Interface) messages sent over the Internet.

Thanks to VMI it was possible to increase the efficiency of the flow of goods, services and information in the supply chain as a result of customer's inventory management by the supplier. The supplier is responsible for the recipient's stocks. Using EDI messages, they receive from the client data over the Internet related to: sales volume and production, states inventory and needs of completion them. Basing on the received information the supplier can create the optimal delivery schedules for both parties, because the amount and type of products ordered are not generated by the consumer, but created on the basis of their needs by the supplier.

The main objective of CPFR technique was to increase the efficiency of supply chains by optimizing inventory up and down the chain, while maintaining the standards of customer service. CPFR compares the forecasts of the cooperating companies, automatically capturing significant differences in these sizes, which are made available by cooperating analysis teams and analyzes the differences that exceed the agreed standards. This tool, eg. in the form of Excel, lets also basing on graphical analysis of charts, verify the actual data with the corresponding forecasts. This enables the cooperating companies to flexibly react and take appropriate corrective action to the situation (Fig. 6) (Ślaski, 2012).
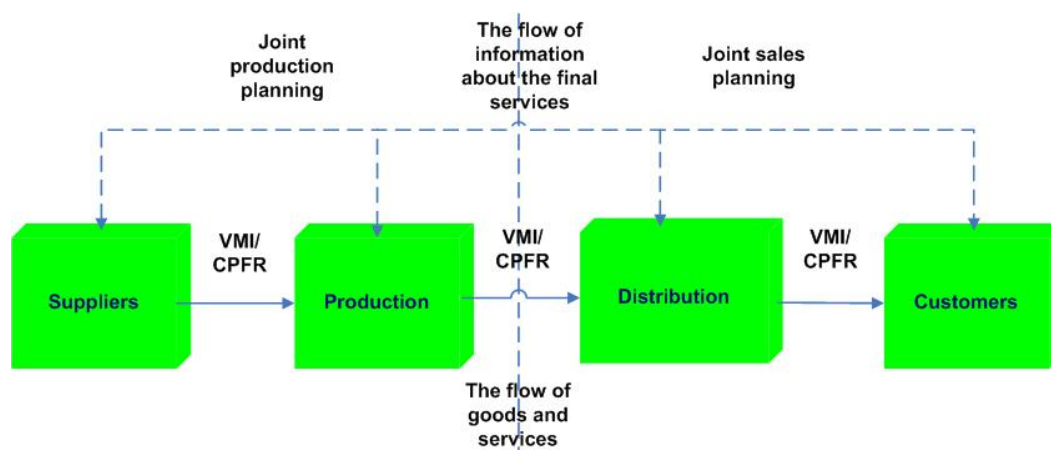
Fig. 6. Links co-operation in the supply chain using techniques CPFR and VMI
Source: own, based on J. Witkowski, Zarządzanie łańcuchem dostaw, koncepcje, procedury, doświadczenia, PWE, Warszawa 2003.

CONCLUSIONS

Considering the operating conditions of modern supply chains, it seems that the process approach is the natural determinant of achieving an increase in their efficiency, though it gives them an opportunity of building more dynamic solutions than the ones, flexibly responding to environmental signals. Therefore, the search for organizational forms, supporting and discounting the effect of processes in supply chain management is a challenge for contemporary theorists, managers, designers and logistics processes.

Enterprises that have made the description of all the processes and methods of improving them should then introduce the concept of process management, link maps developed from existing information technology and create an integrated supply chain.

In this article the author proposed some innovative solutions. Basing on the developed core processes maps author defined actions in processes where you can apply optimization methods of quantity and quality.

As a result, it was possible to shorten the duration of the adoption process of delivery to the warehouse, thereby lowering the cost of quality control. Integration processes in the supply chain enabled the continuity of power supply parts in the manufacturing process and effective and efficient management of the distribution process.

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A Eurasian or a European Future for Post-Soviet Georgia's Economic Development: Which is better?

Vladimer Papava
Professor of Economics, Faculty of Economics and Business
Ivane Javakhishvili Tbilisi State University. Tbilisi, Georgia

Abstract
The paper analyze the economic models of the well-known Eurasianist doctrine of Russian imperial thinking and the Eurasian Economic Union (EAEU). In the modern era of globalization, an alliance of countriesuras on the basis of the Eurasianist economic model is impossible to establish. The newly established EAEU rests on a redistribution mechanism for oil and gas revenues, whereby Russia deliberately relinquishes a part of its due gains in favor of other member-states in order to not only induce economic interest to remain within the Union, but also to maintain and enhance its political influence via this economic output. Western economic sanctions imposed against Russia as a countermeasure to the invasion and annexation of Crimea and the military and political support provided to the breakaway regions of Eastern Ukraine, as well as the retaliatory anti-sanctions levied by Russia against the West, have demonstrated the fragility and instability of the EAEU. A comparison of the EU with the EAEU does not favor the later. Although attaining membership of the EAEU is much easier than that of the EU, the negative aspects described above ensure that this option holds no appeal for post-Soviet Georgia.

Keywords: Eurasian Economic Union, EU, Eurasianism, economic sanctions, post-Soviet Georgia

INTRODUCTION

A new Russian-Kazakh regional project (for example, Nurgaliyeva, 2016), known as the Eurasian Economic Union (EAEU), commenced operation in 2015. Specifically, this means that, as of January 1, 2015, integrated economic processes between Belarus, Kazakhstan and Russia are governed by the Treaty on the Eurasian Economic Union. As of January 2, 2015 Armenia acceded to the EAEU, followed by Kyrgyzstan on May 21.

It is noteworthy that the concept of the expediency of such a union was put forward as early as 1994 by Kazakhstan's President Nursultan Nazarbayev (Alpysbaeva, 2014; Gleason, 2001, 2002; Mostafa, 2013).

The Russian version of regional integration of post-Soviet countries nominally is based on the economy (for example, Galiakberov & Abdullin, 2014).

Despite the fact that Georgia has long made its choice in favor of Europe (and Euro-Atlantic institutions) (for example, Rondeli, 2001), talks on Georgia's rapprochement with Russia have recently reignited. On the one hand, this interest in rapprochement was sparked by the uncertainty arising in Georgian-Russian relations (Rondeli, 2013), on the other – by the establishment and apparent launching of the EAEU (for example, Mendkovich, 2015; Vinokurov, 2016).

In order to respond to the question on whether or not the EAEU will persuade Georgia to alter its European course, it is crucial to review the essence of the EAEU itself. It must also be stressed that ample literature is available on the European Union (EU) and the road towards its membership, while the EAEU is a much newer construct and intensive research into its workings is virtually underway at this moment.

Following the 2011 announcement by the Russian President regarding the establishment of the EAEU (for example, Bryanski, 2011; Putin, 2011), some politicians and experts (for example, Sevim, 2013) have perceived the event as the ultimate victory of Eurasianism in Russia. So, the research of the problem has to be started from the analysis of the economic foundations of Eurasianism.

ON THE ECONOMIC FOUNDATION OF EURASIANISM

Eurasianism, established in the 1920s, is one of the most powerful doctrines of the Russian geopolitical school, and is aimed at the institution of Russia's distinguished historical and cultural role in Eurasia (for example, Laruelle, 2008). Public interest in Russia developed around this theory in the 1990s following the collapse of the Soviet Union, when Russia began to seek an auspicious anti-Western, imperial, and integrative doctrine (Ismailov & Papava, 2010; Papava, 2013) and Eurasianism was undergoing a significant modernization. It should be said that the so-called myths (Tolz, 1998) and narratives (Aktürk, 2006, p. 23) about the homeland were largely encouraged by the talks about revising the Russian Federation state borders, which are much more popular in the intellectual and political communities of Russia and among the Russian public than is believed in Western academic writings (Tolz, 1998, p. 294). This is perfectly natural if we keep in mind the post-imperial nostalgia popular in Russian society (Gaidar, 2007, pp. ix-xiv). Imperial order, the imperial body, and the imperial mind are the three components of Russia's imperial syndrome structure (Pain, 2008). Of these components, the imperial body, that is, the country's territory, is the most inert. At the same time, in fact, its territory, as the receptacle of natural, labor, financial, and other resources, acts as the main resource, the expansion or at least containment of which is the main task of the imperial state (Pain, 2008).

Eurasianists pay particular attention to the teachings of the so-called 'hetero-orthodox' economists who regard the economy as a derivative of culture and for whom historical, cultural-civilizational, spatial, and national factors are of prime importance in determining the nature of the economy (Dugin, 2002b, p. 627).

According to the Eurasianist economic model (Dugin, 2002a), the market principle should not undermine ideocracy, or the ability of ideological fundamentals to dominate social and political life. As a result, the task of the Eurasian economy is to preserve and develop all the economic systems reflecting the cultural-historical path of the individual nations living in the Eurasian State (Dugin, 2004c, p. 286). In other words, the multi-vector nature of Eurasianism should be formed on the basis of: 1. Government control in strategic areas (that is, the land of Eurasia, its rivers, lakes, seas, minerals and their production and primary processing enterprises, armed forces, the military-industrial complex, the financial institution issuing Eurasian currency, pension funds, transportation routes, and the energy industry should be owned by the government); 2. A free market in small and medium production, trade, and services; 3. Diverse forms of collective management (that is, cooperatives, joint-stock enterprises, and so on, permitted in industry, construction, banking, credit, and stock exchange spheres, medical services, education, culture, and so on) (Dugin, 2004c, p. 288).

For Eurasianists, the market and private ownership belong to a pragmatically allowable and pragmatically advantageous realm, based on which they acknowledge "society with a market," rather than "market economy." Consequently, the objective of an Eurasianist economy is to maintain and develop all economic systems reflecting the cultural and historical path of the specific peoples living in Eurasia. Eurasianists prefer the "principle of possession" to the "principle of ownership."   In the first case, proprietors are to abide by their social responsibilities and focus on the welfare goals of society, rendering them accountable to society and the government.   Additionally, the principle of possession envisions that the government should encourage domestic entrepreneurship and carry out a paternalistic policy, simultaneously applying mechanisms of tariff and non-tariff protectionism.

It is difficult to envisage how the economic model of Eurasianism can be implemented in practice in a country given the modern process of globalization underway worldwide. It is noteworthy that Russian economists have also recognized the incompatibility of the concepts of Eurasianism with the reality of the modern world (for example, Greenberg, 2013, p. 10).

According to Eurasianists, the Eurasian economic community will establish a so-called independent "fourth zone" based on the principles discussed above, which will not only differ substantially from other gigantic economic zones – such as America, Europe and the Pacific – but also oppose them (Dugin, 2002b). The principled difference between the fourth zone and the others is also reflected in the post-Soviet state's problematic choice of its path – either toward Europe or toward Eurasia (for example, Zhalilo, 2003).

When looking at the main views of Eurasianists, a question arises: what is more important to them, those principles discussed above on the basis of which the Eurasian State should be built, or the restoration of a Russian empire at any price? This formulation is primarily provoked by the fact that despite their disparagement of Marxism, Eurasianists welcomed the establishment of a Soviet structure that extended Russian territory (for example, Arutiunov, 2000; Dugin, 2002a, p. 629, 2004b; Utkin, 2000b). While also disparaging liberal-capitalist orthodoxy, the current leaders of Eurasianism, although rather skeptical about Anatoli Chubais' idea of creating a so-called Liberal Empire (Chubais, 2003) ended up welcoming this idea, according to which Russia could and should restore its economic influence (for example, Kissinger, 2002, p. 76) by means of economic expansion (for example, Crane, Peterson & Oliker, 2005) throughout the post-Soviet expanse. They did this by actively describing this project of restoring the Russian empire as liberal Eurasianism (Dugin, 2004a, pp. 99-103).

It is noteworthy that, given the governance regime of Belarus, the country's economy comes closest to exhibiting the features of the economic model of Eurasianism (such as "society with a market" and state ownership as a guarantor of achieving social welfare), while more or less successful market reforms have already been carried out in Armenia and Kazakhstan in particular, and at the initial stage of the post-Soviet era in Kyrgyzstan and Russia.

The principal goal of the EAEU at the current stage is to deepen the trade and economic integration of its member countries, which is in no way linked with the economic model of Eurasianism, even on a theoretical level. Moreover, this corollary applies not only to economic models, but to Eurasianism and the Eurasian Union in general (Laruelle, 2015).

ON THE POLITICAL ECONOMY OF THE MODERN STATE OF THE EAEU
A key economic motif that facilitates the integration process of the EAEU is a redistribution mechanism for revenues from oil and gas. Specifically, no export duty is imposed within the

EAEU; consequently, the price of a given resource is reduced by the amount of the export duty in contrast with the global price for said resource, which leads to domestic production subsidies. Export duties are collected only when commodities exit the borders of the EAEU, at which point some of the revenues to be received by Russia would be redistributed to the benefit of other member countries. As oil and gas comprise the main export product for Russia, it is the redistribution of the revenues received from these commodities that is a key economic motive for integration.

Even though the scheme on which the EAEU is based is economically unprofitable for Russia, it is a scheme that secures Moscow's imperial ambition of the gradual reanimation of the Soviet Union in its modernized form. This approach by Moscow towards the EAEU is not at all surprising, given the fact that it is on the basis of the consumption of energy resources (Hill, 2004) that Russia has set course towards geopolitics (Appel & Gelman, 2015), rather than towards economic development.

Today, it is noteworthy that global prices on raw materials, especially on energy resources, are exhibiting a clear downward trend. Thus, the effectiveness of the redistribution mechanism outlined above is reduced.

As early as a few years ago, Russia considered the possibility of entering agreements on Free Economic Zones (FEZ) with certain countries (such as New Zealand (for example, Ballingall, 2010), Vietnam (for example, RT, 2013b), Israel (for example, Keinon, 2013), India (for example, Dikshit, 2013) and the USA (for example, RT, 2013a)) and regional associations (for example, ASEAN (for example, Lisovolik, 2010), EFTA (for example, "EFTA," 2013) and the EU (for example, Maliszewska, Jarocinska & Scasny, 2010)). On May 29, 2015 such an agreement was signed with Vietnam (for example, Reuters, 2015), while negotiations with the remaining countries and regional associations have either been suspended or not yet initiated, due largely to political reasons.

According to the forecasts of Russian economists (covering the three founding members of the EAEU – Belarus, Kazakhstan and Russia), the conclusion of FEZ agreements, both in the short and long term, will result in economic benefits for the EAEU as a whole, as well as for Russia and Kazakhstan; Belarus will experience losses if the other party to a FEZ agreement is an economically developed country (Knobel, 2015, pp. 95-96). Considering that all members of the EAEU have the veto power, in order to prevent Belarus from exercising its veto power in case a FEZ agreement is signed, it is necessary to develop an internal redistribution mechanism benefiting Belarus.

As a result of Russian annexation of Crimea and the armed conflict in Eastern Ukraine, as of the spring of 2014, the US (subsequently joined by other countries) imposed economic sanctions against Russia (for example, Koenig, 2015). This posed a new challenge to the EAEU, as the sanctions do not apply to its other member states.

As of August 2014, Moscow imposed so-called anti-sanctions (for example, McHugh, 2015), thereby counteracting the existing sanctions against Russia and banning the import of food products from the US, the EU, Australia, Norway and Canada.

Given that the sanctions are only imposed against Russia and do not apply to other member counties of the EAEU, the latter have not joined the anti-sanctions as imposed by Russia. Therefore, the goods banned by Moscow may still enter the territory of Russia from other

EAEU member countries. This possibility is not ruled out by the common customs territory of the EAEU which includes all of its member countries.

The experience of imposing countersanctions has demonstrated that it is primarily Russia that has incurred losses.

It is clear that the existing situation fundamentally opposes the principle of the integrity of the EAEU's common customs territory. In effect, the imposition of countersanctions has prompted the division of the territory into two areas: that of Russia and that of the other EAEU member countries.

The probability that the other member countries of the EAEU will voluntarily join Moscow's anti-sanctions is low, as this would be economically unreasonable for these countries. If Moscow applies any mechanism of pressure to influence these countries, this will further undermine the already fragile foundations of the EAEU and raise questions about its future.

Moreover, it is notable that, if Moscow should use any form of pressure against the existing member states, this would scare away other countries that Moscow may consider potential new members of the EAEU.

Because of its political ambitions, it can almost be guaranteed that Moscow will not forfeit the countersanctions until the sanctions imposed against Russia are lifted.

Thus, it is now less likely that the existing system of "sanctions and anti-sanctions" will be altered at the expense of any compromise on the part of Moscow.

As a conclusion, it can be stated that the realization of the economic model of Eurasianism in the modern global world is a utopian concept, while the economic model of the EAEU in itself is not only unstable, but also inadequate. This has become most apparent against the background of the sanctions imposed against Russia and the anti-sanctions introduced by Moscow (Papava, 2015a). This conclusion is reinforced by the fact that, in 2016, due to increasing pressure stemming from the sanctions, on the one hand, and the continuing downward trend in global prices on energy resources on the other, Russia's economic turmoil is likely to deteriorate further (Dynkin & Baranovskii, Eds., 2015).

WHAT IS BETTER FOR GEORGIA'S ECONOMY: EUROPEAN OR EURASIAN CHOICE

When discussing which course is more suitable for Georgia, the European or Eurasian, one must take into account all possible factors, such as historical experience and prospects for development under Eurasian cooperation and European integration (for example, Obydenkova, 2011), the economic and security interest of the EU in Eurasia (Laruelle, 2016), as well as post-Soviet Georgia's experience of relations with EU and Russia (Kuchins, Mankoff, & Backes, 2016), and of its economic reforms (Papava, 2012). The economic component is one of the most significant constituent parts of any interstate association, and calls for a particular examination.

It will not suffice to focus solely on the fact that Georgia was forcibly pulled into the USSR, and moreover, that it must not return to its ranks, modernized though they may be. It is essential to analyze the dangers that the country's future may hold. This, in turn, calls for a more or less detailed examination of a range of issues.

First and foremost, the essential disparities between the EU and the EAEU must be emphasized. These disparities are rather substantial, and each distinction is discussed in detail below.

Purpose of Establishment. The EU was initially set up as an economic union, in other words, a union with the aim to promote the economic development of its member states. Although the EAEU contains the term "economic" in its title, this union, as noted above, is not so much a means of economic development as it is a tool that Moscow employs to maintain and increase its political influence on the member states of the EAEU via an economic mechanism (namely, redistribution of revenues not in Russia's favor).

Current Economic Status. Despite the fact that some countries in the Eurozone are experiencing a crisis, the EU in its entirety (with the partial exception of several Eastern European countries) is an association of states with developed economies, while the EAEU comprises of post-Soviet countries complete with deficient market institutions and a technological lag (for example, Papava, 2010). While the leading EU countries are post-industrial (in the classic sense of the term), the countries comprising the EAEU (as well as other post-Soviet countries, with the exception of the Baltic States) are post-Soviet postindustrial (Gorodezky, 2013). This is not so much a result of the development, or lack thereof, of a high-quality service sector in these countries, as it is of the backwardness of industrial production (Papava, 2015b). Consequently, while the EU is principally an alliance of economically developed countries, the EAEU is an association of countries with clear-cut institutional and technological backwardness.

Corruption Level. According to the results of Transparency International's Corruption Perceptions Index of 2015 (TI, 2016), Denmark was the least corrupt country in the EU, ranked first among 175 countries, while the most corrupt state in the EU was Bulgaria, ranked 69th among the world's best. In contrast, the highest-ranking country in the EAEU is Armenia, which is 95th on the global scale, while the lowest-ranking countries are Kazakhstan and Kyrgyzstan, sharing the 123th position. For comparison, Georgia ranks 48th, which renders it more in compliance with the EU standard (the closest EU-member states are Latvia at 40, and Croatia, Hungary and Slovakia at 50).

The Complexity of Membership. A country's ambition does not solely suffice for it to become a member of the EU. It is imperative that an applicant country meet certain standards recognized by Brussels in areas such as democratic institutions, human rights, freedom of speech and expression, and market economy. Accordingly, only after an applicant country has met European standards in all of the fields listed above is the issue of EU enlargement to include the applicant placed on the agenda. In order to encourage rapprochement with the EU, Brussels has adopted special formats of cooperation – for instance, the European Neighborhood Policy (ENP) instrument and the Eastern Partnership (EaP). Georgia is a participant of both formats (for example, Gogolashvili, 2009). It is through the application of the EaP framework that Georgia has managed to successfully traverse the rather difficult path towards the achievement of the Deep and Comprehensive Free Trade Area (DCFTA) agreement (for example, Kakulia, 2014), as well as the EU Association Agreement (CG, 2015).

Unlike the EU, the EAEU has virtually no complex preconditions for membership (for example, EEK, 2014). On the contrary, Moscow's political aim is to expand the union in order to increase its political influence on member-states via economic leverage.

If the distinctive elements between the EU and the EAEU are summed up, it can be concluded that Georgia can more easily attain membership of the latter than the former. However, this evokes the logical question of why Georgia, as a country with a more or less EU-level standard of corruption, should enter the much more (approximately doubly) corrupt EAEU, which lags behind the EU in institutional and technological terms, and simultaneously serves Moscow's political objective to strengthen Russian control over the countries in its alliance via economic leverage. It is evident that the answer to the question will not be in favor of EAEU membership.

Moreover, it must also be emphasized that the so-called "dimensional barrier" for the EAEU is much more critical than for the EU. The renowned Russian economist, Ruslan Greenberg brings this issue into focus when comparing the Commonwealth of Independent States (CIS) with the EU (Greenberg, 2013, p. 9). In particular, an alliance of countries is streamlined and the alliance itself has a higher chance of success when the dimensionality of the member countries is more or less comparable. When an alliance of countries is formed, the states concerned should make a decision on the areas where they are ready to relinquish part of their sovereignty in favor of the supranational governing bodies of the association. When the dimensionality of the countries is more or less analogous, reaching consensus on this matter is easier than when one country and its economy are several times larger in size than those of all the other constituents of the union put together. In this case, the largest country finds it difficult to imagine how it can be expected to yield a share of its sovereignty equivalent to that of much smaller states. As a result, this large country attempts to relinquish far less of its state sovereignty than it obligates the other smaller member states to surrender, thereby maintaining a dominant position in the association.

One of the reasons of the EU's success is also the fact that it consolidates relatively large and simultaneously dimensionally more or less homogeneous countries, such as Germany, Great Britain, Italy and France, and relatively small but dimensionally comparable countries, such as Belgium, Ireland, the Netherlands, etc.

According to Greenberg, the "dimensional barrier" for the CIS was rather high, since the Russian economy accounted for 67-70% of the entire economy of the CIS (Greenberg, 2013, p. 9). This barrier is even further increased when considering the EAEU, as Russia's share constitutes over 82% of the entire economy of the Union (EEK, 2015).

Thus, the "dimensional barrier" is also a testament to the fact that the EAEU does not have a high chance for successful development. Then the question regarding whether or not Georgia should become a member of this Union becomes even less likely to secure a positive response.

EU membership cannot be a target for Georgia, rather, it is a means to achieve the objective by which the country's population can live in dignity, democratic institutions are sufficiently developed, human rights are protected to the highest possible extent, the freedom of speech and expression is no longer restricted, and market economy is developed to a level conducive to developing the economic fundamentals necessary for a dignified quality of life. In order to achieve these objectives, Georgia should adopt and establish EU standards, which will ultimately bring the country closer to the EU.

CONCLUSION

The economic foundation of the well-known Eurasianist doctrine of Russian imperial thinking is not "market economy," but rather "society with a market." For the Eurasianists, the economy should be subordinated to the idea of the Eurasian State, Eurasian civilization, and Eurasian culture. For them, the market principle should not threaten the foundations of ideocracy, that

is, those ideal principles that rule public and political life. The multi-vector nature of Eurasianism should be formed on the basis of government control in strategic areas, a free market in small and medium production, trade, and the service sphere, as well as diverse forms of collective management.

In the modern era of globalization, an alliance of countries on the basis of the Eurasianist economic model is close to impossible to establish, as, even in the post-Soviet countries where authoritarian rule has been instituted (with a few exceptions), preference is given to market economy rather than "society with a market."

The newly established EAEU rests on a redistribution mechanism for oil and gas revenues, whereby Russia deliberately relinquishes a part of its due gains in favor of other member-states in order to not only induce economic interest to remain within the Union, but also to maintain and enhance its political influence via this economic output.

Western economic sanctions imposed against Russia as a countermeasure to the invasion and annexation of Crimea and the military and political support provided to the breakaway regions of Eastern Ukraine, as well as the retaliatory anti-sanctions levied by Russia against the West, have demonstrated the fragility and instability of the EAEU. This is primarily reflected by the fact that the EAEU member-states are not and cannot be economically congruent with Russia.

A comparison of the EU with the EAEU does not favor the later, as, in contrast with the former organization, the EAEU is far more corrupt, with underdeveloped market institutions, and an unequivocal delay in technological development.

Moreover, an impeding factor to the development of the EAEU is the so-called "dimensional barrier," which prevents Russia from yielding a measure of its sovereignty to the Union's supranational governance bodies identical to that which it desires the other member-states to relinquish.

Although attaining membership of the EAEU is much easier than that of the EU, the negative aspects described above ensure that this option holds no appeal for Georgia.

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The Distribution Analysis for Extreme Returns of Nikkei 225 Index: Based on the Extreme Value Distribution of GEV and GL

Yuan An
China Institute for Actuarial Science
Central University of Finance and Economics
Beijing, 100081, China

Ernest Agyemang Duah
Department of Statistics and Actuarial Science
University of Waterloo, Waterloo. N2L 3G1, Canada

Abstract

This paper focuses on the problem of modelling extreme events in the financial market. The choice of the distribution that adequately models the extreme behavior of the financial time series. Extreme Value Theory outlines the framework for determining the best fit distribution for the data. The generalized extreme value distribution and the generalized Pareto distribution are the traditional distributions that most analysts resort to using. However, recent works have shown that the generalized logistic distribution can also capture the effect of the extreme due to its fat tailed characteristic. In this paper, we determine appropriate distribution for extreme returns of Nikkei225 Index and analyze the importance of the generalized logistic distribution in modelling extreme events in the financial market in order to accurately conduct risk measure analysis.

Keywords: Extreme Value Distribution, Generalized Logistic Distribution, Sub Period Technique, Probability Weighted Moments

INTRODUCTION

Many financial institutions are faced with high possibilities of risk. These risk arise due to various factors including market performance, portfolio size and failure of internal conducts. Whilst exposed to a variety of risks, the institutions still have an obligation to its clients and must reserve enough capital to sustain these obligations. As such, many regulatory agencies such as the BCBS, Federal Reserve Board and the Federal Deposit Insurance require institutions to have a minimum capital requirement in reserves. This minimum capital is required to act as a cushion when businesses are impacted by large losses and to reduce the chance of running into bankruptcy or default. Institutions therefore make it an important duty to calculate how much of this capital is required to buffer the institution against large losses. Many institutions use the risk measures Value-at-Risk and expected shortfall to quantify these exposures to financial risks and to estimate the necessary capital to protect them against these extreme losses. Since VaR is a quantile risk measure, it is believed to be a good measure for capturing tail extreme events. In the financial literature, it is usually assumed that the daily log returns of indexes follow a normal distribution. Two popular examples of this assumption is the Black-Scholes-Merton (1973) framework which assumes stock prices follow a Geometric Brownian motion in the option pricing model and Sharpe (1964) who assumes normality of the distribution for the stock returns in deriving the capital asset pricing model. However, after extensive research and analysis of this data type, it had been proven to be skewed data.

Therefore, under the normal assumption, VaR analysis tends to drastically underestimate the true extreme financial losses the institution may be exposed to if the index drastically falls. It is therefore of importance to identify the best distribution that fits the heavy left tail of the financial time series. The determination of adequate model for extreme stock movement was an important problem that thus arose in the financial industry. It is under these circumstances of modelling extreme events in order to conduct risk measure analysis that the concept of Extreme Value Theory was developed.

Extreme Value Theory (EVT) allows one to assess the probabilities and distribution of events that are more extreme than others previously observed. The application of EVT is seen in disciplines that require careful monitoring of extreme events and the casualties they may cause. In finance, EVT focuses only on extreme returns rather than all returns, which is of importance to the institutions and regulators. There have been a variety of work done where EVT was applied to various aspects of the financial sector. [1] Forecast VaR for the long and short positions separately with unconditional and conditional EVT and judge the performance comparing with the other models. [2] Applied EVT to daily returns of crude oil prices in the Canadian spot market from 1998 to 2006. [3] Test the forecasting efficiency of the existing VaR methods for 20 different stock markets and find that the EVT can do the backtesting best. [4] Compare the accuracy of VaR estimation with EVT and GARCH separately employing data from Asian stock markets. [5] Apply univariate EVT to the FTSE100 Index and S&P 500 indices. Their study shows that EVT performs well in fitting financial market return series for predicting static VaR and ES. [6] study the relation between the Chinese stock market and other 5 stock markets with EVT, their result shows that GL is better for the downside extreme market movements and GEV is better for the upside extreme market movements. [7] Compared the accuracy of GARCH-EVT approach for VaR calculation with other models using data from six stock markets of the world and find that the GARCH-EVT method outperforms in estimating VaR.

In this paper we seek to characterize the distribution of extreme stock returns for the Nikkei225 index from 1995 to 2015. The fatness of the tail of the limiting distribution can be used to calculate the probabilities of a market crash and thus can contribute to the early warning of market risk (Jansen and De Vries, 1991). [8] Applied the two well known methods under EVT, Block Maxima Approach and the Peak over Threshold, to the data which leads to different but closely related descriptions of the extremes. The methods model the extreme events by fitting the Generalized Extreme Value (GEV) distribution and the Generalized Pareto (GP) Distribution, whereafter risk measure analysis was conducted using both models. [8] Concluded that the GP is the better model as there is less wasting of data. However, [9] states that although the GP distribution does have its advantages over the GEV, it is subjected to more serial dependence. [9] Therefore applied a non-overlapping sub period technique to the financial data to reduce dependency. He then fit the Generalized Logistic (GL) distribution and the GEV to the data and compared the results to determine which model better describes the extreme events. [10] Applied GEV and BGEVA models to the sample of Italian SMEs from 2006 to 2011 and found each of the two model is better than the logistic regression. [9] Introduced the option of probability weighted moments as a more efficient way to estimate parameters instead of the maximum likelihood approach, which was the method used in [8]. Each sub period is analyzed and the better fit distribution is assigned to each sub period, where after he concluded that the extremes are generally better characterized by the GL distribution.

The aim of this paper is to apply Extreme Value Theory to financial returns and determine the best distribution which fits the returns. We apply the data sub period technique of [9] on three

global financial indices and fit the GL and GEV distributions to the data set. We then compare the results from using the sub period technique to [8] who analyzed the fit of the GEV distribution to the entire time horizon. Based on our results, we analyze which methodology is more efficient and sufficient for choosing the adequate distribution that describes the financial market extremes. Finally, we perform VaR analysis given the optimal distribution to determine capital requirement.

Section 2 details the technical content surrounding the different distributions, obtaining model parameters as well as goodness of fit testing. Section 3 provides a description of the data sets used and results obtained. Section 4 covers a critical analysis of the results as well as advantages and drawbacks of both approaches. Finally, we end the paper with our conclusion.

METHODOLOGY

Distributions

We make mention of two approaches that model and analyze the behavior of extreme events. These are the Peak over Threshold approach that utilizes the GPD distribution and the Block Maxima Approach which more popularly utilizes the GEV distribution and the more recent introduction of the Generalized Logistic distribution. In figure 1, we observe from the probability distribution density functions of the GPD, GEV and GL that the tails are similar in distribution. As such, the three distributions are asymptotically equivalent in their tails [11]. It is with this equivalence in the tails that we focus our attention on the three distributions to model extreme stock returns.
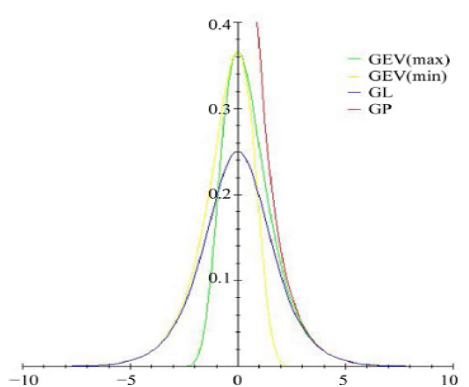

Figure 1: Probability density functions of GEV (max), GEV (min), GP and GL distributions.

The Peak over Threshold Approach models all values that exceed a fixed or high level threshold. This approach follows the Pickands-Balkema-de Haan (1975) theorem. The theorem indicates that the limiting distribution of excesses over a high enough threshold provides a theoretical foundation for us to use the GPD to develop estimators and quantiles. The GPD is argued to be more advantageous than the GEV and GL as it makes use of more data points from the tails. As such, there exists a greater number of available data for the model to fit. However, this approach has two drawbacks: choosing a suitable threshold and being subjected to serial dependence. The choice of a threshold is critical as if it is too high then there are less observations available for accurate estimation and if too low will lead to many central observations in the sample. Additionally, EVT is based on the assumption that the extremes are independent and identically distributed. As financial returns tend to cluster and have high serial dependence, the GP approach is more likely to violate the i.i.d assumption that underlies the EVT concept. Also take into consideration the modelling of extreme events using the sub period technique that is of focus in this paper. This modelling approach is not fit for assuming the GPD distribution. As such, we focus on the GEV and GL distributions.

The Block maxima approach utilizes the assumption that the log returns are independent and identically distributed. It is realized as a traditional method that groups the returns into non-overlapping blocks of equal length and models the maxima of each adjoining block with a suitable distribution. The choice of block size is very critical as there exists a bias-variance trade off between the block length and the number of blocks. This traditional approach follows the [12] and Gnedenko (1943) theorem. The theorem indicates that under EVT, the limiting distribution of the extremes collected over non-overlapping time periods of equal length, after being normalized and centered, ought to be one of the three distributions that make up the GEV family (Weibull, Gumbel and Frechet distribution).

If shape parameter is 0, then it is the Gumbel distribution; if shape parameter is greater than 0, it is the Weibull distribution and if less than 0, it is Frechet distribution. We take particular note of the shape parameter which governs the shape of the distribution, where larger absolute values of shape parameter imply heavier tailed distributions. [8] And [9] are two of the many works that have proven extreme financial returns generally follow the Frechet distribution, a distribution with a heavy left tail.

However in a number of recent EVT analysis, various authors have empirically shown that the extremes of financial returns can adequately be modelled by the generalized logistic distribution (GL) over the GEV distribution. [13] Studied the distribution of extreme stock market index on both tails and discovered that the GL distribution characterized the extremes better than the GEV and GP for daily, weekly and monthly financial returns as there is persisting evidence of autocorrelation and heteroskedasticty in the financial data. This owes to the fact that the GL distribution has a fatter tail than the other aforementioned distributions. [11] Have also in their research proved the theoretical importance of GL distribution in extreme value modelling: a fatter-tailed distribution is better able to fit large extremities that lie in the tail, reducing underestimation error.

Model Selection
The selection the distribution that best fits the financial returns is determined by using L-moment ratio diagrams. L-moments (Hosking 1990) are expectations of certain linear combinations of ordered statistics (L-statistics), used to summarize the shape of a probability distribution. They can be used to calculate mean, standard deviation, skewness and kurtosis.

A theoretical distribution has a set of population L-moments. Sample L-moments can be defined for a sample from the population, and can be used as estimators of the population L-moments. We identify the distributions that best fit empirical data by plotting the estimated skewness and kurtosis from the data set and choosing the distribution whose theoretical L-skewness and L-kurtosis curve is closest to the observed plotted points.

Parameter Estimation
Estimating parameters for the models are subjected to sampling errors. Therefore, a method of estimating parameters that minimize these errors must be chosen. Parameter estimates for the limiting distributions are calculated using the probability weighted moments (PWM) technique outlined in [9] and [13] instead of the conventional MLE as used in [8] and other researchers. This technique was chosen as it generates more unbiased parameter estimates than popular MLE method for small sample sizes, which is the norm for EVT data sets. There also exists a linear relationship between PWM and the more robust L-moments as to why this technique was chosen. The PWM method estimates a distribution's parameters by equating the sample moments to those of the fitted distribution.

Goodness of Fit

The Anderson-Darling test [14] is used to assess how effective the chosen distribution is to fit the extremes. The test is most often used in contexts where a family of distributions is being tested, in which case the parameters of that family need to be estimated. This goodness of fit test is believed to be the best option in this analysis for measuring the discrepancies in the tails between theoretical and empirical distributions based upon a small sample size [15]. [16,17] describe the AD test as the most powerful statistical tools for detecting how great the sample moves away from normality. The test statistic includes a weight function that places greater emphasis on the tails of the distribution. As such, it is the best model test for heavy tailed distributions.

DATA DESCRIPTIONS AND RESULTS

This paper focuses on the results of modelling extreme maxima daily returns over weekly intervals. That is, we focus on the maxima extreme returns which occur on the right tail of the empirical distribution observed in each week and determine the best fitting distribution for the weekly maxima data set. These maxima daily returns are collected over non-overlapping successive selection intervals of 5 days. Daily log returns of the Nikkei225 indexes were the underlying data used to assess the effectiveness of the chosen distributions to fit the extreme returns. The closing prices were downloaded for different time periods based on availability of the data. As a result, the historic time periods under analysis are 1995-2015 for the Nikkei225 index.

Figure 2 illustrates the QQ plot of daily log returns against the normal distribution for the Nikkei225. Notice in the diagram that the data does not follow the pattern of the normal distribution, which as previously mentioned is universally assumed. We observe the existence of deviation from the normal in both the left and right tails, justifying the use of the EVT distributions to model the right tail distributions of the three indexes.
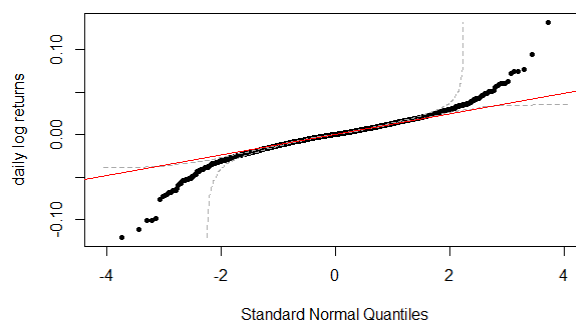

Figure 2: QQ plot of daily log returns against the normal distribution

The time span chosen also contains some key volatile moments in history which have negatively impacted the chosen financial markets, from which proper EVT modelling should capture if sufficient. These extreme historic moments include but are not limited to the 2008 financial crisis, the 2011 Japanese earthquake and the 2001 US terrorist attack. The weekly maxima extremes (right tail extremes) were collected for the Nikkei225 over the period 1995 to 2015. We apply the moving window techniques where the log financial returns are divided into yearly selection intervals each of size 51-52 extremes. As a result, we not only determine the distribution which best fits the entire sample period, but the distribution that fits each of the 21 sub respectively. This technique is argued to reduce the serial dependency of financial returns by capturing the non-stationary of the data.

The first step in our analysis is to assume probability distributions that are likely to provide good descriptions of the financial series. As previously mentioned, the focus of analysis lies on the GEV and GL distributions. The values of skewness against kurtosis for the series of maxima over each selection interval were estimated and plotted on an L-moment ratio diagram. Figures 3 shows the relationship between sample estimates of skewness against kurtosis and that of the theoretical GEV and GL curve respectively. The diagrams reveal that the samples of the weekly maxima are generally dispersed and fall in the region between the theoretical GEV and GL distributions for the three indexes. Based on this observation, we run further statistical tests on the GEV and GL distributions.
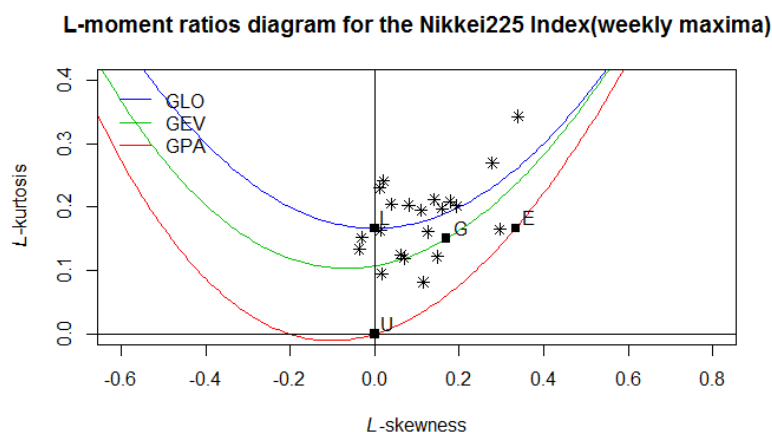

Figure 3: L-moment ratio points for Nikkei225 weekly maxima, divided into 21 sub periods, over 1995 to 2015

The second step is to determine which of the distributions (if any) better fit the extreme returns for each sub period and for the entire sample time horizon as well. The GEV and GL distributions were fitted to the weekly maxima returns for each of the different 21 sub periods for the Nikkei225 index. The parameters for both models were estimated using PWM technique, then the Anderson-Darling goodness of fit test is conducted for model efficiency for the three indexes. The tables for all three indexes illustrate the location, scale and shape parameter estimates for the distributions together with the critical p-values of the AD goodness of fit test.

We observe the results for the Nikkei225 index in table 1 after fitting the GEV distribution and the GL distribution. The shape parameter takes an overall negative value for the entire 21-year-period of -0.010, showing the 21-year weekly maxima returns is modelled by a Frechet distribution. However, notice once more that dividing the time horizon into yearly sub periods for both distributions, the shape parameter fluctuates between negative and positive values. This shows us that different time periods have different skewness of distribution depending on what is going on in the market at that point in time. The Anderson-Darling p-values of 0.0442 and 0.0011 for the GEV and GL distributions respectively are both lower than 0.05 when both distributions were fitted to the entire 21-year-period. This indicates that both distributions provide an inadequate fit to the Nikkei225 index for the whole 21 years. An explanation for the ill-fit of both models is that the nature of the distribution of the extremes was changing over time. Therefore, when the entire 21-year-period was used, the data came from a mixture of distributions, making it di cult for a single distribution to provide a better fit. When the weekly maxima were divided into 21 sub periods, both the GEV and GL provided an adequate fit for 20 of the 21 sub periods. Both the GEV and GL distributions failed to adequately fit the maxima returns in sub period 17 which corresponds to the 2011 Japanese earthquake in North Japan.

The effect of this earthquake on the Japanese economy caused the index to plummet drastically within this period. Again, we observe that the shape parameter for both distributions takes its maximum values in this sub period. In comparison to each other, the GL provided a better fit for 14 of the 21 sub periods, whilst the GEV fit better for only 7. Unsuspectingly, the average sub period scale parameter exceeded that of the entire sample period for both the GEV and GL.

Table 1: GEV and GL parameters Estimates for NIKKEI 225

SUBPERIOD(S)	LOCATION		SCALE		SHAPE		AD P-VALUE		FIT
	GEV	GL	GEV	GL	GEV	GL	GEV	GL	
S=1	0.011	0.014	0.009	0.006	−0.01	−0.174	0.0442	0.0011	GEV
S=21									
1	0.01	0.014	0.009	0.006	0.017	−0.159	0.9263	0.9806	GL
2	0.007	0.01	0.006	0.004	0.215	−0.038	0.7895	0.9886	GL
3	0.013	0.017	0.008	0.006	−0.187	−0.296	0.8652	0.7394	GEV
4	0.012	0.016	0.01	0.007	−0.036	−0.194	0.9735	0.9976	GL
5	0.0113	0.015	0.0094	0.006	0.096	−0.11	0.9195	0.9825	GL
6	0.011	0.014	0.008	0.005	0.071	−0.125	0.8867	0.908	GL
7	0.015	0.019	0.013	0.008	0.087	−0.115	0.9467	0.7748	GEV
8	0.013	0.017	0.011	0.007	0.145	−0.08	0.8451	0.9706	GL
9	0.014	0.016	0.008	0.004	0.259	−0.014	0.9	0.9659	GL
10	0.01	0.012	0.008	0.004	0.339	0.037	0.9953	0.9947	GEV
11	0.009	0.012	0.007	0.004	0.176	−0.062	0.9751	0.9325	GEV
12	0.01	0.012	0.006	0.004	0.034	−0.148	0.9867	0.9333	GEV
13	0.01	0.014	0.011	0.006	0.248	−0.02	0.3331	0.6845	GL
14	0.016	0.022	0.014	0.009	−0.162	−0.278	0.9286	0.9919	GL
15	0.013	0.016	0.008	0.005	0.046	−0.14	0.8277	0.9594	GL
16	0.01	0.0142	0.012	0.007	0.262	−0.012	0.9355	0.9211	GL
17	0.011	0.013	0.006	0.004	0.34	0.31	0.0001	0.0002	GL
18	0.0122	0.015	0.008	0.005	0.254	−0.017	0.9908	0.9221	GEV
19	0.014	0.017	0.009	0.005	0.164	−0.069	0.9435	0.8893	GEV
20	0.009	0.012	0.007	0.004	−0.0122	−0.178	0.9434	0.9915	GL
21	0.008	0.01	0.006	0.005	−0.248	−0.306	0.8218	0.9325	GL

The VaR at the 99% confidence level reveals some of the smallest values in the sub periods that were very volatile and affected those in the long position. Take for example sub period 17 of the Nikkei225 index. The VaR results were 2.6% and 2.8% given the GEV and GL distributions respectively. As previously mentioned, this sub period is related to the 2011 Japanese earthquake. Individuals therefore with a short position in stock were less exposed to risks.

Also, we notice that the observed VaR for the entire periods did not exceed the average sub period VaR. This reveals the true purpose of our research as we can conclude that the VaR estimates can be greatly underestimated depending on the length of the sub periods. The same conclusion holds when we compare the VaR results across the two different distributions. We generally observe that the distribution which provided the better fit gave a better VaR estimate than the other.

Table 2: VaR Estimates via GEV and GL at 99% confidence level

SUBPERIOD(S)	GEV	GL	SUBPERIOD(S)	GEV	GL	SUBPERIOD(S)	GEV	GL
S=1	0.051	0.055						
S=21								
1	0.053	0.057	8	0.05	0.054	15	0.048	0.051
2	0.026	0.029	9	0.035	0.038	16	0.041	0.045
3	0.074	0.078	10	0.027	0.03	17	0.026	0.028
4	0.062	0.066	11	0.031	0.034	18	0.035	0.038
5	0.047	0.05	12	0.036	0.038	19	0.043	0.046
6	0.04	0.043	13	0.04	0.044	20	0.041	0.043
7	0.063	0.069	14	0.11	0.115	21	0.059	0.06

CRITICAL ANALYSIS

Many applications of EVT in finance tend to focus on either the GEV or GP distributions. However, the GL distribution has a fatter tail than the aforementioned distributions. Therefore, it is expected to be a better fit for extreme value and better estimate tail measures such as VaR. The works of Tolikas (2008) and Tolikas and Gettinby (2009) argue that overall the GL distribution proves a better fit when multiple sub periods are used. Hussain (2015) concludes that the GEV distribution is the best distribution to fit the extremes that exist in the right tail of indexes. Gilli and Kellezi (2006) on the other hand identified the GP distribution as the better choice for modelling extreme events in financial markets over the GEV distribution. However, the results revealed that both the GEV and GP distributions are necessary for modelling the extreme maxima returns for the Nikkei225 index. The results revealed that the GL distribution adequately fit more sub periods than the GEV but neither distribution provided an adequate fit to the Nikkei225 maxima returns for the entire 21-year-period. The sign of the shape parameter tends to change over each sub period, indicating no unique distribution can adequately describe the empirical data well.

Additionally, upon dividing the entire time horizon into sup periods, it is observed that the size of the extreme maxima varies constantly over time. This is indicated by the substantial variability observed in the shape parameters over the different sub periods as mentioned above. We observe that those sub periods with extremely large losses had high volatility parameters and in turn resulted in higher shape parameter than those with smaller observable losses. This result would have a great effect on VaR estimates as those periods with higher shape parameters are expected to have greater VaR estimates. Therefore, industries who choose to use shorter period for measuring their exposure to financial risks would have a greater minimum capital requirement than those who choose to conduct analysis on extended time horizons. Therefore there are both advantages and disadvantages to this methodology of obtaining the extreme maxima returns. An advantage of analyzing the extreme losses using the sub period technique is that the VaR estimates are more likely to respond to changes in the market faster than using one extended time horizon. However, a disadvantage is having a larger minimum capital requirement reserve than needed, leading to less available funds to the organization to conduct other business. We can therefore conclude that the choice of distribution and time period to model the behavior of extreme returns has important implications for investors who wish to assess the risk of a portfolio, and for financial regulators who employ VaR based on the distribution.

Financial returns exhibit heteroscedasticity and serial correlation. [9] Argues that the sub period technique reduces the dependency that financial series may be subjected to by selecting maxima extremes from non overlapping blocks of equal length. This approach is similar to the

block maxima approach but differs in the sense that the best fit distribution is determined for each predetermined sub period and not the entire time horizon. However, for shorter periods, we cannot guarantee the same level of confidence of reduced heteroscedasticity. [18] Suggest modelling heteroscedastic financial time series by fitting the tail of the conditional distribution of returns using an autoregressive volatility model, standardizing the returns by the estimated conditional volatility and finally conducting the EVT analysis. However, this method requires additional parameter estimation which leads to increased possibility of estimation error and model risk. Additionally, further research can be conducted to compare the EVT analysis with the GARCH-based approach in estimating the VaR.

L-moment ratios were used to determine the candidate distributions that could possibly model the extreme financial returns. This method of identifying distributions has a number of advantages we make note of. The main advantage of the L-moments is that they are more robust to the presence of outliers than conventional moments by being linear combinations of the ordered data. This is because conventional moments include powers that give greater weight to outliers that can lead to bias and variance in the estimators. Another advantage of L-moments is that sample L-moments can take any value that the population moments can take while conventional moments have bounds. Finally, the asymptotic biases of the L-moments are negligible for most distributions. Efficient parameter estimation plays an important role for measuring the financial risks associated with extreme events. Institutions must select the best method for deriving estimates so that parameters are not greatly under/overestimated and yield inaccurate results. The probability weighted moment technique was chosen in order to determine parameter estimates. [19] Argues that the asymptotic properties of MLE are more open to doubt in the case of small samples where convergence of the likelihood function is not always guaranteed to be at the global maximum, MLE is a better fit for moderate and large samples. As we are working with sub periods of 50-53 observations each, probability weighted moments (PWM) was chosen to estimate parameters. PWM tends to have a lower root-mean square error for small sample sizes than MLE. PWM are fast and straightforward to compute and almost always yield feasible values for the estimated parameters [20]. However, one disadvantage of estimating PWMs depends on the choice of plotting positions. Thus careful choice of plotting positions is important.

CONCLUSIONS

This paper provides insight for risk assessment of extreme events in stock markets. Financial institutions are now more concerned with managing market risks due to the increase in market volatility of recent times. The results above show that the assumption that returns follow a normal distribution is not an adequate assumption to make as the distribution of financial returns tend to generally be skewed. This can lead to substantial underestimation of the extreme risks involved in the financial markets. The extreme value analysis on VaR estimates shows that without analyzing the extreme events that lie on the tail, the VaR is greatly underestimated. The choice of selecting the most appropriate distribution can therefore have serious implications on stock market risk management. Computational errors would mean either having to maintain high minimum capital reserve to remain solvent in the case of overestimation, or facing great losses in the case of underestimation.

We apply the Extreme Value Theory method to the log returns of Nikkei225 stock index in order to derive estimates for VaR. The analysis of the extremes revealed that major estimation error can occur if the best fit distribution to the extremes is not chosen. It was determined that in most instances the GEV provided a better overall fit for the distributions based on recent historical data. However, applying the same distribution to subsets of the entire time horizon indicated that different distributions adequately fit different time periods based on the market

performance in that period. This leads to the conclusion that no one distribution can adequately model the extreme maxima. Finally, if the type of data set that financial institutions wish to perform tail analysis on is not i.i.d, EVT based analysis does not provide the best results when modelling the extreme events. We therefore advice that practitioners check for dependence in the data before applying EVT.

ABBREVIATIONS

The following abbreviations are used in this manuscript:
Nikkei 225 Index from http://finance.yahoo.com

Reference

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Impact Of Statutory Retirement Age On Youth Unemployment In Kwara State, Nigeria

ISIAKA Sulu Babaita
Department of Business Administration,
University of Ilorin, Ilorin, Nigeria

WOLI-JIMOH, Ibrahim Ayodeji
Kwara State Ministry of Justice, Ilorin. Nigeria

ABSTRACT

Youth unemployment is a pressing problem in both the advanced and developing countries of this world of which Nigeria is not an exception. More worrisome is the few research works linking Statutory Retirement Age (SRA) to youth unemployment. However, to add to the growing concern on the subject matter, the current study empirically examines the impact of statutory retirement age on youth unemployment rate in Kwara State. The study used simple random sampling technique to select a sample size of 390 civil servants from Kwara State Civil Service Commission (KWCSC). It also interviewed a focus group of graduates undergoing the One-Year program of the Kwara Bridge Empowerment Scheme (KWABES). Data obtained were presented using both descriptive and inferential statistics of simple percentage. Regression Analytical tool was used to test the hypotheses formulated for the study. The results indicate that the variability changes in the rate of youth unemployment could be accounted for by approximately 84.3% of increase in statutory retirement age. Also, the variability changes in the level of job creation opportunities could be accounted for by approximately 63.2% of factors related to statutory retirement age This established that increase in statutory retirement age have effect of increasing youth unemployment and the level of job creation depends on factors that are related to SRA. Base on this conclusions, it was recommended that the KWCSC should focus on strict implementation of SRA policies and Programmes and by this, the state government can deal decisively with the problems of youth unemployment through the Statutory Retirement Age.

Keywords: Statutory, Retirement, Youth, unemployment, Kwara, Nigeria

BACKGROUND TO THE STUDY

Youth unemployment is a pressing problem in both the advanced and developing countries of this world. According to World Bank data (2014) the unemployment rate for youth is 15.7% aged15–24 ranged from 3.7% in Thailand to 59.0% in Greece (Labour Market Statistic, 2014).However, of the 65 countries for which data are available, 59 had a male youth unemployment rate above 10%. Data from the Organisations of Economic Cooperation and Development (OECD) for 2010 show that almost 13% of youth aged 15–24were not in education, employment, or training, with the increase in the Baltic countries, Ireland, and Spain. Policy makers who advocate increases in the retirement age are accused of worsening the chances of young people getting jobs (Labour Market Statistic, 2014). African Youth Charter refers to youths in age range of 15 to 35 (United Nations Educational, Scientific & Cultural

Organisation, 2014). This age range represents over 60% of the African continent's total population. Although more than 50% of the youth population in Africa is illiterate. Those that have some qualifications often exhibit skills irrelevant to current demand in the labour market. With the prevailing growth in educational and skill requirements, millions of youth are either unemployed or sometimes underemployed (African Economic Outlook, 2015). South Africa has the highest in Africa with a figure of over 50%. Nigeria has a youth unemployment rate of over 13% (Tighisti, 2014) Statutory retirement age which is also known as an enforced or mandatory retirement age is the set age at which persons who hold certain jobs or offices are required by industry, custom or law to leave their employment by retirement. Typically, statutory retirement age is justified by the argument that certain occupations are either too dangerous (military) or mentally and physically requiring high skill levels (airline pilots). Most rely on the notion that workers' productivity decline significantly after certain age, particularly at 60years in the case of Nigeria and that statutory retirement age is the employer's way to avoid huge cost on unproductive workers. The statutory retirement age is often somewhat arbitrary and not based upon an actual physical evaluation of an individual employee's productivity. In countries like United States of America and Canada, statutory retirement age is unlawful except in certain industries.

There is a growing concern that the total monthly package of a worker who has attained the mandatory age of 60 years can sufficiently create youth employment opportunities for a minimum of four fresh graduates (Kwara State Bureau of Statistics, 2014). The argument is, whether such money saved on recurrent expenditure will be used by government to create job opportunities for the youth or not. It has been argued that elongating the statutory retirement age will prevent career advancement of some civil servants that are supposed to fill the vacancies created by the exit of retiring civil servants(United Nations, World Youth Report, 2012). It is also argued that the elongation could further compound the youth unemployment rate which could have been ameliorated, if the statutory retirement age was properly managed.

While in some developed countries, increasing the statutory retirement age is done to solve the problem of pension. In other developed countries, it is a crime to do so (Allen, 2012).Although the labour unions of countries that increased their statutory retirement age had vehemently opposed such policies leading to protests and strikes which happened specifically in France.

In developing countries such as Nigeria, increasing statutory retirement age is perceived as a temporary source of income, the stream of which a retiree may not receive, if retired. While this may be true of the civil servants in Ministries, Departments and Agencies (MDA), the same cannot be said of the judicial, health and academic institutions. Another issue raised by the statutory retirement age is that, government can create more jobs having known the expected number of civil servants due for retirement at a nearer future date. Although, this practice is political, but also seen to possibly mitigate youth unemployment rate (Kwara State Civil Service Commission, Bulletin 2011).

The abolition of the mandatory 35 years in service while retaining only the 60 years statutory retirement age by the Edo state government (Ibileke, 2014) threw up the challenge of reducing unemployment rate of older people rather than those of the youth in the face of a rising youth unemployment rate in Nigeria.

This research work was informed by the evolving issues raised above and hence the need to tackle the rising rate of youth unemployment through a thorough review of statutory retirement age (SRA) policies and programmes.

Research Questions

This research work intends to answer the following questions;

  i. what is the effect of statutory retirement age on youth unemployment?
  ii. what is the effect of statutory retirement age on job creation opportunities?

Objectives of the Study

The main objective of the study is to examine the impact of the statutory retirement age on youth unemployment in Kwara state. And the specific objective is to examine the effect of statutory retirement age on job creation opportunities.

Test of Hypotheses

The following hypotheses shall be tested in the course of the study;

$H_{01:}$ Statutory retirement age has no significant impact on youth unemployment.

$H_{02:}$ Statutory retirement age has no significant effect on job creation.

Scope of the study

The primary focus of this research as implied by the general objective is to find out the impact of statutory retirement age on youth unemployment rate in Kwara state. The study was carried out in Kwara State, Nigeria and Kwara State civil service was chosen because the state is prided as having the least unemployment rate in Nigeria ((Boldwin and Adedayo, 2014).

REVIEW OF RELATED LITERATURE:

Conceptual Review of Statutory Retirement Age and Unemployment

Retirement is defined as the act of retiring or the state of being retired (Atchley,2000). That is, to withdraw oneself from business public life or to remove oneself from active service. Thus, the process of retirement involves the transition of people's experience, when they move from a job role performed for pay, to the role of a retired person. Here, it is referred, to a retired person who had previously worked for either a private organisation or public service for pay. However, after a stated period, such person exits the paid job either to permanently not be involved in any work activity or to withdraw only from a paid job.

Normal retirement age is the age at which a retirement plan allows for full benefits (Fisher 2011). In private pension plans, the date is frequently calculated as a combination of age and years of employment. But for the nation's largest and most ubiquitous Pension plan that is Social Security, the right to full benefits are determined largely by age. Social Security's normal retirement age varies by date of birth. It can range from people born in 1937 or before who get full benefits at age 65 to those born in 1960 or later who have to wait until they turn 67 (United States Bureau of Statistics, 2012).

Statutory Retirement Age also known as Mandatory or Enforced Retirement Age has been in practice in both the private and public service worldwide (Osuala, 2005). It is a major stage in adult development and it marks the split from the middle years to the old age (Osuala, 2005). At the age of 65 years, our mental and physical abilities diminishes; however, it becomes rationale to relieve an employee of some strenuous and excruciating duties that may have a telling effect on and consequently threaten his health. This, therefore, results to normal retirement age of 65 years (Osuala, 2005). The statutory retirement age therefore is a set age backed by the law of a country.

In some developed and economically buoyant countries there is no statutory retirement age or even illegal to have a statutory retirement age. Some other countries have their statutory retirement age set at same age for both men and women or different for both sexes. In Nigeria, due to the economic crunch and high rate of unemployment among other factors the Statutory Retirement Age (SRA) was put at 55years or after 25years of service by General Ibrahim Babangida's regime (Federal Bureau of Statistics, 2008). And until recently when the Federal Government of Nigeria pegged it to 60 years or 35 years of service or whichever is attained first(Atchley2000).

Unemployment occurs when a person who is actively searching for job is unable to find work. Unemployment is often used as a measure of the health of the economy. The most frequently cited measure of unemployment is the unemployment rate. This is the number of unemployed persons divided by the number of people in the labour force. Many different variations of the unemployment rate exist with different definitions concerning who is an "unemployed person" and who is in the "labour force' (United States Bureau of Labour Statistics, 2014).

THEORETICAL FRAMEWORK
Theory Of Retirement
The Life-Cycle Theory of Saving and Retirement. The model was built by Bloom, Canning and Moore (2007). This theory reveals that people may engage in precautionary saving to guard against income shocks, and they may also save to provide bequests (personal properties such as money, stock, bonds, or jewellery) (Skinner 2007). In the interest of simplicity, the researcher assumed that the life cycle has no period of schooling. Schooling will affect the productivity of workers, their health and longevity, and their utility of leisure (Heckman 2007) complicating a retirement. The results give the optimal retirement and savings behaviour of fully rational agents under complete capital markets. In practice, imperfect capital markets (particularly annuity markets), lack of foresight about the need to save for retirement, and time inconsistency in preferences will distort private decisions, generating a role for social security systems (Hubbard& Judd 2007; Feldstein,2007 and Laibson et al. 2007). Mandatory retirement may prevent individuals from responding optimally to longer life spans through longer working lives. Although few social security systems have mandatory retirement, a substantial body of evidence indicates that retirement in industrial countries clusters around specific ages that depend on retirement incentives inherent in the national social security system (Gruber & Wise 2004). The conclusion of the model demonstrates two major long-term influences on the optimal age at retirement and on savings behaviour.

Modern Retirement Theory (MRT). The theory was propounded by Jason and Grubbs (2010). The model offers customized solutions for each individual retiree. It is centred on proprietary process which is a retirement plan that is secured, stable, and sustainable for the retiree's lifetime. It is about issue of longevity and conditions within longevity. The model is premised on six assumptions namely; absolute goal, individualized and client centric, outlook ambiguity, secure-stable-sustainable(3S), ''Retirement Sheet'' Assets and Funding Priority. The major focus here is the 3S, where the first S (secure) refers to income level which must offer a guarantee of some sort or a back stop of protection. The second S (stable) refers to income which must not fluctuate widely and the third S (sustainable) refers to income level which must be for life times.

Theoretical review of Unemployment
THEORY OF UNEMPLOYMENT.
Classical Theory of Unemployment as analysed by Pigou (2000) and Solow (2014), argues that the labour market consists of demand and supply of labour. Demand for labour is a derived demand, obtained from the declining portion of the marginal product of labour. The demand

curve is a negative function of real wage in that if wages increase the quantity demand for labour will decline and the opposite is correct. The supply of labour is derived from worker's choice whether to spend part of time working or not working (leisure). Supply of hours worked is a positive function of the real wage, because if the real wage rises, workers supply more hours of work. In equilibrium, demand and supply of labour are intersected at a clearing point that determines the equilibrium real wage rate and full employment (Sweezy,2000).

EMPIRICAL REVIEW

IZA World of Labour (2014) submitted that the average effective retirement age is the mean age at which older workers withdraws from the labour force to retire and it is lower than the official retirement age. The official retirement age for men in Germany was 65 and the effective retirement age was 62, according to the (OECD, 2014). The research findings show that most wealthy countries have a lower effective retirement age dating back to the 1970s, however such trend has been halted. IZA World of Labour concluded that the basic public policy dilemma is the conflict between the use of early retirement as an instrument for alleviating unemployment among younger workers and the longer term financial viability of pension systems in ageing societies.

Stefan and Zweimüller (2011) in their work examined how an increase in the minimum retirement age affects the labour market behaviour of older workers. The results from the study suggest that the policy change reduced retirement by 19 percentage points among affected men and by 25 percentage points among affected women. The decline in retirement was accompanied by a sizeable increase in employment of 7 percentage points among men and 10 percentage points among women, but had also important spill-over effects into the unemployment insurance program (Staubil, 2013). Specifically, the unemployment rate increased by 10 percentage points among men and 11 percentage points among women. In contrast, the policy change had only a small impact on the share of individuals claiming disability or partial retirement benefits.

METHODOLOGY

The research was conducted to examine the impact of Statutory Retirement Age on youth unemployment in Kwara State.

Research Design

Descriptive research design method is adopted for the conduct of this study, because the data that were used were qualitative in nature. This study used collection of primary opinions on statutory retirement age and its relative impact on youth unemployment, which is achieved through administration of questionnaires.

Population for the Study

The population of this study includes all the civil servants and all the unemployed graduates residing in Kwarastate totalling 17,560. However, since it is not practically possible to collect data from the entire population and all the unemployed graduates residing in Kwara State, it became imperative for the study adopt a hypothetical sample in line with the views of Attwell& Rule (1991), that a hypothetical sample may be used for an unknown population. Hypothetical sample positively select elements that exhibit desired features that are the focus of the research's study.

Measurements:
Hypotheses

H_1: There is no significant relationship between statutory retirement age and youth Unemployment in Kwara state.

H_2: There is no significant relationship between statutory retirement age and job creation opportunities in Kwara state.

Hypothesis One:

H_1There is no significant relationship between statutory retirement age and youth Unemployment in Kwara state

Table 4.1 Variables Entered/Removed[b]

Model	Variables Entered	Variables Removed	Method
1	Statutory retirement age[a]	.	Enter

Source: Author's computation, 2015

a. All requested variables entered.

b. Dependent Variable: Youth Unemployment

Table 4.1 Posited that Statutory retirement age and youth unemployment were variables entered respectively to test whether or not Statutory retirement age has impact on youth unemployment.

Table 4.2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.918[a]	.843	.843	.543

Source: Author's computation, 2015

a. Predictors: (Constant), Statutory retirement age

The R –square value as depicted in table 4.2 is 0. 843 (84.3%) and the adjusted R-Square is 0.843 (84.3%). This indicates that the variability changes in the amount of youth unemployment could be accounted for by approximately 84.3% of issues related to statutory retirement age. This established that statutory retirement age has impact on youth unemployment.

Table 4.3 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	544.658	1	544.658	1.849E3	.000[a]
	Residual	101.345	344	.295		
	Total	646.003	345			

Source: Author's computation, 2015

a. Predictors: (Constant), Statutory retirement age

b. Dependent Variable: Youth Unemployment

Table 4.1 indicates that the calculated P-value is 0.000 (positive) which is less than alpha value of 0.05, therefore, the Null hypothesis which states that statutory retirement age has no impact

on youth unemployment is thereby rejected, while the Alternative hypothesis which establishes that statutory retirement age has impact on youth unemployment is adopted. At 95% level of confidence, the calculated 'F' value of the model which is 1.849 which depicts that the statistical significance of the analysis is valid.

Table 4.4   Coefficients[2]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.059	.071		.829	.408
Statutory retirement age	.990	.023	.918	42.997	.000

Source: Author's computation, 2015
a. Dependent Variable: Youth Unemployment

Table 4.4 reveals that the intercept and slope (i.e. B) of the model are 0.059 and 0.990 respectively. This could be written in model form as YOUN= 0.059 + 990$_{SRA}$+E. Where YOUN= "Youth Unemployment", SRA = Statutory Retirement Age, and E= Error term.

Hypothesis Two:
H$_{2:}$ Statutory retirement age has no effect on job creation opportunities.

The second objective is to examine the impact of statutory retirement age on job creation.

Table 4.5 ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	594.024	1	594.024	4.694E3	.000[a]
Residual	43.536	344	.127		
Total	637.561	345			

Source: Author's computation, 2015
a. Predictors: (Constant), The current statutory retirement age is good for Kwara State Civil Service.
b. Dependent Variable: major objective of government agenda is job creation

Table 4.5 shows that the calculated P-value is 0.000 (positive) which is less than alpha value of 0.05, therefore, the Null hypothesis which states that statutory retirement age has no effect on job creation opportunities is rejected, while the Alternative hypothesis which establishes that statutory retirement age has effect on job creation opportunities is adopted. At 95% level of confidence, the calculated 'F' value of the model which is 4.69 is greater than the 'F' tabulated value of the model which is 3.42. This indicates that the statistical significance of the analysis is valid

Table 4.6 Coefficients a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.049	.044		1.118	.264
	The current statutory retirement age is good for Kwara State Civil Service.	1.025	.015	.965	68.510	.000

Source: Author's computation, 2015

a. Dependent Variable: major objective of government agenda is job creation

Table 4.6 reveals the coefficient of the regression model. The intercept and slope (i.e B) as reflected in the table are 0.0.49 and 1.025 respectively. This could be written in model form as JCOP= 0.049 + 1.025SRA+ E. Where JCOP='Job Creation Opportunities",SRA =Statutory Retirement Age and E= Error term".

Table 4.7 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.965 a	.632	.632	.356

Source: Author's computation, 2015

a. Predictors: (Constant), The current statutory retirement age is good for Kwara State Civil Service.

The R –square value as depicted in table 4.7 is 0.632 (63.2%) and the adjusted R-Square is 0.632 (63.2%). This indicates that the variability changes in the level of job creation opportunities could be accounted for by approximately 63.2% of factors related to statutory retirement age. This posited that statutory retirement age has significant effect on job creation opportunities.

DISCUSSIONS OF FINDINGS

The findings established that the currently adopted statutory retirement age is not good for Kwara state civil service because it does not allow for more than proportionate employment of youths.The R –square value as depicted in Table 4.1 is 0. 843 (84.3%) and the adjusted R-Square is 0.843 (84.3%). This indicates that the variability changes in the number of youth unemployment could be accounted for by approximately 84.3% of issues related to statutory retirement age. This established that statutory retirement age has significant impact on youth unemployment.

Findings also revealed that statutory retirement age has significant effect on job creation opportunities. Government can create job if it can determined the number of civil servants that are due for retirement. The R –square value as depicted in Table 4.5 is 0.632 (63.2%) and the adjusted R-Square is 0.632 (63.2%). This indicates that the variability changes in the level of job creation opportunities could be accounted for by approximately 63.2% of factors related to statutory retirement age.

CONCLUSION

The specific objective of this research work is to examine the impact of the statutory retirement age on youth unemployment. The current policy of 35 years in service or 60 years of age or whichever is earlier has contributed hugely to unemployment problems in Kwarastate. The second objective is to examine the effect of statutory retirement age on job creation opportunities. Statutory retirement age can be used to create job opportunities.

RECOMMENDATIONS

Federal and State governments should review downward the current policy of SRA and implement strictly with a view to reducing the growing incident of youth unemployment. This can be achieved through the acquisition of software packages such as bambooHR, clearcompany, icims, Ascentis, KRONOS, Sage HRMS and others which will keep records of all civil servants in the employment of Kwara State Government. These software are users friendly and with adequate and continuous training of KWCSC personnel, fraudulent and material alteration will be difficult to alter. This will arrest the criminal alterations of material records common with civil servants.

Government should also establish a data bank where all unemployed youth in the state can be registered. Public enlightenment should be embarked upon to encourage unemployed persons to register for job opportunities with the government. This will give the government a fair knowledge, if not actual figure of youth unemployed.

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