

# GLOBAL JOURNAL

OF MANAGEMENT AND BUSINESS RESEARCH: C

## Finance

Energy Prices & Financial Performance

Effect of Ethical & Professional Values

Highlights

Three Nationalized Commercial Banks

Empirical Analysis of Capital Structure

Discovering Thoughts, Inventing Future



# GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C FINANCE

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FINANCE

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VOLUME 19 ISSUE 3 (VER. 1.0)

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 19 Issue 3 Version 1.0 Year 2019

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# Effect of Ethical and Professional Values on the Operations of Deposit Money Banks in Nigeria

By Tajudeen T. Lawal, Rufus Y. Adeyemi & Dauda A. Morakinyo

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**Abstract-** This study examined the effect of ethical and professional values based on the socio-economic factors affecting banking operations of deposit money banks in Nigeria. Prior studies have not dwelt or investigated extensively on ethical and professional practices by banks especially in developing world like Nigeria. Hence, there is the need to evaluate the effectiveness, enforcement and compliance by banks of the codes of ethics and professionalism for the banking industry in Nigeria. Mixed research design method employed with the aid of primary data collected through close ended structured questionnaire from 200 respondents purposively selected from the commercial deposit money banks and three core regulatory institutions for the industry. Both descriptive and inferential statistics were employed to analyze the data and the hypothesis tested with Pw and Kendall's Tau Correlation Coefficients. Findings revealed that the level of ethical and professional competence have not improved as expected.

**Keywords:** code of ethics, professional value, enforcement mechanism, business environment.

**GJMBR-C Classification:** JEL Code: E51



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# Effect of Ethical and Professional Values on the Operations of Deposit Money Banks in Nigeria

Tajudeen T. Lawal <sup>α</sup>, Rufus Y. Adeyemi <sup>σ</sup> & Dauda A. Morakinyo <sup>ρ</sup>

**Abstract-** This study examined the effect of ethical and professional values based on the socio-economic factors affecting banking operations of deposit money banks in Nigeria. Prior studies have not dwelt or investigated extensively on ethical and professional practices by banks especially in developing world like Nigeria. Hence, there is the need to evaluate the effectiveness, enforcement and compliance by banks of the codes of ethics and professionalism for the banking industry in Nigeria. Mixed research design method employed with the aid of primary data collected through close ended structured questionnaire from 200 respondents purposively selected from the commercial deposit money banks and three core regulatory institutions for the industry. Both descriptive and inferential statistics were employed to analyze the data and the hypothesis tested with Pw and Kendall's Tau Correlation Coefficients. Findings revealed that the level of ethical and professional competence have not improved as expected. Furthermore, a weak correlation was established between the socio-economic factors and the level of ethical and professional banking practice in the industry with -0.3135 and -0.2510. It was concluded by the study that commercial banks in Nigeria have not improved significantly on adherence to the ethical and professional codes of conducts of the profession. Compliance to shared ethical and professional values have not been adequate among the banks. The study revealed that poor socio-economic business environment, the obsolete code of ethics, ineffective communication system, poor employment methods and inadequate training were responsible for the poor ethical and moral standard. It was suggested that adequate training facilities and funding must be considered by banks as a means of enhancing ethical and professional values in the Nigerian banking system and in deed to other businesses.

**Keywords:** code of ethics, professional value, enforcement mechanism, business environment.

## 1. INTRODUCTION

Banking business as a form of business organization are globally accepted as the bedrock of any nation's economy and thereby serve as the wheel of economic growth and development in both developed and underdeveloped economies of the world (Ifionu et.al. 2016; Akhtar et. al. 2010 & Auta 2010). Corroborating this assertion,

Ebenezer et. al. (2010) submitted that banks are highly preserved, regulated and monitored worldwide. Banking is an age long profession and its origins can be traced to the London goldsmiths of the 17<sup>th</sup> century which began the acceptance of deposits of coin and other valuables, royal mint from merchants and wealthy people alike. (Doyle & Kelly, 1981). Section 61 of the Banks and Other Financial Institutions Act, 1991 defined banking business in Nigeria extensively as the business of receiving deposit on current, savings or other accounts, paying or collecting cheques drawn or paid in by customers, provision of finance et cetera under the auspices of the Governor of the Central Bank of Nigeria as may be designated as banking business. As a dynamic business, an allowance for reform in line with economic realities of Nigeria was provided. Banking business was first introduced into the Nigerian economy in 1892 through African Banking Corporation and Bank of British West Africa in 1894 and this can be grouped into banking phrases as a way of classifying them into distinct banking developmental stages (Okonkwo, 1991; Goldface-Irokalibe, 2010).

Banking business needs to be properly and continuously regulated due to the pivotal roles it is expected to play in the economy, therefore there is the need to constantly review and reform its procedures, processes, methods, values, peoples' orientation, attitude and behaviors towards banking service both at the providers' end (staff, investors) and the receivers' end (customers and society). Against the backdrop of financial regulation and supervision, this can be associated with moral hazard, government safety net arrangements that are designed to protect the banking and financial system (Barbara et.al. 2006). High professional and ethical standards are critical to the continued existence of the banking sector since they trade on money, which they held in trust for the depositors (fiduciary function). Auta et.al. 2010 submitted that banks engaged in financial intermediary role in any economy all over the world.

Ethics in banking business is to direct businessmen and women in banking to abide by certain codes of conducts that can facilitate and increase public services and confidence in the delivery of banking services as well as increase its utility to all its stakeholders. Odozi (2007) in defining "ethics as the rules or principles of appropriate behavior or conduct for bankers. More specifically, it relates to principles of

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morality and encompasses doing what is good and right, even when that will bring us some pain". Adelabu (2008) expatiated that ethics is the study of moral principles, beliefs, attitudes and how people should conduct or behave in social interactions. Therefore, personal, business and professional ethics have consciously or/and unconsciously evolved over time in order to regulate, control and improve banking service delivery professionally. Professional ethics involve the standards of competence and practice or code of conduct expected of the professionals or trade group or association, both written and unwritten. However when ethics and professionalism are combined as professional ethics, it involves a nexus of written and unwritten norms and best practices such as honesty, integrity, competence, loyalty transparency, accountability et cetera. (Odozi, 2007). Ethical and professional standard must be set by the individual employee, group organization and professional bodies so as to prevent human excesses in terms of greed, lust for power, fraud and other malpractices usually exhibited by people (bankers).

Adewumi (2002) reported that ethical standard is the level of behavior or conduct that is considered or adjudged morally right and acceptable by people. It is a just and fair conducts which goes beyond observing the normal laws, rules and regulations but includes the intrinsic display of high level of discipline, intelligence, perseverance, honesty, transparency, fairness and morals. It includes a set of generally acceptable and practice standards of ethical and moral issues involving dilemmas and conflict of interests from the individuals, groups and organizations alike. Adewunmi (2002) therefore remarked that, the fluidity of human behavior in response to environmental challenges has made ethics and professionalism a dynamic process that requires academic studies. Ethics is proactive since it focuses on doing "good" while morality emphasizes not doing harm or avoiding harm to others (Fisher & Lovell 2003). Honesty can also be linked with trust and confidence, strong belief in doing good always, reliability and belief in doing the right thing (ethics).

Confidence is confiding in or telling ones secret or person who is trusted with private affairs of somebody, belief in oneself or what is said or done on behalf of others. Bank relies on public confidence which is the pivot and essence upon which financial intermediation revolves (Lawal, 2011). This journal paper has contributed to knowledge through its use of statistical and empirical analysis in contributing to the existing body of knowledge generally. The study is systematically divided into five sections: introduction incorporating statement of problem and study's literature review, research methodology, results and discussion while conclusion and recommendation makes the fifth section accordingly.

## II. STATEMENT OF THE PROBLEM

The ethical difficulty that arise from the traits of honesty, good faith, trust and confidentiality of bankers borders on how to balance their behaviors with these traits while conducting banking transactions or during banker customer relationship especially marketing, deposit collection, credit administration, settlement of payment (cheque clearing) and account opening formalities. Omokhuale (2002) stated that unethical conduct manifests itself in various ways including violation of banking laws and contravention of professional ethics, insider abuses, fraudulent dealings (malpractices) mismanagement, poor credit documentation and perfection of security documents, granting of huge loans to the executives and their surrogates without due process, boardroom greed of paying inexplicable whooping bonuses to members and their cronies, et cetera. Greed, among other reasons was identified as the causative agent for high incidence of fraud and other unprofessional conduct in the Nigerian banking industry.

Nwankwo (2001) had earlier corroborated that the "crisis of confidence in the Nigerian banking sector manifested itself in technically insolvent and distressed institutions, bank failures, large portfolio of non-performing credits, several liquidity problems, gross mismanagement, mismatch of the supervisory and abuse of executive capacity. All these problems relate to the ethical and professional standards as well as the enforcement mechanisms put in place by the industry". Some of the casual factors to the ethical and professional infractions may be due to greed of the banking personnel, poor recruitment policy, poor corporate governance, unsuitable and unqualified candidates are employed to work at some technical departments like credit risk management, corporate finance, inspection among others. Graduates from non-banking and finance disciplines, they even employ long unemployed relations or in-laws of questionable characters who usually contaminate others (Kolawole, 2004).

According to Odozi (2007) and Lawal (2014), the summary of the common problems that are likely to promote or determine ethical and professional values for the Nigerian banking practices include among others: the recent ICT explosion ravaging the industry and the effect of e-banking services and many other unethical and professional abuses in the banking system. Inwalombe (2018) had observed that the ATMs of the banks failed their customers mostly due to their inefficient performance ranging from insufficient dispensing of funds, long queues occasioned by malfunctioning and the inadequate limit of maximum amount withdraw able per transaction. Additionally, in an attempt to showcase how important the issue of security in banking operation is, Adeduntan (2018) submitted

that the CBN has mandated all banks to create security operation centers as well as evolving the strategy of right people with right attitude, right technology, right process, and right governance for the Nigerian financial system.

All the aforementioned infractions are ethically and professionally related and attributable to the country's banking architecture, socio-economic infrastructure, bankers' behavior generally and specifically technology with use of the ATMs to cope with the growing demand of the customers and the susceptibility of the machines to systems failure especially in the urban commercial centers. It is therefore imperative to conduct a research to examine and seek answers to the above and many other related questions.

#### a) *Objective of the study*

The objective of the paper is to examine the socio-economic factors that determines ethical and professional practice and values for banks in Nigeria.

#### b) *Research Hypothesis Statement*

$H_{01}$ : There is no significant effect of socio-economic factors on the level of ethical and professional banking practice and values in Nigeria.

### III. LITERATURE REVIEW

#### a) *Conceptual Framework*

Banking business remain one of the businesses that anchors the development of any economy in the world, hence it occupies a pivotal position in either developed or underdeveloped economy. Banking business is defined by Section 61 of Banks and Other Financial Institutions Act (No.25) 1991 (as amended). Doyle and Kelly (1981), stated that "banking operation starts with opening of account(s), running of the account(s) and subsequent termination of the conceptual relationship between the customer and bank". Banking business acts as lubricant to other businesses or sectors of the economy hence, it is strategically positioned to provide the much needed financial impetus to them through financial intermediation process. It includes mobilizing funds from the surplus unit to the deficit unit. Kolawole (2004) submitted that to mobilize funds from other people, ethical and professional controls are usually expected of banks for effective and functional banking services.

##### i. *Concepts of Business Ethics and its Evolution*

Ethics has been variously defined by philosophers/scholars as one of the core branches of moral philosophy and as a fundamental part of the critical examination of life which dates back to pre-Socratic times and as old as the history of rational reflective thought. Ethics is defined or viewed as a normative science of human conduct that differs from the physical sciences. It deals with the standard or

principle of right or wrong, good or bad behavior. It represents an intellectual enterprise, a rational and intellectual inquiry into the language of morals and human actions or affairs for knowledge seeking as well as attempting a systematic study of human conduct (Oruka, 2007). Oke and Esikot (1999) stated that ethics is interested in only human behavior or conduct where one is able to make a choice between alternative courses of action rather than another (conflict of interest and ethical dilemma).

Ethics, derived from the Greek word "ethos" meaning distinctive moral ideas and attitudes of a people that can be regarded as "custom" or "character" while "morals" comes from the Latin word "mores" meaning custom or manner that's concerned with right or wrong, good or bad. It is a set of principles held by an individual or group or the discipline which studies those ethical principles. Duska and Duska (2006) defined ethics by stating its four basic meanings as:

1. The discipline dealing with what is good and bad and with moral duty and obligation.
2. A set of moral principles or values.
3. A theory or system of moral values; and
4. The principles of conduct governing an individual or group.

The Chicago Journals of moral, political and legal philosophy in 2010 defined ethics as a system of moral principles, a culture and it is known as moral philosophy which seeks to address questions about morality per se. Okoduwa (2007) also defined ethics as moral principles that control or influences a person's behavior with synonyms for the word ethics which include principles, standards, values, morals, ideas, beliefs, codes etc. It gives an insight into the nature of ethics which may be defined as a term standing for honesty, integrity, respect, compassion, fairness, loyalty, love, dependability, courage and good citizenship. Suffice it to say that ethics has its roots in the good virtues of ideal/ standard behavior to be practiced/ exhibited by everybody all the time. Ajayi (2007) also posited that ethics is the study of the general nature of morals and of specific moral choices; moral philosophy and the rules or standards governing the conduct of the members of a profession or an organization. Ethics may further be explained to mean an inquiry into the nature and grounds of morality which is taken to mean moral judgments, standards and rules of conduct.

Ekundayo (1999), however submitted that ethics means the norms and morals that guide the practice of an occupation to ensure just and fair discharge of duties and avoidance of abuse of privilege. Ethics was also defined by Esezobor (2010) as "relating to the rules and ethos that guard conduct and relationship in a given calling. Such rules, which hinge on morality, could be written or implied from practice". Ajayi (2007) submitted that ethics are moral codes, principles and

conventionalities inherently implied in the practice of any organization, community or profession. It also comprise of the standards expected of people at the individual, corporate or community levels. Personal ethics involves personal beliefs, attitudes, morals, standards of behavior while business ethics is a form of applied ethics that examines ethical principles and moral or ethical problem arising in the business environment.

Business ethics can be both a normative and a descriptive discipline for corporate practices or as an academic discipline or a career specialization. The field is primarily normative in academia and descriptive approaches are employed to it. Professional ethics however is the combination of ethics and professionalism for standard norms and best practices that anchors honesty, integrity, competence, transparency, accountability among others (Lawal, 2011). As an applied ethics, it's simply the practical application of ethical principles for the purpose of resolving ethical problems in the different fields of human endeavors. It connects with ethical issues that arise and be begging for solutions as they come e.g. medical ethics, Business ethics, environmental and educational ethics, ethics of banking etc. business ethics is the ethics governing the maintenance of business as a profession consisting in sets of restraints mutually agreed upon by practitioners and is an etiquette such as the Nigeria Standards Organization (NSO), Central Bank of Nigeria(CBN) and Chartered Institute of Bankers of Nigeria (CIBN).

Adesiyiyan (1983) had earlier suggested some of the factors that can influence the degree of the effectiveness of an ethical managerial decision: information, timeliness, capability and competency of the decision maker, organizational culture and the external environmental conditions available. According to Odozi (2007) and Lawal (2014), both defined ethical dilemma as "a situation in which all available courses of action appear to include morally-undesirable as well as morally desirable aspects in a given situation". It also involve situations when a difficulty of choice or balancing of choice must be made amongst available courses of action.

#### ii. *Concepts of Profession and Professionalism in banking*

Okafor (2007) defined profession as an occupation which demands a highly specialized knowledge and skill acquired at least in part of some form of examination either at a university or some other institutions and conveying to the persons who possess them considerable authority in relation to clients, such authority which is carefully maintained by guild-like associations of practitioners which lay down rules of entry, training and behavior in relation to the public and watch over their professional status. They further

clarified that profession needs to meet the following FIVE basic requirements:

- i. The acquisition of knowledge and skills which can be through some system of education and training and technical competence,
- ii. The establishment of a set of recognized ethical norms shared and applied by the members of the profession. Usually, these norms defined what proper or improper behavior is in professional service for clients,
- iii. The institutionalization of self-control and discipline by and for the members where members of the profession self-regulate themselves, by strictly complying with the profession's behavioral norms while serving their customers.
- iv. The concept of service and social interest whereby the professional. Put in their service at the disposal of clients at an agreed remuneration. Real professional practitioners subordinates their own self-interest to those of their customers'; and
- v. A scenario where there is an effective community or environmental enforcement of their professional codes as well as the appropriate sanctions for noncompliance.

Ekundayo (1999) defined professionalism as the art of developing and using skills relevant for the practice of an occupation or vocation for mutual benefits of provider and receiver of services. It is an efficient practice of the theories and training in an occupation or vocation. Esezobor (2010) however defined professionalism as the standard of competence and technical skills expected in an occupation. Ali (2005) submitted that it can only be expected in an occupation and can only be achieved by conscious development of skill, attitude and knowledge of skill, attitude and knowledge through the process of training.

#### b) *Theoretical Framework*

Duska and Duska (2006) defined an ethical theory as "prescribing those principles that provide the overriding justifying reason for pursuing any course of action". It therefore follows that the nature of ethical theories arrived at will provide the ultimate principle to solve dilemmas either at home, workplace or in any social organization. The consideration of what is good for all the people affected by our decisions, priority for fairness, honesty and doing more good than harm to others is paramount. However, whether we do good or not, do not matter to some people but the consequences of our behavior matters to some people. Following theoretical foundations have been provided for the research for relevance as indicated below:

##### i. *Agency Theory*

The origin of Agency theory could be traced to Ross (1973) on economic theory of Agency while Mitnick (2006) concentrated on institutional theory



aspect of Agency. Jensen and Meckling (1976) equally remains one of the proponents of this agency. The theory was further developed by Grossman et al. (1980) with the justification that on the basis of government goals of safety and protection. Agency as a theory is used to describe and explain the relationships especially between the principal (owners) and the agents (managers) of businesses. Agency relationships occur when the principal hire the agent to perform a service on the principal's behalf, as principals commonly delegate decision-making authority to the agents. Jensen and Meckling (1976), defined agency theory as a contractual agreement under which one or more persons (principal) engage another (agent) person to perform certain service(s) on their behalf including delegation of some decision making authority to the agent. Agency theory therefore provides the means to address relationship between two or more contractual and/ or implied parties which may erupt problems. Some of the problems include adverse selection, moral hazard and agency costs.

This is however different from the position of Williamson (1985). Mitnick (1973), states that agency problem are in three ways as principal's problem, agents problem and policing/monitoring mechanisms and incentives. Agency problem arise as a result of conflict of interest and information asymmetry between the principal and the agent. According to Umar (2015), the theory's major aim is that government agencies must be present to supervise and check the excesses of financial institutions for the financial system to be safe, protected and sound. He observe that the theory focusses on the problems of hidden actions and information (information asymmetry) from both parties but usually from the agents to the principal. Undoubtedly, agency theory is based on the incompleteness of contract and the separation of ownership (shareholders) and the control (management), which is the main characteristic of firms or institutions nowadays. Agency problem arise due to inefficiencies in resource allocation which is limited in supply and incomplete information (Mitnick, 1973).

Agency problem can be minimized through contract designing so as to be competitive in line with market dictates. This measure may go a long way at optimizing the resources of the firm especially to achieve cost/operational efficiency (Jensen & Meckling, 1976). The two are related to asymmetric information (such as adverse selection regarded as hidden information and moral hazard referred to as hidden action). Adverse selection occurs where asymmetric information exist before the transaction (contract) leading to inefficient allocation of resources. Moral hazard describes an agency problem which exists after a transaction is executed, from where inefficient resource allocation would have been made. Both terms have their linkages to the insurance industry as a

constituent member of good financial system where banking and non-banking institutions are present (Ross, 1973).

According to Jensen (2004), a well-designed pay packages can mitigate the agency problems between managers and shareholders and well-designed corporate policies and processes can mitigate agency problems between members of the board and shareholders. They both focus on different parties striving to achieve same corporate objectives of the firm. The assumption that all directors are greedy may not hold always but it is better to assume that a small minority of them are responsibly greedy in business practice. The relevance of this theory rests on the fact that adequate information must pervade within the system in order to avoid asymmetric information which is counterproductive to high ethical and professional standard.

#### ii. *Utilitarian Theory*

Another relevant theory to the study is the ethical philosophical foundation of utilitarianism of Jeremy Bentham and Mill which placed more emphasis on our feelings, especially the feelings of pleasure and pain, as the guide for ethics. It is called happiness which has the intrinsic value of pleasure and freedom from pain (Oke & Esikot, 1999). The theory states that whatever gives us the greatest pleasure and the least amount of pain is the standard for morally good behavior. "Good" from the moral view establishes a standard by means of which moral judgments can be pronounced. Mill and Oruka (2007) advocated higher pleasure (physical and intellectual) and rich in enjoyments, or the explanation of the rightness of human actions both in terms of quality and quantity as evaluation of consequences.

Utilitarianism which is an ethical empiricist theory known as the "goods perspective" says morality is thought to be the pursuit of a goal or an end. It holds that the supreme moral standard is both what persons aim at when they act, and the reference for evaluating their actions as "good" which is termed generally as "happiness". It is characterized as a quantitative and reductionist approach to ethics. Happiness according to Oke and Esikot (1999) "can be regarded as a normal standard upon which a moral law and an ethical theory can be built, a point of reference from which conduct can be judged to be good or bad, right or wrong, just or unjust.

Mill and Bentham who are the classical utilitarianism influential contributors stated that utilitarianism is a theory in normative ethics holding that proper course of action is the one that maximizes utility, usually defined as maximizing total benefit and reducing suffering or the negatives. It is now generally taken to be a form of "consequentialism". The theory believes in the principle of utility that actions are right in proportion as



they tend to promote greatest happiness. Happiness here means “not the agent’s own greatest happiness but the greatest amount of happiness altogether,” while utility has to do with the usefulness or value of a thing, a product or service, a policy. Utility is defined as the standard for measuring the propriety of our conduct or approach and the capacity to meet the needs and aspirations of the people (customers). That is, do that action which will bring about the greatest good for the greatest number of people and that is why it is called “consequentialist” form of ethical theory. It differs significantly from other forms like egoism since it focuses on all concerned including self. According to Oruka (2007), ethical theories are verifiable or disproved by the process of objective reasoning which could be either deductive or inductive reasoning.

Consequently, an ethical banker must focus on the happiness of the customer through the application of a banking term known as “Know your Customer” (KYC). It is a term which holds its principles on the total satisfaction of the customer by building a robust banker customer relationship through good business advisory services, account and financial services/credit, other ancillary banking services which has the customer’s satisfaction as the center point or pivot of the banking relationship. Thus in practice, the relevance of this theory has been built around the concept of “customer relationship management” with emphasis on total customer satisfaction.

#### IV. RESEARCH METHODOLOGY

This study specifically adopted the mixed research method by making use of questionnaire and subjecting same to inferential statistical analysis through Pw and Ktau’s correlation coefficients. This study employed the five step approach of data validation,

coding, data entry, error detection and data tabulation to have a more robust result. The study’s population comprise of 21 deposit money banks as at December, 2016 and three regulatory institutions in Nigeria. Data collection was from primary source through the instrument of questionnaire. 187 questionnaires returned from the 200 questionnaires distributed representing 93% response rate. According to Asika (2002), questionnaire provides a platform on which social variables could be measured with impact on service users and providers such as bank.

#### V. RESULTS AND DISCUSSION

The study was carried out in the southwestern part of Nigeria as the financial hub of Nigeria in terms of bank presence and branches (CBN 2012). The study examined the socio-economic factors that determines ethical and professional banking practice in Nigeria. The results as revealed through the correlation coefficients indicated and confirmed that socio-economic factors influence ethical and professional performance of banks. The result showed weak negative correlation coefficients of -0.3135 for the extent of working hours that can increase staff productivity and weak negative correlation of -0.1250 for the general conditions of service, recreational and sporting activities by bankers. Thus, this suggests that the higher the social economic factors, the lower its effect on the ethical and professional values in the banking system. The implication of this is that the socio-economic status of bankers needs to improve since these factors have statistical significance to higher productivity and profitability of banks. Summary of correlation coefficient and K tau correlation tables 4.1 and 4.2 are shown below:

*Table 4.1: Summary of Correlation Coefficients*

Variable	Obs	Mean	Std, dev.	Min	Max
VI	187	94	54.1264	1	187
Socioec	187	4.272727	1.055174	3	5
Lwh	187	1.989305	1.307502	1	5
Recsp	187	3.304813	1.409693	1	5
Cons	187	3.882353	1.386207	1	5
Bcha	187	4.128342	1.023697	1	5
Itech	187	3.748663	1.412668	1	5

\*ktau: (obs = 187)

From table 4.1 above, it has been revealed that the degree of dispersion and variation relative to the mean and average distribution of the population shows a higher degree of variability indicating that the data is fit with standard deviation of 1.05 and mean of 4.27. The sampled banks socio-economic variables are spread across the country and not enough for their adequate employment for the discharge of functional banking responsibilities required of today’s banking system.

Table 4.2: Pw Correlation Coefficients

Variable	Socioec	Lwh	Recsp	Cons	Bcha	ltech
Socioec	1.0000					
Lwh	-0.3135	1.0000				
Recsp	0.2510	-0.2812	1.0000			
Cons	-0.1250	0.1891	-0.1631	1.0000		
Bcha	0.0819	0.0332	-0.0459	-0.0386	1.0000	
ltech	0.0138	-0.0102	0.0846	0.01150	0.0113	1.0000

\* $\kappa$ : (Obs = 187) \*Socioec = Socioeconomic, \*Lwh = length of working hours, \*Recsp = recreation & sporting facilities, \*Cons = conditions of service, \*Bcha = bank charges, \*ltech = information technology.

The table 4.2 above depicts that there was weak negative correlation of socio-economic variables to the length of long working hours and poor conditions of service for an efficient banking delivery in Nigeria (-0.3135 & -0.2510). The socioeconomic factors present in the Nigerian system are grossly inadequate to capture the pace of both technological, socioeconomic, financial/banking development as at now. The issue of cybercrime, security threats and poor communication system pervading the entire financial landscape is worrisome and negatively affecting efficient banking services in Nigeria.

## VI. CONCLUSION AND RECOMMENDATION

Based on the findings from this study, it was concluded that banks as a business unit have not improved their ethical and professional norms and values through flagrant disobedience to banking rules, laws and regulation. Thus, a lot of professional abuses are exhibited as regards operational procedures, poor corporate governance and poor asset quality, all revolving on banker customer relationship among others. Government through the Central bank of Nigeria and other regulatory agencies have not been adequate in terms of monitoring and examination of banks generally. It was further revealed that the enforcement mechanism of the regulatory institutions had not been up to standard especially in the area of e-banking. The conclusion by the study is that deposit money banks in Nigeria have not improved significantly on adherence to the ethical and professional codes of conducts of the profession, thus affecting their efficient performance.

Compliance to shared ethical and professional values that have not been adequate among the banks. Government needs to improve the operational environment of the financial system in terms of security, power/electricity provision, road networks and other socio-infrastructure facilities for the country to aid ease of doing business in Nigeria as presently being championed. The present training facilities of the banks should be expanded to the Universities and Polytechnics to accommodate adequate training on ethical and moral standard that may influence bankers' behavior in the daily discharge of their duties. This will go a long way to attract foreign direct investment to the

country and essentially improve the general economy. Further research could be embarked on the ethical and professional compliance of rules, code of ethics specifically from the corporate governance/directors' end for the banks and other business sectors in Nigeria.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 19 Issue 3 Version 1.0 Year 2019

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# An Empirical Analysis of Capital Structure and Firm's Financial Performance in a Developing Country

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**Keywords:** capital structure; firm performance; return on equity; return on asset; earning per share.

**GJMBR-C Classification:** JEL Code: F65



*Strictly as per the compliance and regulations of:*





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## I. INTRODUCTION

Capital structure typically consists of debt and equity for a firm, whether, for a big corporation their structure extended to other components such as preferred share and retained earnings (Van Horne and Wachowicz, 1995). For the newly starting company, they don't have retained earnings; therefore, retained earning only applicable for the existing firm. The Capital structure can significantly impact on the performance of a company and which determines the distribution of operating cash flows between shareholders and debt holders. If company has higher debt rather than equity that the company doesn't make higher income because for the higher debt company need to pay higher interest which create lower profit, on the contrary for the equity company no need to pay interest but they provide dividend to the shareholder if the company can make a good profit they can pay high dividend. So, a company needs to fix a balance between debt and equity (Weston and Brigham, 1979). Firms internal finance is equity, on the other hand,

external finance is debt and majority firm use the combination of debt and equity (Nassar, S., 2016).

Modigliani and Miller first talked about the capital structure of a firm they stated that the capital structure is the combination of equity and debt, which the company uses to form their capital structure. First, they find out the impact of capital structure how could that impact on firm value creation later they modified because first time they used some restricted assumption (1963).

Many studies we found that they tried to get the impact of capital structure how does impact on firm performance in Bangladesh perspective (Amin and Hossain, 2013, Alom K, 2013, Hasan et al., 2014, Amin, S. and Jamil, T., 2015), no one try to find the relation between capital structure and profitability in IT sector. This research investigates only Dhaka stock market enlisted IT firm's capital structure and their impact on profitability.

The paper is organized as follow; the next chapter we discuss relevant past research theoretically and their empirical evidence based on capital structure, then the following chapter discusses on Method and data collection, and the last chapter covered the discussion on empirical findings and conclusion.

## II. LITERATURE REVIEW

Romanian manufacturing companies listed in Bucharest Stock Exchange were analyzed empirically to show the evident of capital structure influence on firm performance, and this study was conducted cross-sectional regressions on capital structure indicators as long and short-term debt, optimal debt and equity ratio with firm's financial indicators as return on assets and return on equity. Result was indicated from the empirical analysis that due to missing data of short-term debt those regression results are insignificant statically but it was visible that the financial performance was higher when manufacturing companies avoid debt rather than equity (Vătavu, 2015). Non-financial registered firms form Karachi Stock Exchange were analyzed to explore the capital structure impact on financial performance, this research used firm performance variables as return on equity, return on asset and return on sales and the capital structure variables are equity ratio, long term

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debt ratio and total debt ratio. After conducted the regression analysis this research showed in the fixed effect model that there is a mixed relationship between firm performance and capital structure are exist. This empirical study illustrates that firm performance as a return on asset has significant and positive impact from capital structure, when firm's performance as a return on equity it showed negative impact form capital structure variables equity and long-term debt but positive impact form capital structure variable debt to asset ratio. Another financial performance as return on sales indicate that debt to asset and equity ratio negatively impact on it but at the same time long term debt impact positively, through this empirical analysis it was evident that the capital structure has impact on firm's financial performance (Javed, Younas, and Imran, 2014). Research on different Chinese firms showed there is a negative impact on financial performance of firm from capital structure (Huang and Song, 2006). There is a negative impact form capital structure were found in firm's financial performance (King and Santor, 2008). Research on Oman firms empirically explore that the capital structure negatively impact on firm performance and which was highly significant (Rao, Yahyee and Syed, 2007). Bursa Malaysia Stock exchange listed 237 companies from different sectors in between year 1995 to 2011 were analyzed to investigate the relationship between firm performance and capital structure, this research uses four financial performances and five capital structure measures and also use a control variable, research finally presented a mixed relationship between firm performance and capital structure (Salim and Yadav, 2012). Dhaka Stock Exchange listed non-financial company for the period of 2008 to 2011 was empirically analyzed and estimated the impact of capital structure variables on firm performance and capital structure were recognized in this study by debt, current debt, debt to equity, proprietary of equity ratio and current assets proprietors funds Ratio, and this study showed debt, debt to equity and proprietary of equity have significant negative impact on firm performance as return on asset, return on sales (Rouf and Abdur, 2015). Research by using panel data analysis for fifteen year's data of seven listed cement companies in Bangladesh evident that the significant positive influence on cement firm's performance as return on asset and return on equity were existed through capital structure variable short-term debt to asset ratio (Amin and Jamil, 2015). Study on 40 Dhaka Stock Exchange listed company attempts to evident that capital structure has an effect on profitability and this study used POLS, fixed and random effects model to confirm the effect on profitability and it was also used two control variables to identify those influences on capital structure, and it was proved that firm's size and liquidity have statically negative influence on capital

structure (Anowar, 2016). Another empirical study was conducted to support the theory of Modigliani & Miller (MM) though Modigliani & Miller (MM) arguments are still vague, this study was used data from Chittagong Stock Exchange and Dhaka Stock Exchange's listed companies form four most dominants sectors for the robustness of the analysis but this study couldn't empirically support the arguments of MM theory because the empirical findings were showed strong positive correlation between capital structure and firms performance (Chowdhury and Chowdhury, 2010). Another empirical study found that there is existent of deficiency of empirical research about capital structure and the performance of banks in Bangladesh and this research attempts to fill this gap by using twenty-two banks of Bangladesh and finally empirical findings evident through the pooled ordinary least square analysis that capital structure inversely affects bank financial performance (Siddik, Kabiraj and Joghee, 2017). Study on relation between firm's performance as ROE and Tobin's Q with capital structure that capital structure negatively impacts on firm's financial performance, and this study was supported by Pecking Order Theory (Hasan, Ahsan and Rahaman, 2014). Empirical Analysis was conducted on 50 non-financial quoted companies from Nigeria and used Pooled Ordinary Least Squares (OLS) model, Fixed Effect Model (FEM) and Random Effect Model (REM) for empirical findings and this study also found mixed relationship between capital structure and profitability of those companies (Salawu, 2009). A research was conducted to examined the capital structure impact on the firm performance through the Egyptian capital market listed sixty-four firm for the period of 1997–2005 and after analyzing variables this research didn't get any significant impact on the firm performance from capital structure decision as well as the relationship also too weak, and this study used multiple regression analysis to obtain this result (Ebaid, 2009). A single measure financial performance as ROA-Return on asset was used to identify the influence from capital structure for Pakistani textile companies and data were used from the period of 2004 to 2009 on 141 firms, this study applied the log-linear regression model, the empirical findings evident that the relationship is exist but the capital structure variable TDTA has negative impact on the performance ROA (Memon et al., 2012). Nonfinancial 174 Swedish companies were analyzed to measure the influence of capital structure variable on the firm performance and this study evidenced that the relationship is visible and the significance level is also strong enough to measure the negative influence (Gansuwan and Onel, 2012). Study of five different variables upon capital structure of listed Romanian constructions sector firms in the Bucharest Stock Exchange was conducted to identify the importance. A

panel data estimation was developed through using 20 companies and period selected between 2009 to 2011. This study adopted traditional explanatory variable, and these selected variables are profitability, company size, tangibility of assets, liquidity and asset turnover. Method was used for this study were OLS-Ordinary least square and FE-Fixed effect, simple and multiple linear regressions. For perceive the influence of traditional explanatory variable on the leverage of construction sector of Romania those methods were used. Finally, this study shows that construction sectors capital structure is negatively affected by profitability and liquidity ratios. Tangibility of the firms were negative for the dependent variable leverage as capital structure, solidification the findings of preceding empirical research's which claim that this indicator changes in reverse direction with the debt ratio of companies situated in developing countries. Alternatively, the firm size and its turnover of assets have a positive correlation with leverage. Another explanatory variable of this study was profitability and this explanatory variable has highest impact on the capital structure decisions than any other explanatory variable (Serghiescu and Vaidean, 2013). Economic growth may influence by the financial structure and this issue was addressed in a study, where three contending sight of capital structure review in the literature and those are bank, market and financial service-based view. Through applying panel and cross-section methods recent empirical studies observe their importance. This study followed the time-series data and method, along with the Dynamic Mixed Panel approach, fundamentally on developing countries. This research found significant cross-country heterogeneity in the changing aspects of economic growth and capital structure, and the study also conclude that the sample countries pooled data was invalid. Real per-capita output was significantly impacted by the capital structure of firms, which was in sharp difference to some of the findings. Panel estimations, in most cases, do not parallel to country specific estimations, and hence may extend incorrect implications for several countries of the panel. (Arestis and Luintel, 2004). Manufacturing companies from Nigerian Stock Exchange listed was analyzed to investigate the capital structure and firm performance relationship. Five years data were used to conduct the research and the periods were from 2005 to 2009. Multiple regression method was used in this research to analyze the impact, variables used in this research was Profit Margin (PM) and Return on Asset (ROA) as firm performance variable and dependent variable and other independent variables were Long term debts to Total assets (LTDTA), Short-term debts to Total assets (STDTA), and Total debt to Equity (TDE) and these were capital structure indicators. This research found Long term debts to Total assets and Short-term

debts to total assets has negative influence on the firm performance as Return on Asset and Profit Margin but the impact was not significant. Total debt to Equity and returns on asset were positively related but negatively with profit margin. Short term debt to total asset and return on assets were significantly related while long term debt to total asset and profit margin were significantly related. They concluded that that capital structure is not a main determinant of firm performance (Iorpev and kwanum, 2012).

### III. RESEARCH METHODOLOGY

- a) *Data and Variables*: This study was analyzed data from all IT firms listed in Dhaka Stock Exchange and the period of five years (2013 to 2017), and data were collected from the official website of Dhaka stock exchange and the annual financial statement of those IT firms.

Three financial performance indicator and four capital structure variables were selected to identify the capital structure impact on the financial performance. Return on asset (ROA), return on equity (ROE), earning per share (EPS) were chosen as the financial performance indicators, previous literature also studied to select those indicators (Siddik, Kabirajand Joghee2017., Hasan et al., 2014). Others function as capital structure variable were debt ratio (DR), equity ratio (ER), long-term debt ratio (LTDR), short-term debt ratio (STDR). Here, previous literature (Abor, J., 2005, Nassar, S., 2016, Rouf, D. and Abdur, M., 2015, Vätavu, S., 2015) was analyzed to determine the capital structure variable of this study, total debt out of total asset are considered as debt ratio, short term debt and long-term debt individually out of total asset are respectively considered as short-term debt ratio and long-debt ratio and equity ratio is calculated through total equity to total asset.

- b) *Empirical Model*: A primary empirical model (i) was developed to explore the capital structure impact on financial performance of IT sectors of Bangladesh, in this primary model in equation (i), the dependent variable was financial performance of IT firms (ITFP) and the independent variable was capital structure (CS) and there is an error term ( $\epsilon$ ). Where,  $\alpha$  was the intercept and which was unknown for all IT firms and t is time (t= 2013-2017).

$$ITFP_{c,t} = \alpha + \beta_1 CS_{c,t} + \epsilon_{c,t} \dots\dots (i)$$

Equation (ii), (iii), (iv) are extension form of primary empirical model (i), since we have considered three different financial performance (ROA), (ROE), (EPS), those were placed as dependent variable for firm c in time t at equation (ii), (iii), (iv) respectively.

$$ROA_{c,t} = \alpha + \beta_1 CS_{c,t}^{DR} + \beta_2 CS_{c,t}^{ER} + \beta_3 CS_{c,t}^{LTDR} + \beta_4 CS_{c,t}^{STDR} + \epsilon_{c,t} \dots \dots (ii)$$

$$ROE_{c,t} = \alpha + \beta_1 CS_{c,t}^{DR} + \beta_2 CS_{c,t}^{ER} + \beta_3 CS_{c,t}^{LTDR} + \beta_4 CS_{c,t}^{STDR} + \epsilon_{c,t} \dots \dots (iii)$$

$$EPS_{c,t} = \alpha + \beta_1 CS_{c,t}^{DR} + \beta_2 CS_{c,t}^{ER} + \beta_3 CS_{c,t}^{LTDR} + \beta_4 CS_{c,t}^{STDR} + \epsilon_{c,t} \dots \dots (iv)$$

Where  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$  and  $\beta_4$  respectively represent the regression coefficient of capital structure as independent variables of debt ratio (DR), equity ratio (ER), long-term debt ratio (LTDR), short-term debt ratio (STDR) for firm  $c$  in time  $t$ , and there is error term  $\epsilon_{c,t}$ . Ordinary Least square- OLS, FE- Fixed effect model and RE- Random effect model are used to test the static model, those models are exploring specifically the impact of variables toward the performance and those models are also assist to explain the different variables discretely.

c) *Descriptive statistics*: Below table1 present the descriptive statistics of the variables, where return

*Table 1: Descriptive statistics of variables*

	ROA	ROE	EPS	ER	DR	LTDR	STDR
Mean	0.0766	0.0941	1.5950	0.8074	0.1926	0.0377	0.1549
Std. Error	0.0047	0.0052	0.1439	0.0220	0.0220	0.0059	0.0210
Std. Deviation	0.026	0.028	0.788	0.120	0.120	0.032	0.115
Kurtosis	-1.047	0.011	0.475	-1.031	-1.031	0.097	-0.858
Skewness	0.172	0.925	1.306	-0.249	0.249	1.005	0.546
Minimum	0.0416	0.0615	0.69	0.5928	0.0181	0.0056	0.0049
Maximum	0.12732	0.1644	3.26	0.9819	0.4072	0.1242	0.3758
Count	30	30	30	30	30	30	30

d) *Correlations*: In table 2 correlation matrix between variable are presented, it's appeared that return on asset and return on equity are highly correlated, good correlation between return on equity and earnings per share are visible, debt ratio and equity ratio are highly and negatively correlated, debt ratio and short-term debt are strongly correlated, strong negative correlation between short term debt and equity also visible. Average relation between return

on asset in average 0.07 and in case of return on equity is 0.094, earning per share is in average 1.59, Average equity and debt indicate Bangladeshi IT firm's huge investment on asset are from shareholder's equity, and debt were use very less, and it's also appeared IT firms concentrate less on long-term debt in compare to short term debt. Among all variables std. error below 0.02 except earnings per share. And in case of std. deviation earning per share are also highly deviated. Kurtosis of return on asset, equity, debt and short-term debt shows distribution has lighter tails and flatter peak.

on asset and earnings per share, equity, debt and short-term debt (negative) are exist, weak and negative relation between long-term debt and return on asset also appeared, return on equity and equity are negative and with debt ratio are positive but weak relation exist, earning per share are negative and positively related with all variable but those relation are very weak.

*Table 2: Correlation matrix of variables*

	ROA	ROE	EPS	ER	DR	LTDR	STDR
ROA	1						
ROE	0.9126	1					
EPS	0.6049	0.7801	1				
ER	0.5634	0.1878	-0.154	1			
DR	-0.5634	-0.1878	0.154	-1	1		
LTDR	-0.1208	0.0509	-0.138	-0.298	0.2982	1	
STDR	-0.5560	-0.2111	0.200	-0.963	0.9632	0.0306	1

#### IV. EMPIRICAL FINDINGS

Table 3 presenting the result of multiple regression between capital structure and financial performance variables, in this table 3 a comparative

result analysis model was developed to illustrate the probable impact of capital structure variable toward the financial performance, this model consists through three different test results Ordinary Least Square-OLS, Fixed effect, Random Effect, this model will be used to identify

the impact in three phase, first phase capital structure (ROE), and third phase dependent variable as earning per share EPS).  
 impact on dependent variable as return on asset (ROA),  
 second phase dependent variable as return on equity

Table 3: Comparative Result Analysis

ROA Dependent Variable		OLS			FE			RE		
	Variable	$\beta$	t	P	$\beta$	t	P	$\beta$	z	P
	Intercept	0.06	9.31	0.109	.071	8.92	0.034	.068	5.83	0.086
	ER	0.121	3.6086	0.001**	.028	0.68	0.5	.057	1.52	0.128
	DR	-0.12	-3.608	0.001**	-.02	-0.68	0.504	-0.05	-1.5	0.12
	LTDR	-0.09	-0.644	0.52	.32	2.62	0.015	0.27	2.2	0.027
	STDR	-0.12	-3.53	0.0014**	-.06	-1.45	0.161	-0.07	-2.05	0.041
	R-Squared	0.3414			0.0554			0.1132		
	F Test	4.49			3.59			Wald Chi2(4) = 10.10		
	Adj R-sq	0.2655			Hausman Chi2 (4) = 4.32			Hausman Prob>Chi2= 0.2291		
ROE Dependent Variable		OLS			FE			RE		
	Variable	$\beta$	t	P	$\beta$	t	P	$\beta$	z	P
	Intercept	0.088	8.7774	0.0280*	0.10	8.01	0.002	0.096	5.61	0.003
	ER	0.0441	1.0120	0.3202	-0.08	-1.62	0.119	-0.047	-0.98	0.328
	DR	-0.04	-1.012	0.3202	0.087	1.62	0.11	0.04	0.98	0.32
	LTDR	0.04	0.2698	0.7893	0.57	3.91	0.001	0.48	3.39	0.001
	STDR	-0.052	-1.1429	0.2627	0.036	0.64	0.528	0.009	0.20	0.84
	R-Squared	0.0728			0.4694			0.4672		
	F Test	0.68			6.19			Wald Chi2(4) = 14.76		
	Adj R-sq	-0.0342			Hausman Chi2 (4) = 6.80			Hausman Prob>Chi2= 0.0785		
EPS Dependent Variable		OLS			FE			RE		
	Variable	$\beta$	t	P	$\beta$	t	P	$\beta$	z	P
	Intercept	1.728	5.209	0.005**	1.68	9.87	0.007	1.68	3.73	0.007
	ER	-1.005	-0.822	0.41	-1.21	-1.63	0.117	-1.20	-1.68	0.094
	DR	1.005	0.822	0.417	1.217	1.6	0.11	1.2	1.6	0.09
	LTDR	-3.346	-0.735	0.468	7.51	3.56	0.002	7.12	3.39	0.001
	STDR	1.367	1.078	0.290	0.55	0.7	0.49	0.60	0.79	0.428
	R-Squared	0.0662			0.4064			0.4062		
	F Test	0.61			4.79			Wald Chi2(4) = 13.28		
	Adj R-sq	-0.0415			Hausman Chi2 (4) = 2.47			Hausman Prob>Chi2= 0.480		

Note: Significance level 0.05\*, 0.01\*\* respectively.

In first phase of the model this study tried to identify the capital structure behavior towards return on asset (ROA), OLS test indicate equity ratio have impact on the return on asset significantly and positively and debt ratio negatively behave on the asset with high significance, In the meantime long term debt were statically insignificant towards the assets but short-term debt was statically significant towards the assets

and also have negative impact. Between fixed effect and random effect model Hausman test shows random effect were most appropriate to explain the impact where random effect imply only long term and short term were significantly influence the assets but equity and debt ratio were insignificant. In random effect it was visible that long term debt positively influences asset but short-term debt though negatively but slightly influences



the asset compare to long term debt. Though Hausman test didn't trigger the fixed effect model but comparative issue of the study it can be said that any variable of this model wasn't statically significant except the long-term debt. OLS model was the most perfect by comparing fixed and random effect model. Little similar coefficient from the equity, debt and short-term debt its visible that equity is more suitable for this sector and less long-term debt coefficient then short-term debt indicate BD IT sector have tend to go for more short-term debt rather than long term debt.

In second phase of the comparative result analysis dependent variable was return on equity (ROE), where this study found that impact of several capital structure variable was exist in all model but the level of significance was very lower or high insignificance were existing. OLS model shows all variables was totally insignificant towards the return on equity, apparently it appears there is no impact but another two-model fixed and random effect shows a common variable long-term debt were highly significant for equity. Hausman test indicate random effect model is perfect for the explanation so if we consider the random effect model then all variable of this model was highly insignificant except long-term debt and it has significant positive impact on the equity. Biggest coefficient of this variable implies that profitability as return on equity was increased when company goes long term debt.

Subsequently analyzing the third phase, this study found capital structure variable have insignificant impact toward the earning per share (EPS) in case of OLS test but fixed effect and random effect shows there is several influences. Hausman test shows the random effect model was more appropriate for explain the effect of capital structure variable rather than fixed effect model. Random effect shows several variables was significant but long-term debt was highly significant then equity and debt ratio, more specifically equity and debt were near trend significance and contain biggest coefficient both of them and equity had negative influence on the earning per share but at the same time debt had positive influence and if we concentrate on the long-term debt than the model shows very small coefficient with high value significance towards the earning per share.

Overall evaluation of this study found that capital structure has significant and positive or negative impact on return on asset (ROA), return on equity (ROE), earning per share (EPS) as financial performance. Capital structure behaves in different ways in different dependent variables. More specifically IT sector of Bangladesh is growing and newly developed, by nature of this sector and in the perspective of the country most of the IT company have tend to acquire investment from shareholders and owners mutually and very less from debt and most of the debt are from short term basis and

this fact also visible in whole comparative result analysis multiple regression model.

## V. RESEARCH DISCUSSION

This empirical research is supported by packing order theory, Modigliani and Miller Theory and trade off theory. Modigliani and Miller Theorem (1958) proposed that if other factors like tax, interest etc. persist unchanged then capital structure does not have any impact over firm performance. But in current world and in economy this theory is not possible to hold these entire factors are unchanged like tax and interest. So, this theory is not applicable for today's world. Modigliani and Miller (1963) also explained that if other things get involved, then debt over assets ratio would be one that means that all of the financing is due to debt and equity is not used at all. Now, from the empirical result of this study it can be evidently stated that the Modigliani and Miller Theorem (1963) is not applicable on the IT sector of Bangladesh because though other things get involved but primary source or higher percentage of financing of this sector are from equity than the debt.

Miller in 1977 presented Trade-off Theory that stated firms can only get highest revenues if their leverage is at optimum level. It is very problematic to choose optimal leverage level so there are always likelihoods of faults while making the best choice between debt financing and equity financing. Debt over assets has constructive influence over return on assets (Frank, M.Z. and Goyal, V.K., 2008). But Huang and Song (2006) conducted study on Chinese firms and found adverse relation between capital structure decision and firm performance. Ghosh (2007) came to know that leverage is inversely associated with profitability. (Rao et al., 2007) studied Oman companies and stated that capital structure is negatively and significantly connected to company's financial performance. From the study result of IT sector of Bangladesh, empirically it can be stated that the capital structure as debt are negatively related with financial performance as return on asset.

Pecking Order Theory was proposed by Myers and Majluf in 1984, this theory stated that firm first should use the internal financing rather than debt financing such as retained earnings and reserves, than firm should consider the debt financing after this last way of financing can be issuing preferred stock and common stock (Frank, M.Z. and Goyal, V.K., 2008). Pecking Order Theory is the best match for the IT sector of Bangladesh and it also visible from the thorough analysis of the capital formation of this sector.

## VI. CONCLUSION

This paper investigated the impact of capital structure on firm's financial performance, and has been



tried to get the relationship between capital structure and performance of IT firms in the Bangladesh perspective. In order to conduct the experiment Dhaka Stock Exchange enlisted IT Company's selected. In a nutshell, from the research it can say that capital structure has positively significant impact on return on asset (ROA). Moreover, debt and equity ratio uniformly impact on the ROA. So, this paper suggests maximizing shareholder wealth between equity and debt needs to make a perfect combination. On the contrary, other two dependent variable ROE and EPS as financial performance didn't have significant impact from capital structure.

*Contribution/Originality:* This study is focused on the Information Technology Industry in Bangladesh. Recently the IT industry is very flourishing in the Bangladesh market, but some IT company went for bankruptcy after a few years of their starting. Therefore, this research is conducted to investigate how capital structure impact on Firm's financial performance, moreover, it will contribute to developing and emerging economies finance literature.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 19 Issue 3 Version 1.0 Year 2019

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# Energy Prices and the Financial Performance of Different Industries in Pakistan

By Qamar Rasheed

*The University of Lahore*

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**Keywords:** panel data, fixed effect, random effect, energy prices, ratio analysis, PSX manufacturing industries.

**GJMBR-C Classification:** JEL Code: E44



*Strictly as per the compliance and regulations of:*



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## 1. INTRODUCTION

The energy prices play its role in the economy level, stock exchange level and corporate level. Sometimes energy prices affect each level with same degree of variation and sometimes differently. The stakeholders should know the impact of the increase and decrease in the energy price to reduce risk against their investment. In each free market buyer wants to pay little price and seller wants to disclose high prices to gain more and more.

Yan (2012) explored that energy and its prices take interest and concentration of each group worldwide. Oil price volatility occurs due to the limited supply of oil by international organizations, instability of oil production in OPEC, economic changes in OPEC countries, change in demand worldwide, variation in oil stock in all countries, political instability, and fluctuation in dollar exchange rate. Bayar and Kilic (2014) revealed that production decreases due to the increase in oil and gas prices because of the cost of manufacturing increases along with the rise in the price of input.

Whether the price of oil is very high or very low depends on the point of reference (Frias, 2000). In the

free market, buyers want to pay as little price as possible and sellers want to charge big prices. The World Bank analysis described an increase from a price of US \$26 per barrels in January 1985, US \$31 per barrel in 2004, US \$53 per barrel in January 2007 to US \$102 per barrel in January 2014, so this kind of fluctuation is notable over the long-term perspectives. Having fluctuated about US \$20 per barrel for much of the 1990s, oil prices have increased rapidly since 1999, peaking in July, 2008, and a very big drop in oil prices found by the end of December, 2008 (Brien and Weymes, 2010).

Latest studies help the belief and ensures that price uncertainty has influence over the macroeconomic variables of advanced economies of the world. The Gross Domestic Product (GDP) is directly linking with oil price volatility, stock return (Sadorsky, 1999; Hondroyannis and Papapetrou, 2001) and the interest rate (Hondroyannis and Papapetrou, 2001; Ferderer, 1996). Sometimes evidence shows that low oil price does not boost economic activity and depress the economy. The asymmetry is one explanation for the impact of price uncertainty, over and above the effect of price level (Mork, 1989; Loungani, 1986). The dynamics of oil prices are very crucial for oil exporting countries and oil producing companies. The Organization of the Petroleum Exporting Countries (OPEC) plays a vital role to set principal motives to exploit and ensure the stability of oil prices in the global market. The OPEC's aim to diversity the detrimental effect of unnecessary fluctuations in the oil prices.

WEO (World Economic Outlook) and International Energy Agency's (IEA's) indicated in World Economic and Financial Survey (April 2016) that there are three key factors which are playing important role to decline in oil prices. The increase in oil supply, weaker global demand and improved energy efficiency. These three factors increased financial and fiscal stress in oil exporting countries. The increase in oil supply cause 50% decline in oil price in 2015 and 2016. The benefit of decline in oil price transfer to advanced economies, which are less dependent on oil exports and their GDP improves gradually along with reduction in oil prices. The global GDP decline due to weaker global demand. The improvement in energy efficiency is the third factor to decline oil prices and it has small positive impact on

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the Global GDP and more benefits for advanced economies<sup>1</sup>.

Responding to persistent low oil prices The Organization for the Petroleum Exporting Countries (OPEC) and Russia met together in January 2017 and decided to wide ranging support for production adjustment and oil prices. They decided to cut production and push up the low crude oil prices. Through this commitment, they tried to make strong economic growth and financial markets. Together two main players have helped to tighten markets<sup>2</sup>.

Gas will grow faster than oil and coal over the next five years, helped by low prices, ample supply, and its role in reducing air pollution and other emissions. Industry emerges as the main engine of demand growth, accounting for half of the forecast growth in global gas demand. A growing use of gas in the chemical sector, and strong demand for fertilizers in countries like India and Indonesia, and the replacement of coal by gas in a host of smaller industrial applications in China mean that industrial gas demand grows by almost 3% per year. Many countries are reforming their gas markets to increase the use of gas and to attract new investments. Gas prices in Australia's major eastern market have traditionally been very low but have now risen sharply, in part because new export projects have created a pricing link with international markets. Higher end-user prices have led to concerns about the impact on industrial competitiveness. In response, the Australian government has introduced a domestic gas security mechanism that gives it the power to restrict exports if there is a risk of shortfalls on the domestic market<sup>3</sup>.

Price competitiveness and market reforms will be critical to sustaining natural gas demand growth in emerging markets. Emerging markets are much more sensitive to price levels than traditional buyers; competitiveness of natural gas, either sourced from domestic production or imported, is therefore a crucial factor in sustaining such demand growth. Emerging Asian markets, where half of the global consumption increase is expected in the medium term, still mainly use oil-indexed mechanisms to define natural gas prices. Importing countries should pursue adequate market reforms to further open their own domestic gas markets if they intend to benefit from the development of more competitive wholesale gas markets, including market-based natural gas pricing mechanism<sup>4</sup>.

## II. LITERATURE REVIEW

Many researchers and economists have tried to figure out the relationship between oil prices, gas prices and the financial performance of firms. Oil and gas prices have huge impact on the performance of firms in different perspective such as business performance, corporate performance and stock return. A number of studies have carried out at the global level and domestic level on the financial performance along with energy prices. Many of the studies have revealed positive relationship (like, Falzon and Castillo, 2013; Rahmanto et al., 2016; Dadashi et al., 2015; Caporale et al., 2015; Hamma et al., 2014; Baars and Rukavishnikova, 2014; Wattanatorn and Kanchanapoom, 2012; Aliyan, 2013; Liu and Ma, 2017; Gencer and Demiralay, 2013; Jafarian and Safari, 2015; Waheed et al., 2017). Beside that some studies have confirmed negative relationship (such as, Haq, 2017; Janor et al., 2013; Rodríguez, 2007; Arshad and Bashir, 2015). While, some researchers have stated mix relationship (like, Aimer, 2016; Daddikar and Rajgopal, 2016; Zhang and Chen, 2014; Lis et al., 2012; Elder and Serletis, 2009; Gencer and Demiralay, 2014). Whereas, firms level studies have explored that fluctuation in oil price has insignificant impact on the manufacturing industries and top five oil companies of the world (Mahboub and Ahmed, 2016; Hazarika, 2015).

Taking into consideration a firm level relationship between energy prices and performance of firms, Haq (2017) revealed by using quantitative techniques over the four years of high and low oil prices that fluctuation in oil prices have a significant impact on the performance of corporate firms in Oman; he found that average revenue negatively correlated with average oil prices. In addition, oil prices affect average profit by direct proportion and EPS decrease with the reduction in oil prices. Basha (2014) investigated the impact of the increase in the crude oil prices on the financial performance of Jordanian pharmaceutical. The study confirmed that statistically significant relationship stands between oil prices on the financial performance of a pharmaceutical company. Shaari et al. (2013) explored the effects of oil prices on agriculture, manufacturing, transportation and construction sectors and reported that oil prices can affect agriculture, manufacturing, transportation and constructions sectors in long run. Bolaji and Bolaji (2010) probed the effect of the increase in oil prices on manufacturing companies in Nigeria and revealed that raise in the price of oil effect cost, diminish the market demand and decrease profit. Lele (2016) investigated the impact of oil prices on revenue growth, profitability and return on equity of 13 Industrial sector of Saudi Arabian Stock Exchange. The research confirmed that oil price has rigorous and significant impact on overall revenue growth, overall profitability and overall return on equity. Mahboub and Ahmed (2016) probed

<sup>1</sup> International Monetary Fund | April 2016, Chapter 1, Recent Developments and Prospects

<sup>2</sup> Annual Report OPEC 2017: The World Economy, The Impact of Oil Price on Asia: 2017 Marsh & McLennan Companies, Inc

<sup>3</sup> Analysis and Forecasts to 2022: Gas 2017, International Energy Agency

<sup>4</sup> Analysis and Forecasts to 2023 Gas 2018, International Energy Agency



the impact of oil price shocks on the manufacturing sector in Saudi Arabia over the period of 2002 to 2014. Vector Auto Regressive (VAR) model used to determine that oil price shocks have the insignificant impact on the manufacturing sector in Saudi Arabia. Aimer (2016) examined the effects of oil price volatility on the four economic sectors of Libya based on 27-year analysis. Granger Causality Test applied to disclose that agriculture and construction sector could be affected by the change in oil price in the same direction. Seth et al. (2016) explored the influence of oil price volatility and its impact on Indian industry by examining 06 manufacturing sector. The ordinary least square (OLS) method applied to report that oil price changes significantly affect the cost of raw material and revenue of automobile industry, dyes industry, chemical industry and oil refinery industry. Daddikar and Rajgopal (2016) applied GARCH model to estimate the volatility trend. The study found that firm value and financial performance partly affected by the change in oil price as per regression analysis and oil prices affect selected firm differently because of equity pattern, economies of scale and other factors.

Besides that, Hazarika (2015) conducted a study to determine the performance of the top five oil and gas companies in the world. Simple linear regression method applied to show that there is no statistically significant relationship exist between oil prices and profitability, liquidity and financial performance of the top five oil and gas companies. Wattanatorn and Kanchanapoom (2012) revealed a study to determine the interaction between crude oil prices and its impact on the profitability performance of listed companies of Thailand Stock Exchange over the period of 2001 to 2010. Panel data regression and generalized least square (GLS) estimation method applied to report that the profitability performance has positive relationship with fluctuation in oil prices. Aliyan (2013) examined the influence of oil prices on industrial production from Iran and applied Vector Auto Regression (VAR) model to shows industrial production increases with the increase in oil price. Elder and Serletis (2009) explored the influence of oil price over industrial output and found that unsure rise in oil price has causes of reduction in industrial production, mining, oil and gas extraction. The outcomes of the rise in oil price are less damage for the industry than the decline in oil price. Liu and Ma (2017) found the interaction between oil prices and world natural gas industry and China separately. According to the study, oil prices positively affect the profit and growth of gas industries and attract the investors. In increasing trend of oil prices become a cause to increase demand for natural gas that's why the growth of gas industries goes up. Similarly, reduction in oil prices creates a problem of cash flow, capital expenditure, and supply of natural gas. In china's perspective, reduction in oil prices

affects profit margin and gas consumption. Rodríguez (2007) explored the interaction between oil price shocks and industrial output by analyzing eight-industry group of six OCED (Organization for Economic Development) countries. The study used Vector Auto regression (VAR) methodology for each country. As per result of the study that rise in oil price negatively affects overall manufacturing production in six countries, however, each country response differently. Homogeneity found among USA and UK relationship between oil prices and industrial output but heterogeneity existed among four countries of European Economic and Monetary Union (EMU).

Zhang and Chen (2014) examined the interaction between oil prices and China's bulk commodity market and investigated the impact of oil price shocks towards China's fundamental industries. The study consisted from 8th October 2001 to 30th September 2011 and separately applied on Wenhua China's Commodity Index (CCI) and West Texas Intermediate (WTI). Maximum likelihood estimation (MLE) method applied as parameters for estimation with RATS statistical software. ARMA GARCH model used to explicit the influence of oil price shocks on China's bulk commodities market. The research revealed that oil prices volatility has the significant influence on CCI. Oil price volatility did not affect Grain and metal market like other industries so the study suggested investor should make the investment in these industries for portfolio diversification.

Most of the stock level studies have revealed that increase in energy prices have positive impact on stock performance. Falzon and Castillo (2013) collected 461 months data to analyze the relationship between oil prices and equity return in the UK and US. The study reported that higher oil price variation led to higher equity return variation, revealing the higher risk in the market. Rahmanto et al. (2016) applied linear and asymmetric models and divided data into nine sectors to know the impact of crude oil prices. According to their study the stock return increase with the increase in oil prices. Dadashi et al. (2015) explored the relationship between oil prices and value of the listed firm in Tehran Stock Exchange by analyzing data from 62 manufacturing firms during the period of April 2003 to March 2012. Based on Spearman's correlation coefficient that oil prices and stock prices have the positive relationship. Caporale et al. (2015) performed Mean bivariate VAR GARCH model to prove that unsure changes in oil prices have the positive impact of the unexpected shift in the aggregate demand on all sectoral stock returns excluding three sectors. Hamma et al. (2014) conducted a sector level study on oil price volatility and concluded that unidirectional relationship existed between oil market and Tunisian stock market and degree of variation different from sector to sector. Baars and Rukavishnikova (2014) investigated the

relationship between oil price volatility and the stock return of clean energy companies. The study explored data from 85 companies over the period of 2004 to 2014 and applied deductive and inductive research methods. The study found that stock return positively affected by the variation in oil prices and every sector affected by oil prices differently.

Furthermore, Gencer and Demiralay (2013) applied VAR and VEC models to determine the long run and short run relationship between oil prices and stock returns. The study found that oil prices have the positive impact on sector stock return. Jafarian and Safari (2015) examine the association between oil prices and 08 different industrial sectors of Malaysian Stock Market over the period of January 2000 to March 2014. The OLS regression analysis disclosed that oil prices have the significant and positive impact on the Kuala Lumpur Composite Index's (KLCI) return at 10% level of significance. Waheed et al. (2017) reported by individual firm analysis that 27.45% companies have significant positive effect while 25.69% companies have the insignificant effect and 5.28% companies have significant negative effect due to change in oil prices. However, according to full sample, the result of the asymmetric analysis that oil prices shocks have the significant positive impact on stock return.

Lis et al. (2012) investigated the interaction between crude oil prices and stock returns of car manufacturing companies. German and USA car manufacturing companies are more responsive than Japan car manufacturing companies against fluctuation in oil prices. Gencer and Demiralay (2014) conducted research to estimate the sensitivity of changes in oil prices and its impact on five services and industrial sectors by exploring daily data of BIST 100 Index (Borsa Istanbul). The study revealed that oil price has the significant impact on sectoral return and each sector return affects differently in the response to the change in oil price. Additionally, past news also affects the stock return of each sector against the fluctuation of oil prices. Gupta (2016)'s study consisted of monthly data from 70 countries over the period of 1983 to 2014 and deduced that oil-exporting countries face more difficulties than oil importing countries by volatility in oil prices. Gormus (2013) used two different approaches for Istanbul Stock Exchange (ISE-100) and S & P 100. The conclusion made by applying Ordinary Least Square (OLS) method that oil price changes have a significant influence on Turkish stock market and Turkish stock market relatively gets more affected than US stock market.

Some of the stock level studies have confirmed that rise in energy prices have negative impact on stock performance. Janor et al. (2013) deduced that oil price shocks increased uncertainty in KLCI and escalate investment risk. Arshad and Bashir (2015) concluded as per panel regression results of this study that stock

returns of chemicals and textile industry negatively affected by the change in oil prices.

### III. EMPIRICAL MODEL, DATA, AND METHODOLOGY

#### a) Data and sample

The population of selected industrial sector is consisted on 178 firms. Based on the availability and accessibility of the data only 67 companies used in the study to make analysis. The population and the sample of the research consist of the listed companies of Pakistan Stock Exchange (PSX). The sample firms classified by Pakistan Stock Exchange and the study contemplates on annual balanced panel data of each sector over the period of 2007 to 2016. The annual report of selected firms collected by different sources, which include firms official websites, Pakistan Stock Exchange, Business Recorder and Khi Stocks. A total of 67 companies included in our sample size out of which 23 firms selected from textile sector, 13 firms selected from the cement sector, 14 firms selected from the sugar sector, 10 firms from the automobile assembling sector and 07 firms selected from the pharmaceutical sector.

#### b) The study variables

The study contains 08 variables in which 03 dependent variables (Return on Equity, Return on Asset and Profit Margin Ratio), 04 independent variables (Oil Price, Gas Price, Electricity Fixed Price and Electricity Variable Price), and 01 controlled variable (Exchange Rate), employed to analyze the relationship between them. Figure 3 A, and 3 B, present the oil and gas prices. Figure 3 C, and 3 D display electricity prices and exchange rate mentioned in Figure 3 E.

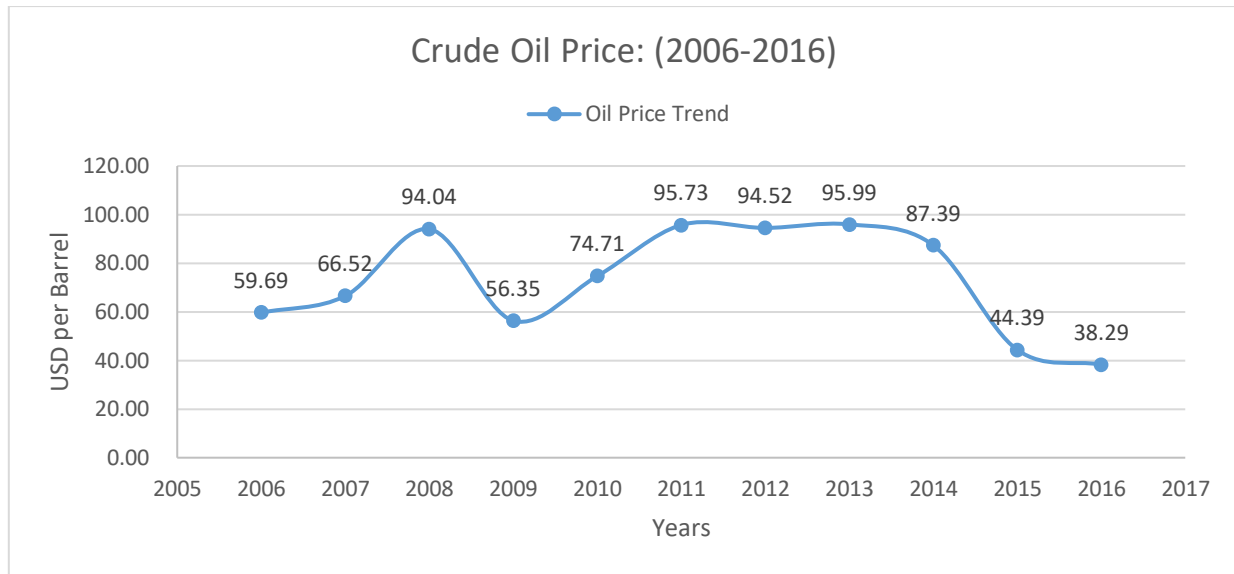


Figure 3 A: Average crude oil prices during 2006-2016 as per U.S. Energy Information Administration

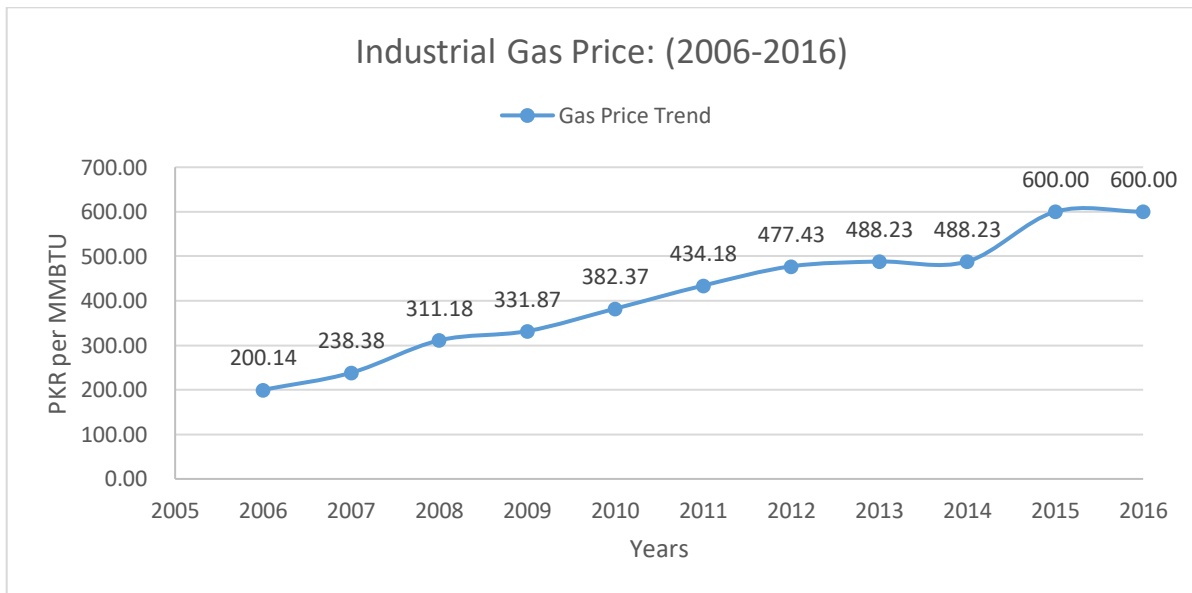


Figure 3 B: Average industrial gas prices during 2006-2016 as per The Oil and Gas Regulatory Authority (OGRA)-Pakistan

## Industrial Electricity Fix Tariff: (2006-2016)

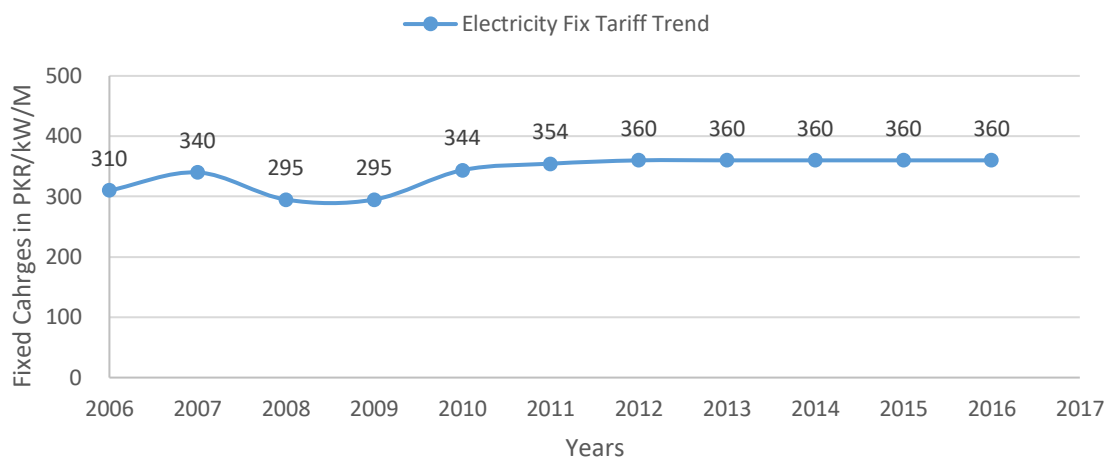


Figure 3 C: Average industrial electricity fixed prices during 2006-2016 as per The National Electric Power Regulatory Authority (NEPRA)-Pakistan

## Industrial Electricity Variable Tariff: (2006-2016)

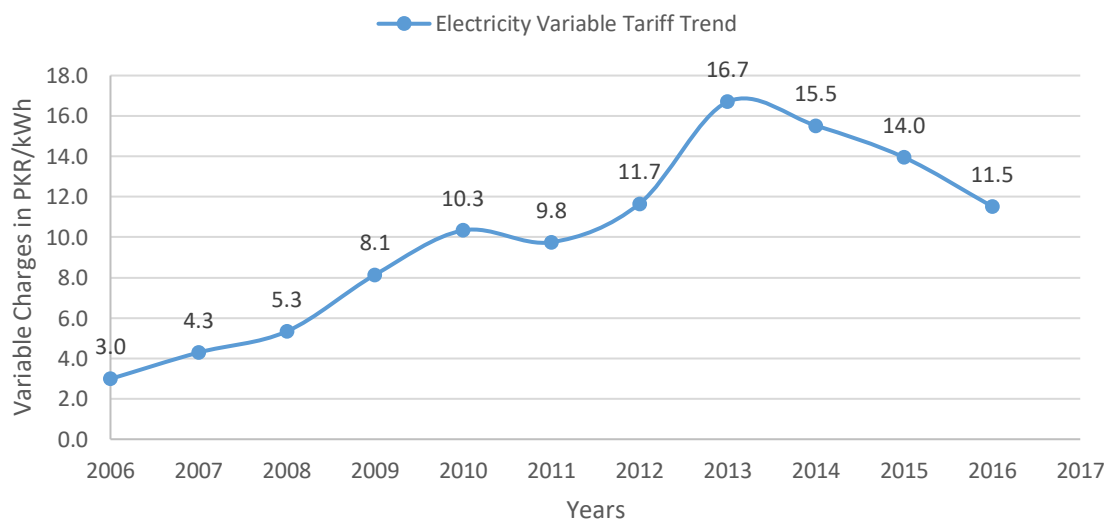


Figure 3 D: Average industrial electricity variable prices during 2006-2016 as per The National Electric Power Regulatory Authority (NEPRA)-Pakistan



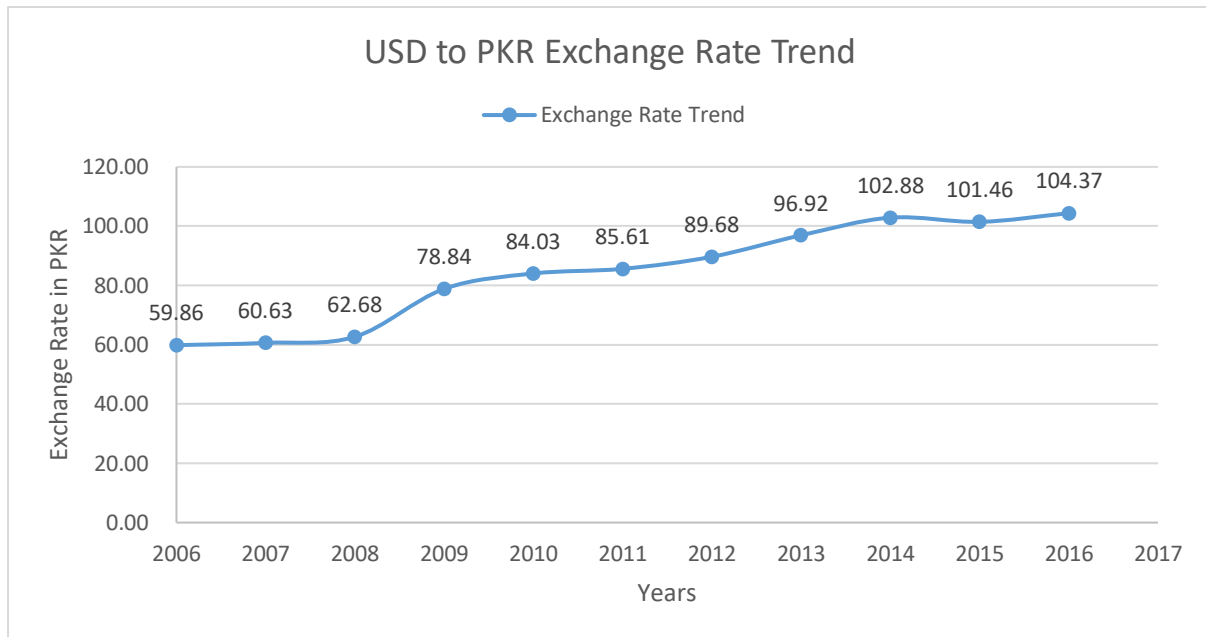


Figure 3 E: Average exchange rate (USD to PKR) during 2006-2016 as per State Bank of Pakistan (SBP)

#### c) Estimation method

The key objective of this part of the study is to apply the appropriate research methodology to draw outcomes. The quantitative approach to be used to analyze the data to obtain the study findings. The data converted into a format that can be used to measure and answer the research questions. Panel data is used to analyze the relationship between oil, gas, electricity prices and the financial performance of different manufacturing industries of Pakistan. Panel data have benefits in terms of additional variability, smaller collinearity between the variables, high degree of freedom and high efficiency (Baltagi, 2005, Econometric Analysis of Panel Data). The Panel least square method is applied in the study to estimate the effect of energy prices and the financial performance of the firms. As reported by Wattanatorn and Kanchanapoom (2012), the generalized least square method uses to estimate equations instead of ordinary least square method and to deal with heteroscedasticity and autocorrelation problems. Similarly endogeneity problem may be created because of fixed effects model, therefore there are two method used in this study such as fixed effects and random effects in term to deal such problem. The study considers panel least square with fixed effect models and random effect models to check the relationship between energy price and the financial performance of different industries in Pakistan.

##### i. Model specification

To investigate the empirical analysis, a multifactor regression model structured to examine the relationship between energy price and firm financial performance. Equations 3.1, 3.2 and 3.3 run on E views

to investigate the impact of energy prices on the financial performance of each sector of the firms.

$$ROE_{i,t} = \beta_0_{i,t} + \beta_1 OIL_{i,t} + \beta_2 GAS_{i,t} + \beta_3 ELFR_{i,t} + \beta_4 ELVR_{i,t} + \beta_5 ER_{i,t} + e_{i,t} \dots\dots 3.1$$

$$ROA_{i,t} = \beta_0_{i,t} + \beta_1 OIL_{i,t} + \beta_2 GAS_{i,t} + \beta_3 ELFR_{i,t} + \beta_4 ELVR_{i,t} + \beta_5 ER_{i,t} + e_{i,t} \dots\dots 3.2$$

$$PMR_{i,t} = \beta_0_{i,t} + \beta_1 OIL_{i,t} + \beta_2 GAS_{i,t} + \beta_3 ELFR_{i,t} + \beta_4 ELVR_{i,t} + \beta_5 ER_{i,t} + e_{i,t} \dots\dots 3.3$$

$\beta_0$ : Intercept,  $\beta_1$ : coefficient of OIL,  $\beta_2$ : coefficient of GAS,  $\beta_3$ : coefficient of ELFR,  $\beta_4$ : coefficient of ELVR,  $\beta_5$ : coefficient of ER,  $e$ : error term

where  $ROE_{i,t}$ , signify Return on Equity of i'th firm and performance in year t.  $ROA_{i,t}$  and  $PMR_{i,t}$  represent Return on Assets and Profit Margin Ratio of i'th firm and performance in year t. Where  $\beta$  is the constant and  $OIL_{i,t}$  is the price return of annually oil prices. Annual Gas price return is denoted by  $GAS_{i,t}$ . Where  $ELFR_{i,t}$  and  $ELVR_{i,t}$  represents the annual price return of Electricity Fixed Tariff and Electricity Variable Tariff.  $ER_{i,t}$  denotes Pakistan Rupee Exchange Rate return against US Dollar on annual basis. where  $e_{i,t}$  is a disturbance term.

sector over the period of 2007 to 2016. In the statistical summary included mean, maximum value, minimum value and standard deviation of the dependent variables are used in the study. The extreme average value of ROE in the sectoral study is 14.70% and the lowest average value of ROE is -303%. Its mean ROE of automobile sector generates a highest average return from five industrial sectors while the sugar sector faces huge average losses against ROE within the five sectors. The minimum and maximum value from sector analysis in terms of ROE is -21279% and 1050% respectively. It indicates that the sugar sector is one of the sectors, which provides the lowest and highest return over ROE as compared to other sectors.

#### IV. EMPIRICAL RESULTS

##### a) Descriptive statistics for sectoral analysis

Table 1, contains the statistical summary of textile, cement, sugar, automobile and pharmaceutical

*Table 1: Sectoral descriptive statistics over the period of 2007-2016*

Industry	Variables	Mean	Maximum	Minimum	Std. Dev.
Textile	ROE	-0.06	1.29	-26.46	1.84
	ROA	0.05	0.54	-0.27	0.08
	PMR	0.04	7.30	-10.64	0.97
Cement	ROE	0.09	0.48	-0.95	0.21
	ROA	0.06	0.24	-0.18	0.09
	PMR	0.05	0.31	-2.14	0.29
Sugar	ROE	-3.03	10.50	-212.79	24.59
	ROA	0.02	0.24	-0.27	0.08
	PMR	0.00	0.43	-0.49	0.11
Automobile	ROE	0.15	0.65	-1.64	0.31
	ROA	0.09	0.42	-0.27	0.11
	PMR	0.03	0.18	-1.34	0.16
Pharma	ROE	0.09	0.52	-3.81	0.52
	ROA	0.10	0.37	-0.13	0.09
	PMR	0.08	0.25	-0.19	0.08

*This table describes the descriptive statistics of study's specimen over the period 2007-2016*

Pharmaceutical sector performs better than other sectors in term of average value of ROA meanwhile the maximum value and minimum value of ROA is 53.50% and 23.60% respectively. It denotes that the textile sector show an enormous return over ROA but sugar sector generates less return over ROA. The pharmaceutical sector has great mean value in regards to PMR while the maximum value of PMR is 729.50%. It signifies that the textile sector has great potential to

generate profit margin within the entire sample. The standard deviation of the sugar sector is relatively higher than other sectors because its value is 24.59. However, ROA of each sector deviates comparatively low. It indicates that investment in assets of each sector is less risky than other financial indicators such as ROE and PMR.

b) *Descriptive statistics for energy variables*

Table 2, consists on analytical examination of the statistical summary of energy variables and control variable. The mean value of ELVR is more than other energy variables so it is more risky energy variable beside OIL and GAS. In term of maximum and minimum value, ELVR and OIL value is 52.50% and -49.20% respectively. It identifies the span of both variables. The standard deviation shows the dispersion of variables

from their means. Looking through the standard deviation, the most dispersed measure is OIL with the standard deviation of 0.28 and the least scattered variable is ELFR with the standard deviation of 0.07. ELFR shows moderate variability as compare to others energy indicators such as OIL, GAS, and ELVR. In the meantime, OIL and ELVR report high disparity within the energy samples.

*Table 2:* Descriptive statistics for energy prices over the period of 2007-2016

Variables	Mean	Maximum	Minimum	Std. Dev.
OIL	0.00	0.41	-0.49	0.28
GAS	0.12	0.31	0.00	0.10
ELFR	0.02	0.17	-0.13	0.07
ELVR	0.17	0.53	-0.17	0.24
ER	0.06	0.26	-0.01	0.07

c) *Sector-wise regression results*

The study examined sector wise panel data to analyze the influence of energy prices on the financial performance of different industries in Pakistan such as textile industry, cement industry, sugar industry, automobile assembling industry and pharmaceutical industry. Run the regression model by applying the fixed effect model to interpret the association of financial performance of firms with energy prices. Later on, draw a conclusion which method would be effective and suitable for the study. Table 3, reports the coefficient values and probability values of return on equity, return on assets and profit margin ratio (return on sales) of the fixed effect model and random effect model for each sector. All energy prices excluding electricity variable prices significantly affect the financial performance of

the cement sector based on its probability value at 5% level of significance. Electricity variable price is one of them, which affects insignificantly the return on sales of cement sector because its probability value is more than the 5% level of significance. In the meantime, it also behaves positively with return on sales of cement sector. From other energy variables, only electricity variable prices affect the profitability of the sugar sector with respect to return on assets. Return on assets has a negative association with electricity variable prices from the perspective of the sugar sector in accordance with its coefficient value. The other industrial sectors behave insignificantly against changes in energy prices such as textile, automobile and pharmaceutical sector. However, these sectors have a negative or positive relationship with energy prices as per their coefficient values.

*Table 3:* Sectoral regression analysis over the period of 2007-2016

Industry	Independent Variable	(β)-Values			(P)-Values		
		ROE	ROA	PMR	ROE	ROA	PMR
Textile	OIL	0.47	0.03	-0.22	0.35	0.13	0.42
	GAS	-0.33	-0.12	1.24	0.84	0.08	0.16
	ELFR	-0.32	0.14	0.90	0.86	0.07	0.37
	ELVR	-1.16	-0.03	-0.77	0.14	0.31	0.08
	ER	2.33	-0.09	0.91	0.42	0.42	0.56
Cement	OIL	-0.37	-0.14	-0.38	0.00	0.00	0.00
	GAS	-1.07	-0.45	-1.02	0.00	0.00	0.00
	ELFR	-1.00	-0.32	-0.70	0.00	0.00	0.02
	ELVR	0.34	0.09	0.20	0.00	0.00	0.11
	ER	-1.80	-0.68	-1.59	0.00	0.00	0.00
	OIL	-3.67	0.01	-0.02	0.67	0.48	0.52
	GAS	-35.64	0.03	0.05	0.19	0.70	0.64

Sugar	ELFR	36.68	-0.01	-0.14	0.24	0.92	0.25
	ELVR	3.92	-0.07	-0.04	0.77	0.02	0.45
	ER	-74.82	0.37	0.34	0.12	0.00	0.08
Automobile	OIL	-0.07	-0.05	-0.02	0.55	0.06	0.74
	GAS	-0.11	0.00	0.15	0.76	0.96	0.43
	ELFR	0.02	-0.05	0.02	0.96	0.61	0.92
	ELVR	-0.02	-0.06	0.02	0.93	0.18	0.85
	ER	-1.72	-0.31	-0.21	0.01	0.05	0.53
	OIL	0.10	-0.01	0.00	0.67	0.88	0.91
Pharma	GAS	0.49	-0.06	-0.01	0.53	0.52	0.89
	ELFR	0.29	0.04	0.02	0.74	0.72	0.81
	ELVR	0.33	0.03	0.05	0.38	0.57	0.14
	ER	-0.06	-0.30	-0.25	0.97	0.09	0.06

i. *Fixed effect model sector-wise results*

Table 4, displays the results of the fixed and random effect model. The constant ( $\beta_0$ ) behave similarly with respect to the fixed and random effect model because there is no change found in the value of constant ( $\beta_0$ ). However, R-Squared, adjusted R-Squared and probability values of F-Statistics are different. In terms of constant ( $\beta_0$ ), the aggregative effect of energy prices is positive with the financial performance of different sector meanwhile, profit margin ratio partially negative with respect to energy prices. There is a cumulatively negative relationship exist between the textile and sugar sector with energy prices from the

perspective of profit margin ratio. As per fixed effect model, the energy prices and control variable dominate over the financial performance of cement and pharmaceutical sector in accordance with R-Squared analysis. Similarly, if more independent variables included in the fixed effect model then cement and pharmaceutical sector would be affected relatively more comparatively other industrial sectors according to adjusted R-Squared values. The probability values of F-Statistics show that energy prices and exchange rate mutually and significantly affect the financial indicator of each sector except return on equity of textile, sugar, pharmaceutical, and profit margin ratio of textile sector.

Table 4: Sectoral fixed and random effect model over the period of 2007-2016

Model	Industry	Constant $\beta_0$			R-Squared			Adjusted R-Squared			Prob. F-Statistics		
		ROE	ROA	PMR	ROE	ROA	PMR	ROE	ROA	PMR	ROE	ROA	PMR
Fixed Effect	Textile	0.04	0.07	-0.05	0.11	0.20	0.03	-0.01	0.09	-0.10	0.93	0.01	1.00
	Cement	0.29	0.15	0.25	0.62	0.78	0.51	0.56	0.74	0.44	0.00	0.00	0.00
	Sugar	4.39	0.01	-0.02	0.15	0.55	0.34	0.02	0.48	0.24	0.31	0.00	0.00
	Automobile	0.26	0.11	0.02	0.39	0.68	0.30	0.29	0.63	0.18	0.00	0.00	0.00
	Pharma	-0.03	0.12	0.08	0.26	0.58	0.73	0.12	0.50	0.67	0.07	0.00	0.00
Random Effect	Textile	0.04	0.07	-0.05	0.02	0.07	0.03	-0.01	0.05	0.01	0.63	0.01	0.21
	Cement	0.29	0.15	0.25	0.50	0.64	0.30	0.48	0.63	0.27	0.00	0.00	0.00
	Sugar	4.39	0.01	-0.02	0.05	0.10	0.07	0.02	0.06	0.03	0.19	0.02	0.09
	Automobile	0.26	0.11	0.02	0.18	0.22	0.02	0.13	0.18	-0.03	0.00	0.00	0.81
	Pharma	-0.03	0.12	0.08	0.06	0.08	0.10	-0.02	0.00	0.03	0.59	0.40	0.21

This table describes the fixed effect and random effect analysis of study's specimen over the period 2007-2016.

ii. *Random effect model sector-wise results*

In sector wise panel estimation, the random effect model applied to estimate the impact of energy price on the financial performance of the different sector. Later on, draw a conclusion which method would be effective and suitable for the study. Table 4 reports the outcomes of the random effect model. The constant ( $\beta_0$ )

behave similarly in both models like fixed and random effect model because of no change found in the value of constant ( $\beta_0$ ). The R-Squared values signify that energy prices have a big influence on the financial performance of the cement sector. Furthermore, if more independent variables included in the random effect model then only cement sector would be affected as compared to other



industrial sectors from the perspective of adjusted R-Squared. The probability values of F-Statistics of each sector show that energy prices and the exchange rate has a partially significant impact on the financial performance of the different industry. Meanwhile, energy prices insignificantly affect the financial indicator of the pharmaceutical sector.

d) *Hausman test*

After applying the random effect and fixed effect method separately of regression analysis, it is necessary to make a better choice. The Hausman test conducted

to eradicate ambiguity regarding the behavior of intercept whether intercept behaves randomly or fixed. Table 5, identifies the results of return on equity, return on asset, profit margin ratio (return on sales) by using the Hausman test for each industrial sector. Results justify that intercept of ROE, ROA and PMR for each sector behave randomly because its probability value is greater than the 5% at 5% level of significance. Therefore, the random effect model is the right choice to take better results for each industrial sector of the study.

*Table 5: Hausman Test over the period of 2007-2016*

Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	5	1.0000

*This table describes the Hausman Test of study's specimen over the period 2007-2016.*

## V. CONCLUSIONS

This research proves previous finding that oil prices have positive impact on the financial performance of different industries in Thailand, Wattanatorn and Kanchanapoom, 2012). The study also compliments the previous research that oil prices have the significant and positive impact on the financial performance of pharmaceutical companies in Jordan, (Basha, 2014). This study supports the previous research that oil price affects the firm's financial performance positively, (Daddikar and Rajgopal, 2016), and (Lele, 2016). Sample firms included in Large Scale Manufacturing industries of Pakistan as per division of Pakistan Bureau of Statistics. Fixed effect estimator and random effect estimator are applied to each sector for regression analysis while the Hausman Test is performed to know the appropriate method of regression analysis. Random effect model considered appropriate method based on the Hausman test.

First of all the return on asset more significantly affected by variation in the energy prices than other financial indicators such as return on equity and profit margin ratio based on the entire sample of the study. Secondly, the return on equity significantly affected by changes in energy prices as a whole Large Scale Manufacturing sample firms. The profit margin ratio or return on sales is least and significantly affected by changes in energy prices which are considered as aggregate sample.

The energy prices have the huge and significant impact on the financial performance of the cement industry of Pakistan like return on equity, return on asset and return on sales. The electricity variable prices under energy prices have enormous and significant impact on financial performance of sugar sector of Pakistan in

terms of return on assets. The exchange rate is considered as control variable playing a vital role in the whole model to control financial indicators such as return on equity, return on asset and return on sales. The exchange rate has a significant relationship with every financial indicator of the study never with every firm.

To summarize the effect of energy prices on the financial performance of different industries in Pakistan that energy prices significantly and immensely effect the financial performance indicators such as return on equity, return on asset and return on the sale of cement sector of Pakistan. However, there is no effect of energy prices on automobile assembling and manufacturing sector, textile sector, and pharmaceutical sector even any single indicator of the energy computation. The second most affected sector of large-scale manufacturing industries of Pakistan is the sugar sector. In the sugar sector, the return on assets significantly affected by the changes in electricity variable prices while return on equity and return on equity is not affected by the changes in energy prices. The exchange rate is playing significant role in the entire model, it affects every financial indicator like return on equity, return on assets and return on sales. The exchange rate controlled the financial performance of cement sector, sugar sector and automobile assembling sector of Pakistan, however there is no serious effect of exchange rate on the financial performance of textile sector and pharmaceutical sector of Pakistan.

Further in conclusive remarks, based on the intercept values in large-scale manufacturing industry that the aggregate coefficient of energy prices have the positive impact on the financial performance of different industries in Pakistan.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 19 Issue 3 Version 1.0 Year 2019

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

# Comparison and Analysis of Profitability of Top Three Nationalized Commercial Banks in Bangladesh

By Saeed Sazzad Jeris

**Abstract-** Banks are playing a vital role in the economic & financial development of Bangladesh. Profitability indicates the overall performance of the banks. In this study, it has been tried to compare the top three nationalized commercial banks by some financial parameters, and it relies on secondary sources of data. In this paper, I used statistical tool ANOVA for comparison. The result indicates the statistical difference among these banks and their performance is not stable.

**Keywords:** bank, profitability, performance, ANOVA.

**GJMBR-C Classification:** JEL Code: G21



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# Comparison and Analysis of Profitability of Top Three Nationalized Commercial Banks in Bangladesh

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**Abstract-** Banks are playing a vital role in the economic & financial development of Bangladesh. Profitability indicates the overall performance of the banks. In this study, it has been tried to compare the top three nationalized commercial banks by some financial parameters, and it relies on secondary sources of data. In this paper, I used statistical tool ANOVA for comparison. The result indicates the statistical difference among these banks and their performance is not stable.

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## I. INTRODUCTION

Financial sector plays a crucial role in the economic & financial development of a country. An efficient financial system is required to ensure the formation of capital. A sound financial infrastructure is rare in many developing countries like Bangladesh. As financial markets are usually underdeveloped, the importance of banks is more pronounced in developing countries, and banks are considered a principal source of finance for the majority of firms (Arun and Turner, 2004). Banks are unlikely to gain a sustainable competitive advantage unless they can extend its product quality beyond the core service with additional and potential service features and value. In this regard, profitability and solvency are any bank's significant concern (Chang et al., 1997).

The Nationalized Commercial Banks (NCBs) of Bangladesh is one of key the tool for achieving socio-economic objectives, and the commercial banking system dominates Bangladesh's financial sector. The banking system of Bangladesh is composed of eight state-owned commercial banks, ten specialized banks, forty-one private commercial banks, one land development bank, and nine foreign commercial banks.

## II. OBJECTIVES

1. To study the profitability ratios of top three nationalized commercial banks, viz. Sonali bank, Janata bank, and Agrani bank.
2. To compare the profitability ratios of top three nationalized commercial banks, viz. Sonali bank, Janata bank, and Agrani bank by return on net worth, net interest margin, the cost to income ratio and return on asset.

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## III. HYPOTHESIS

$H_0^1$  = There is an insignificant difference among Sonali bank, Janata bank, and Agrani bank by on net worth.

$H_0^2$  = There is an insignificant difference among Sonali bank, Janata bank, and Agrani bank by cost to income ratio.

$H_0^3$  = There is an insignificant difference among Sonali bank, Janata bank, and Agrani bank by return on assets.

$H_0^4$  = There is an insignificant difference among Sonali bank, Janata bank, and Agrani bank on the Profitability and solvency are any bank's important concern basis of net interest margin.

## IV. REFERENCE PERIOD

This study has covered the period from 2013 to 2017.

## V. METHODOLOGY

Secondary data and information required for the analysis has been collected from the annual report of Sonali Bank, Janata Bank, Agrani bank and different books, journals, magazines, websites.

## VI. STATISTICAL TOOLS

In this study, various tools are used (i.e.) Mean, Standard deviation, Coefficient of variation and ANOVA.

## VII. LITERATURE REVIEW

Eichheld and Sassar (1990) have said that the relationship between customer retention and company revenues should build in such a way as a small improvement in customer retention can have a massive effect on company revenues. Amandeep (1991) concluded that the profitability of banks is ascertained mainly by two factors: spread and burden. She recommended in her study that the bank should give more attention to the management of freight, establishment expenses, non-fund income, and deposit composition. Reynolds et al. (2000) used some dependent variables which were regressed to structural variables to evaluate the performance of the bank and financial structure. N S Toor (1994) in his article, said that the profitability in banks seemed to be a crucial

parameter for measuring their performance and their social role got the advantage over the profits and profitability.

Narang et al. (2011) got evidence that some banks achieved remarkable performance owing to the index of interest earned to total asset ratio.

Qin and Pastory (2012) measured the profitability of commercial banks in Tanzania from 2000 to 2009. They tested the hypothesis with ANOVA and regression analysis by return on average asset, net interest income to average bearing assets and non-interest expenses to average assets. The study indicates that there was no significant difference in profitability among commercial banks. Swamy (2015) examined the factors of bank asset quality and profitability using panel data techniques and robust data for the period between 1997 and 2009. The study experimented that public sector banks were not found as better risk procedures and technology while private sector banks were superior in this regard. According to Vanar and Dhole (2006), banks should try to maximize their income and should also introduce rules and regulations to minimize expenses because it impacts on the profitability of the bank. Mohd. and Rasidah (2011) measured the impact of bank-specific factors such as liquidity, credit, capital, operating expenses and the size of commercial banks in Malaysia and China. These factors are measured by return on average assets (ROAA) and return on average equity (ROAE), and the result explained that without the credit and capital ratios, other factors are affected differently on the performance of banks in both Malaysia and China.

## VIII. MEASURES OF PROFITABILITY

The study has tried to compare three top nationalized banks by some financial parameters.

## IX. ANALYSIS AND FINDINGS

### a) Return on net worth

#### a) Return on net worth

*Return on equity (ROE)* is a measure of profitability that estimates what profit a company generates with each dollar of shareholders' equity. The formula for ROE is:

$$ROE = \text{Net Income} / \text{Shareholders' Equity}$$

#### b) The cost to income ratio

The cost to income ratio is used to determine the operating costs of a company about its operating income.

The formula for the cost to income ratio:

$$\text{Cost to income ratio} = \text{operating expenses} / \text{operating income}$$

#### c) Return on asset

Return on assets ratio or ROA measures how effectively and efficiently a company organizes its assets to produce gain during a period. The formula for return on asset:

$$\text{Return on asset} = \text{net income} / \text{total assets}$$

#### d) Net interest margin

Net interest margin is a profitability ratio that calculates how much money an investment bank is making on its investing operations. The formula for net interest margin:

$$\text{Net interest margin} = (\text{interest income} - \text{interest expense}) / \text{Average earning assets}$$

Table 1: Return on net worth (%)

Year/Banks	Sonali Bank	Janata Bank	Agrani Bank
2012-13	9.89	30.09	25.39
2013-14	11.05	9.66	5.02
2014-15	0.99	9.7	1.46
2015-16	2.18	5.22	(19.06)
2016-17	10.63	5.23	16.59
Mean	6.95	11.98	5.88
Standard Deviation	4.93	10.37	16.84
Co-efficient of Variation	0.71	0.87	2.87

Source: Annual reports of the sample banks

In table 1, mean, standard deviation and coefficient of variation of return of net worth of selected banks have been calculated. Janata Bank has the highest mean value, and Agrani Bank has the lowest number. Standard Deviation of profit after tax to equity

shareholder fund of Agrani Bank is 16.84 with the highest coefficient of variation of 2.87 percent. Sonali Bank has a low standard deviation (4.93), and it has a low coefficient of variation i.e., 0.71 percent among top three nationalized commercial banks.

b) *The Cost to income ratio*

*Table 2: Cost to income ratio(%)*

Year/Banks	Sonali Bank	Janata Bank	Agrani Bank
2012-13	94.47	77.98	74.15
2013-14	86.8	81.06	74.25
2014-15	87.54	80.75	79.52
2015-16	94.01	81.53	86.6
2016-17	83.92	78.33	80.51
Mean	89.35	79.93	79
Standard Deviation	4.67	1.65	5.16
Co-efficient of Variation	0.05	0.02	0.07

*Source: Annual reports of the sample banks*

Table 2 shows the calculation of mean, standard deviation and coefficient of variation of cost to income of selected banks. Sonali Bank has the highest mean value, and Agrani Bank has the lowest value.

Standard Deviation of Agrani Bank is 5.16 with the highest coefficient of variation of 0.07 percent, and Janata Bank has 1.65 low standard deviation and low coefficient of variation 0.02 percent.

c) *Return on asset*

*Table 3: Return on Asset(%)*

Year/Banks	Sonali Bank	Janata Bank	Agrani Bank
2012-13	0.45	1.42	2.04
2013-14	0.68	0.61	0.4
2014-15	0.06	0.7	0.12
2015-16	0.14	0.33	(1.12)
2016-17	0.58	0.33	1
Mean	0.38	0.68	0.49
Standard Deviation	0.27	0.45	1.16
Co-efficient of Variation	0.71	0.66	2.38

*Source: Annual reports of the sample banks*

Table 3 shows the bank-wise mean, standard deviation, and coefficient of variation of return of assets of selected banks. Janata Bank has the highest mean value while Sonali Bank has the lowest figure. Standard Deviation of Agrani Bank is 1.16 with the highest coefficient of variation of 2.38 percent, and Janata Bank has the lowest coefficient of variation.

of Janata bank is 0.57 with the highest coefficient of variation of 21.98 while Agrani Bank has the modest standard deviation and coefficient of variation.

d) *Net interest margin*

Table 4 shows the calculation of mean, standard deviation and coefficient of variation of cost to income of selected banks. As is presented in the table, Agrani Bank has the highest mean value, and Janata Bank has the lowest value. Also, the standard deviation



Table 4: Net interest margin(%)

Year/Banks	Sonali Bank	Janata Bank	Agrani Bank
2012-13	0.95	0.47	3.43
2013-14	1.66	(0.47)	3.9
2014-15	1.93	(0.64)	3.34
2015-16	1.94	0.1	3.24
2016-17	2.3	0.67	3.59
Mean	1.76	0.03	3.5
Standard Deviation	0.50	0.57	0.26
Co-efficient of Variation	0.29	21.98	0.07

Source: Annual reports of the sample banks

Table 5: Summary of descriptive statistics of financial parameters

Financial Parameters	Highest Rate of Return	Consistency
Return on Net Worth	Janata Bank	Sonali Bank
Cost to Income Ratio	Sonali Bank	Janata Bank
Return on Asset	Janata Bank	Sonali Bank
Net Interest Margin	Agrani Bank	Agrani Bank

The above table illustrates that there are lots of variation in profitability of these nationalized commercial banks. In one parameter, their performance is good, but in other variables, their performance is not consistent.

However, in terms of return on net worth and return on assets Janata Bank has found to be a better performer than Sonali Bank and Agrani Bank.

Table 6: Comparative Analysis of Sonali bank, Janata bank and Agrani bank on the basis of financial parameters

Return on net worth						
Source of Variation	Sum of Squares	Df	Mean Square	F	p-value	
Between Groups	106.12	2	53.05	0.38	0.69	
Within Groups	1664.71	12	138.73			
Total	1770.83	14				
Cost to income ratio						
Source of Variation	Sum of Squares	Df	Mean Square	F	p-value	
Between Groups	327.5158	2	163.76	9.61	0.003	
Within Groups	204.4606	12	17.04			
Total	531.9764	14				
Return on asset						
Source of Variation	Sum of Squares	Df	Mean Square	F	p-value	
Between Groups	0.22492	2	0.11	0.21	0.82	
Within Groups	6.49244	12	0.54			
Total	6.71736	14				
Net interest margin						
Source of Variation	Sum of Squares	Df	Mean Square	F	p-value	
Between Groups	30.17185333	2	15.09	69.84	2.45	
Within Groups	2.59204	12	0.22			
Total	32.76389333	14				

In Table 6, there is a significant difference at 5 percent level of significance (p-value 0.003) among three banks Sonali Bank, Janata Bank and Agrani Bank

by cost to income ratio. Therefore null hypothesis  $H_0^2$  is rejected.

The p-value of  $H_0^1, H_0^3, H_0^4$  are 0.69, 0.82, 2.45 respectively, hence  $H_0^1, H_0^3$  and  $H_0^4$  are not rejected. There is an insignificant difference among Sonali Bank, Janata

Bank, and Agrani Bank by the return on net worth, return on asset and net interest margin.

e) *The summary of analysis*

Hypothesis	Decision
$H_0^1$	Don't Reject
$H_0^2$	Reject
$H_0^3$	Don't Reject
$H_0^4$	Don't Reject

## X. CONCLUSION

Profitability is an essential criterion to measure the performance of banks. In recent times, nationalized commercial banks are dominant in the banking sector in Bangladesh. However, the banks need to perform better and at the same time maintain the profitability in some perspective to meet the goals. The ratio of return on net worth and return on asset has fluctuated over the years among the banks, and it creates an unstable situation in overall performance. The findings revealed statistically much difference between the top three nationalized commercial banks and also it is suggested for the entire bank to take proper steps to improve the stability of the bank.

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GLOBAL JOURNAL OF MANAGEMENT AND BUSINESS RESEARCH: C  
FINANCE

Volume 19 Issue 3 Version 1.0 Year 2019

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-4588 & Print ISSN: 0975-5853

## Microfinance –A Device to Empower Women

By Sukanya. R

*Karnataka State Open University*

**Abstract-** Microfinance is emerging as a powerful tool in eradicating poverty in India. Microfinance has helped in the upliftment of the poor. Banks are not willing to provide credit assistance directly to the poor since they know that they will not be in a position to repay the loan, however the microfinance institutions have played a pivotal role in providing loans to the poor without any collateral. Microfinance has also helped in the upliftment of women in the society. Economic empowerment helps women by encouraging and enabling them to become entrepreneurs. The status of women in the society is improving and microfinance has helped to evoke confidence among women. Women empowerment helps in reducing the disparity between men and women on economic and social grounds. The present paper focuses on the role of microfinance institutions in empowering women in the society.

**Keywords:** *empowerment, microfinance, microcredit, upliftment, etc.*

**GJMBR-C Classification:** *JEL Code: G21*



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# Microfinance –A Device to Empower Women

Sukanya. R

**Abstract-** Microfinance is emerging as a powerful tool in eradicating poverty in India. Microfinance has helped in the upliftment of the poor. Banks are not willing to provide credit assistance directly to the poor since they know that they will not be in a position to repay the loan, however the microfinance institutions have played a pivotal role in providing loans to the poor without any collateral. Microfinance has also helped in the upliftment of women in the society. Economic empowerment helps women by encouraging and enabling them to become entrepreneurs. The status of women in the society is improving and microfinance has helped to evoke confidence among women. Women empowerment helps in reducing the disparity between men and women on economic and social grounds. The present paper focuses on the role of microfinance institutions in empowering women in the society.

**Keywords:** empowerment, microfinance, microcredit, upliftment, etc.

## I. INTRODUCTION

Women empowerment is very essential to rule out gender discrimination. Empowerment of women not only helps in ruling out gender discrimination but also helps in the overall development of the country. Micro finance as part of financial inclusion has played a vital role in providing financial assistance and various other services such as micro savings, micro insurance, micro remittance etc. Financial inclusion is mainly concerned with including the people who are unable to access financial services to access various financial facilities. Financial inclusion mainly operates with the help of Self-help Groups, through Bank linkage programmes. Self-help groups have helped people particularly the rural women to become members of the group and have inculcated the habit of savings. Micro credit is available to the women for starting up small business. Self-help groups also play a major role in providing skill development programme to women to enable them to become entrepreneurs and hence to earn a decent livelihood. The paper is basically descriptive in nature. It aims to identify the various programmes launched by the self-help groups as an initiative under financial inclusion to ensure empowerment of women.

## II. MICROCREDIT

Microcredit is the small amount of loan that is provided for the upliftment of the weaker section in the society. The borrowers of the loan will consider the commitment seriously and will repay the money in order to be eligible for more amount of loans. There is no

collateral security that will be demanded for providing the loan amount to the borrower. The concept of Microcredit originated from the Grameen Bank in Bangladesh in the year 1983. Microcredit is an essential component of microfinance. There are many financial services provided to the poor in the form of microcredit. Grameen Bank in Bangladesh was founded by Muhammad Yunus. He started himself providing loans to the poor people from his own money without asking for any collateral security. Grameen Bank was followed by organizations such as BRAC in 1972 and ASA in 1978. Micro credit has played a vital role in the upliftment of the poor section of the society. Muhammed Yunus founded the Grameen bank which is popularly known as the first modern microcredit institution and was awarded the Noble peace prize in the year 2006.

## III. OBJECTIVES OF MICRO FINANCE

### a) Access to funds

Generally, the poor people approach the money lenders in order to obtain loan from them and money lenders charge an exorbitant rate of interest which the poor find it difficult to repay. Bank do not consider poor people as eligible for providing the loans as they are generally the default customers. Hence, micro finance institutions play a vital role in providing small credit to the poor without accepting any collateral for the loan amount that is provided.

### b) Encourages Entrepreneurship

Although the underprivileged people have profitable business ideas, they will not be in a position to start and to run the business successfully due to lack of funds. However, microfinance has proved to be a boon to such underprivileged people as they provide loans. The profits earned by entrepreneurs from their business, can be used by the poor to repay the loan amount borrowed by the microfinance institutions.

### c) Manage Risk

Micro financial institutions provide financial assistance to the poor which helps them to manage the risk. Banks do not provide any type of financial assistance to the poor as they are not creditworthy.

### d) Empower Women

Micro finance institutions are providing loans to women which has helped them to become self-reliant and to earn a decent living. Women are able to become entrepreneurs of small business and improve their standard of living in the society. Micro credit is playing a

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crucial role in empowering women and making them to stand on par with men.

#### e) *Community-Wide Benefits*

Microfinance institutions help in reducing poverty among the poorer section of the society. More job opportunities help individuals to improve their standard of living. As individuals living standards improve, it helps in the overall development of the economy. Microfinance helps in the countries development.

### IV. DIFFERENCES BETWEEN FORMAL BANKING AND MICRO FINANCE

1. *Form of Organization:* Formal banks are basically commercial forms of organisations whereas micro finance institutions are basically social organisations working for the wellbeing of the society.
2. *Size of the Loan:* Formal banks provide loans on a medium and large scale whereas micro finance institutions provide small amount of loans.
3. *Duration of the Loan:* Formal banks provide medium term and long term loans whereas Micro finance institutions provide short duration loans.
4. *Thrift:* Formal banks only concentrate on the loan whereas microfinance institutions focus on loan and also encourage savings habits among the poor people
5. *Monitoring and Screening:* Formal banking follows formal procedures of monitoring and screening whereas the micro finance institutions follow the informal procedures of monitoring and screening for loans provided.
6. *Repayment:* In case of formal banking, collateral and legal pressures are imposed for repayment of loan whereas in case of microfinance, peer pressure and weekly repayment of loans is imposed
7. *Motivation:* In case of formal banks, they are highly motivated to earn more and more profits whereas micro finance institutions are motivated with the intention of encouraging self-help among people belonging to the self-help groups

### V. LIST OF MICROFINANCE INSTITUTIONS IN INDIA

There are several microfinance institutions which have been set up and are playing a vital role in providing small amount of loans to the impoverished and are also providing several other benefits. The following is the list of few popular micro finance institutions in India.

1. Annapurna Microfinance Pvt Ltd
2. Arohan Financial Services Pvt Ltd

3. Asirvad Microfinance Pvt Ltd
4. Bandhan Financial Services Pvt Ltd
5. BSS Microfinance Pvt Ltd
6. Cashpor Micro Credit
7. Disha Micro fin Pvt Ltd
8. Equitas Microfinance Pvt Ltd
9. ESAF Microfinance and Investments Pvt Ltd
10. Fusion Microfinance Pvt Ltd
11. Grama Vidiyal Micro Finance Ltd
12. Grameen Financial Services Pvt Ltd
13. Jana Lakshmi Financial Services Pvt Ltd
14. Madura Micro Finance Ltd
15. RGVN (North East) Microfinance Limited
16. Satin Credit Care Network Ltd
17. Shree Kshetra Dharmasthala Rural Development Project
18. SKS Microfinance Ltd.
19. S.M.I.L.E Microfinance Ltd
20. Sonata Finance Pvt Ltd
21. Suryoday Micro Finance Pvt Ltd
22. SV Creditline Pvt Ltd
23. Swadhaar Fin Serve Pvt Ltd
24. Ujjivan Financial Services Pvt Ltd
25. Utkarsh Micro Finance Pvt Ltd

### VI. SELF HELP GROUP

A self-help group is a voluntary association of people with similar economic background to enable mutual help to all the members of the Self –Help group. Self Help Groups basically act as the intermediaries and mainly consist of 10-20 members who work for the mutual benefit of all the members in the group. The members of the group bring in a small amount of money in the form of regular savings and contribute to a fund and this fund can be used to meet the emergency needs of the group members. The concept of collateral lending is absent and hence ensures peace of mind to the borrowing members of the group. Basically the Self-help groups are started by Government organisations. Self-help groups have been playing a vital role in ensuring the upliftment of poor and needy people, SHG's are empowering women through skill development activities. Women empowerment through SHG's will help in overcoming poverty and will ensure the economic development of the country.

The progress of SHG bank linkage program from 1992-03 to 2009-10  
(Amount in Rupees Crores)

Year	No. of Shg	Increase	Percentage	Loan Amount	Increase	Percentage
1992-93	255	-	-	0.29	-	-
1993-94	620	365	143.14	0.65	0.36	124.14
1994-95	2122	1502	242.26	2.44	1.79	275.38
1995-96	4757	2635	124.18	6.06	3.62	148.36
1996-97	8598	3841	80.744	11.84	5.78	95.38
1997-98	14317	5719	66.515	23.76	11.92	100.67
1998-99	32995	18678	130.46	57.07	33.31	140.19
1999-2000	114778	81783	247.86	192.98	135.90	238.15
2000-01	263825	149047	129.86	480.87	287.89	149.18
2001-02	461478	197653	74.918	102634	545.47	113.43
2002-03	717360	255882	55.448	2048.67	1022.33	99.609
2003-04	1079091	361731	50.425	3904.2	1855.53	90.572
2004-05	1618456	539365	49.98	6898.46	2994.26	76.693
2005-06	22,38,565	620109	38.31	31975.43	7076.97	102.59
2006-07	29,24,973	686408	30.66	18040.74	4065.31	29.09
2007-08	50,09,794	2085027	71.28	22268.32	4227.58	23.43
2008-09	61,21,147	1114000	22.23	22679.84	411.54	1.848
2009-10	69,59,250	829000	13.54	28038.28	5358.44	23.63

Source: SHG Statistics of NABARD

## VII. ROLE OF SELF HELP GROUPS IN MICROFINANCE IN INDIA

NABARD has launched the Self Help Groups (SHG) and Commercial Bank Linkage Programmes in 1992. Empowerment of women is very essential for the economic development of the country. Rural women should be provided financial assistance to instil confidence among them and to enable them to have a better standard of living in the society. Microcredit has helped in empowerment of women in India. SHG's have helped women by providing employment opportunities. Income and savings of women has increased hence empowering them economically and socially.

1. Encourages savings habits among women: Self Help Groups have played a pivotal role in encouraging rural women to save a small amount of money from their earnings. This has enabled women to become empowered in the society.
2. Self Help Groups extend credit facilities to the rural women: Self Help Groups have been extending credit facilities to the rural women without obtaining any type of collateral security. The group guarantee scheme is a boon to the rural women embedded by individual responsibility. Rural women are in a position to avail loan from SHG's without much of formalities.
3. Choice of appropriate activities: The rural poor who borrow money from the SHG's are given the freedom to choose any productive activities

according to their will and wish, this encourages them to be happy and enthusiastic with their activities and hence improves their living standards in the society.

4. Encourages Commercialisations: The productive activities that are undertaken by the members of the Self Help Group has encouraged them to take up activities for commercial purpose as they have a commitment of repayment of loan that they have borrowed. Initially the activities were mainly undertaken for domestic consumption but now they have commercialised their productive activities.
5. Change in the lifestyle of women: Initially women's role was restricted to only household activities, Self Help Groups have encouraged commercial activities however, now women have empowered socially, culturally and politically.

## VIII. PROGRAMMES INITIATED BY GOVERNMENT OF INDIA FOR WOMEN EMPOWERMENT

### a) Swa-Shakthi

The Swa-Shakthi programme was initiated in India in the year 1988. This programme mainly aims at the empowerment of rural women in India. The programmes worked through the support of Self-Help Groups. The Swa-Shakthi programme is funded by the World Bank and the International Fund for Agricultural Development. The programme mainly aimed at enabling

women to access financial assistance for their overall wellbeing. The scheme aimed at skill development and income generating activities amongst rural women which helped in women empowerment. During the year 2004-05, out of the total expenditure of 2600 crores, the Government had allotted almost 1.54% towards the Swa-Shakthi Scheme which shows the Governments interest in upliftment of poor and to ensure women empowerment.

#### b) Swayamsiddha

Swayamsiddha is a popular scheme introduced by the Government of India with the intension of empowering women socially and economically. The name Swayamsiddha clearly indicates the concept of being self-reliant. Women empowerment will help in eroding gender inequality in the society. The scheme provides access to credit to rural women, it also encourages panchayat level participation among the rural women. The scheme works through the Self-help groups which persuades women to work for the overall benefit of the members in the group. Swayamsiddha yogna is a recast of the Indira Mahila Yojana.

- The scheme mainly aimed at encouraging savings habit among women through the small savings scheme.
- The scheme has a unique feature of having association with the government and panchayat officials.
- The scheme works through Self-help Groups wherein homogeneous groups of women who have the same socio-economic status will be formed and the SHG's will be linked with government institutions.
- Continuous monitoring and co-ordinating mechanism is enforced by the Government from time to time

#### c) Swawlamban Programme

Swawlamban Scheme was introduced by the Department of Women and Child Development, with the partial assistance from Norway from the year 1982. The scheme also aims at making women self –dependent. The scheme aims at providing skill development for women to enable them to take up employment opportunities to lead a dignified living. The poor and underprivileged women are covered under this scheme and women from the weaker section of the society are empowered through financial assistance.

#### d) Support to Training and Employment Programme

The Government have given importance to Support to Training and Employment Programme for Women (STEP) scheme since 1986. The Government has revised the guidelines of STEP in the year 2016. The STEP Scheme aims to cover the scheme to around 500 million women by the end of the year 2022. The scheme aims at providing skill enhancement programme to the

rural women to enable them to become self –reliant and to take up various employment opportunities. The Government gave liberal grants to the organisations including the NGO's who are providing any type of employability and entrepreneurship to women including various sectors such as Agriculture, Horticulture, Handlooms, Food processing, Embroidery, Zari works, Travel, Hospitality etc.

#### e) Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA)

This Scheme was launched to empower adolescent girls. The scheme is managed by the Department of Women and Child Development. Initially the Government had included 200 districts which was extended to 300 districts. Now the Government aims to cover the scheme to many more districts in the country.

The various objectives of the SABLA scheme are as follows:

1. To facilitate the empowerment of young girls.
2. To enhance vocational skills, life skills and home skills among young girls.
3. To spread awareness among young girls about health, education, and nutrition.
4. To provide information to the adolescent girls about various public services such as Banks, Police station and Post offices.

Strict monitoring and control mechanism is being adopted to check the functioning of this scheme to ensure better utilisation of resources for the benefit of Adolescent Girls.

#### f) Women empowerment and Lively hood programme

Out of the estimated number of people who are poor across the world, it is estimated that around 70% are women. In India it is estimated that only 55% of the women population are literates whereas almost 78% of the male population are literate. Gender inequality has to be eliminated and women should be empowered. The Sabuj Jeevan Deep Prakalpa Programme has been initiated which has formed approximately 655 Self Help Groups wherein more than 10,000 women have been empowered. Women are in a position to access credit provided by these Self Help Groups, women are trained to enable them to become entrepreneurs of small business to lead a dignified life. Sukarya's flagship program has also been initiated with the aim of empowering rural women with the help of Self-Help groups and through livelihood initiatives. The Sukarya's program has helped women to learn skills relating to cereal processing, liquid soap making, paper bag manufacturing etc. The scheme aims to inculcate savings habit among women and to enforce credit discipline. Training for skill development has been initiated to ensure income generating activities for rural women. Women are able to earn a decent living with the help of Self Help Groups.

## IX. CONCLUSION

Although Self-help groups have played a vital role in empowering women, there are several loopholes such as low education level of the members of the Self-help group, lack of co-operation between members, non-availability of bank linkage programs, extreme work burden on part of women etc. Efforts should be made to increase the number of Self-help groups, education should be given priority in order to empower women, banks should set up more number of branches in villages and other unconnected parts of the country and measures should be taken for rural infrastructural development.

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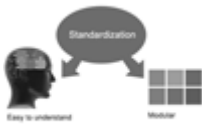
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A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

### **Numerical Methods**

Numerical methods used should be transparent and, where appropriate, supported by references.

### **Abbreviations**

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

### **Formulas and equations**

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

### **Tables, Figures, and Figure Legends**

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.



## Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

## PREPARATION OF ELETRONIC FIGURES FOR PUBLICATION

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

Color charges: Authors are advised to pay the full cost for the reproduction of their color artwork. Hence, please note that if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a Color Work Agreement form before your paper can be published. Also, you can email your editor to remove the color fee after acceptance of the paper.

## TIPS FOR WRITING A GOOD QUALITY MANAGEMENT RESEARCH PAPER

Techniques for writing a good quality management and business research paper:

**1. Choosing the topic:** In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

**2. Think like evaluators:** If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

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

**4. Use of computer is recommended:** As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

**5. Use the internet for help:** An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



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

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

**8. Make every effort:** Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

**9. Produce good diagrams of your own:** Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

**10. Use proper verb tense:** Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

**11. Pick a good study spot:** Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

**12. Know what you know:** Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

**13. Use good grammar:** Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice. Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

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

**15. Never start at the last minute:** Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

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

**17. Never copy others' work:** Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

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

**19. Refresh your mind after intervals:** Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

**20. Think technically:** Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



**21. Adding unnecessary information:** Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

**22. Report concluded results:** Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

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

## INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

### Key points to remember:

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

### Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

*The introduction:* This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

### The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

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

### General style:

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

**To make a paper clear:** Adhere to recommended page limits.

### Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

#### **Title page:**

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

**Abstract:** This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

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

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

*Reason for writing the article—theory, overall issue, purpose.*

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

#### **Approach:**

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

#### **Introduction:**

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

*The following approach can create a valuable beginning:*

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.





**Approach:**

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

**Procedures (methods and materials):**

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

**Materials:**

*Materials may be reported in part of a section or else they may be recognized along with your measures.*

**Methods:**

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

**Approach:**

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

**What to keep away from:**

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

**Results:**

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

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



**Content:**

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

**What to stay away from:**

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

**Approach:**

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

**Figures and tables:**

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

**Discussion:**

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.



**Approach:**

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

## THE ADMINISTRATION RULES

Administration Rules to Be Strictly Followed before Submitting Your Research Paper to Global Journals Inc.

*Please read the following rules and regulations carefully before submitting your research paper to Global Journals Inc. to avoid rejection.*

*Segment draft and final research paper:* You have to strictly follow the template of a research paper, failing which your paper may get rejected. You are expected to write each part of the paper wholly on your own. The peer reviewers need to identify your own perspective of the concepts in your own terms. Please do not extract straight from any other source, and do not rephrase someone else's analysis. Do not allow anyone else to proofread your manuscript.

*Written material:* You may discuss this with your guides and key sources. Do not copy anyone else's paper, even if this is only imitation, otherwise it will be rejected on the grounds of plagiarism, which is illegal. Various methods to avoid plagiarism are strictly applied by us to every paper, and, if found guilty, you may be blacklisted, which could affect your career adversely. To guard yourself and others from possible illegal use, please do not permit anyone to use or even read your paper and file.



CRITERION FOR GRADING A RESEARCH PAPER (COMPILATION)  
BY GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

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



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ISSN 9755853



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