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Investigating the Impact of Management Control Systems on Organizational Performance by Applying Framework of Performance Measurement Systems: A case of Banking Sector in Pakistan

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ABSTRACT

Performance measurement system (PMS), as an integral part of management control systems (MCS), has a critical role in guiding organizational members toward goals and evaluating the extent to which management has achieved the set goals. This is because organizations which are able to continuously monitor and manage their performance are more likely to succeed. Thus, owing to the growing importance of MCS and PMS, especially in developing countries which are under studied, this study has been targeted to evaluate the impact of PMS and MCS on organizational performance (OP) in a developing country 'Pakistan'. Moreover, there are very limited studies that have targeted to study the same in banking industry in developing countries, and in this case in Pakistan, using the variables of PMS and MCS. The present study is aimed to evaluate the impact of PMS on OP in the banking sector of Pakistan and it has also discussed the different types of MCS and factors of PMS contributing at banks in Pakistan. Moreover, the mediating role of MCS between PMS and OP is analyzed.

In this regard, a sample of 106 bank branches in Pakistan has been selected which are located in different parts of the country. The data has been collected using a structured questionnaire. The hypotheses were tested using linear regression and mediation as well as multiple mediation analysis. The findings suggest that the banks in Pakistan implement the four levers of controls including diagnostic controls systems (DCS), interactive controls systems (ICS), belief controls systems (BLCS), boundary controls systems (BCS), with highest application of BCS. The results of the study also suggest that both financial performance measurement system (FPMS) and non-financial performance measurement system (NFPMS) have a significant positive relationship with MCS whereas MCS has significant positive impact on organizational financial performance (FP) and non-financial performance (NFP) of banks. Mediation analysis suggests that MCS partially mediate the relationship between PMS and OP (both FP and NFP). In a model of multiple mediation taking all four controls simultaneously, the results indicate that BCS and BLCS are partial mediators between FPMS and FP while DCS and BLCS have been proved as significant partial mediators between NFPMS and NFP. Results also revealed that ICS has not proved as a mediator in any relationship except in the linear model.

The study is quite helpful in making both practical and theoretical contributions. It has bridged the gap in literature by analyzing the impact of PMS on OP taking MCS as a mediator in Pakistani banking system. It has also combined both financial and non- financial performance aspects in one study which has rarely been made in literature of PMS and OP, in the context of Pakistan. On practical side, the study provides valuable suggestions to Pakistani banks to improve their performance.

Keywords: *Performance measurement systems, management control systems, organizational performance, diagnostic controls systems, interactive controls systems, belief controls systems, boundary controls systems*

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May Allah bless you all.

DEDICATION

To my parents

Mrs. and Dr. Zafar Asdullah Rana

To my wife

Dr. Wajeeha Ashar

To my lovely kids,

Zymal Ashar

Minha Ashar

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LIST OF ABBREVIATIONS

ABL	Allied Bank Limited
BAL	Bank Alfalah Limited
BCS	Boundary Control Systems
BLCS	Belief Control Systems
BR	Business Recorder
BSC	Balanced Scorecard
CFA	Confirmatory Factor Analysis
DCS	Diagnostic Control Systems
EPS	Earnings Per Share
FP	Financial Performance
FPMS	Financial Performance Measurement System
GDP	Gross Domestic Product
HBL	Habib Bank Limited
ICS	Interactive Control systems
ICT	Information Communication Technology
KPIs	Key Performance Indicators
MAS	Management Accounting Systems
MCB	Muslim Commercial Bank Limited
MCS	Management Control Systems
NBL	National bank of Pakistan
NFPMS	Non-financial Performance Measurement System
NFP	Non-Financial Performance
OP	Organizational Performance
PM	Performance Measures
PMS	Performance Measurement Systems
PPP	Pakistan People's Party
ROI	Returns on Investment
SBP	State Bank of Pakistan
SEM	Structural Equation Modeling
SPSS	Statistical Package of Social Sciences
UBL	United Bank Limited
UET	Upper Echelon Theories

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CHAPTER ONE: INTRODUCTION

1.1 Overview

There has been growing popularity of the term Management Control Systems (MCS) in literature in the recent past where MCS is basically a set of procedures that managers deploy in order to control, align and motivate their employees in best interest of organization (Horngren et al., 2005). It is a system which gathers information and utilizes it to understand how different business resources have been performing in terms of set goals and strategies. Some of the researchers use the concept of MCS and management accounting systems (MAS) as well as organizational control systems interchangeably while in some researches, the concepts of MCS and MAS are combined to name Management Accounting Control Systems which are used to collect information for planning, monitoring and control of organizational resources ultimately helpful for decision making processes (Chenhall, 2003). In this way, MAS are expanded and thought to include all types of control mechanism in the organizations (Jamil and Mohammed, 2013). However, other researchers consider MCS in a broader context than MAS to include cultural as well as behavioral aspects in control processes (Kober et al., 2007). Malmi and Brown, (2008) have pointed out that while designing MCS for developing countries, there is a clear need of understanding and studying the culture as well as environment of developing countries. MCS which are not designed keeping in view of cultures, may not provide the required benefits rather they may affect the functioning of business.

The primary purpose of MCS is to achieve organizational objectives. Achievement of organizational objectives and improvement of organizational performance (OP) are quite significant for a business to survive in the market. The measurement of OP may be done through financial or non-financial or both types of measures (Rehman et al., 2018). The second purpose of MCS, keep control of organizations and measuring the overall performance is quite essential for any business of any size. Organizations use a number of control techniques for

different purposes. As for example, in order to spread knowledge within the organizations, roles and responsibilities are assigned to those who actually possess the knowledge (Rai, 2011). Moreover, rewarding the employees financially serves best to make their required behavior (Robertson and Swan, 2003; Rhodes, 2016). Henri (2006) has pointed out four important areas to explain the control structure of organizations which include: delegation of decision powers, implementation of standard rules and regulations, Performance Measurement Systems (PMS) and finally rewards and punishments.

Rai (2011) further explained that the delegation of tasks has to make important decisions as to which duties should be delegated and the level up to which they should be delegated by the management to its sub-ordinates. The use of rules and regulations are helpful to better control the performance of employees. They may involve performance targets including financial and non-financial etc., to achieve OP (Rabiu, 2009). The performance evaluation can be measured on several bases depending on the subjective judgment of the measuring authority or it is based upon certain benchmarks. The oldest form of controlling may involve direct supervision and observations. When direct supervision is made, management come closer to employees which is not only helpful to improve controls of business but also improves understanding of employees. Organizations may choose to adopt budget controls. Through this, business income and expenditures are controlled (Rehman et al., 2018). Malmi and Brown, (2008) have highlighted that the researchers may choose to use different types of controls including rewards and compensation controls, cultural controls, cybernetic controls, administrative controls and planning controls. These controls should work in combination rather than in isolation. Finally, rewards and punishments can also take different forms. As for instance: rewards may include promotion or other financial incentives while punishment may include firing an employee or shifting him/her to other departments or transfer or ceasing his/her financial rewards (Weatherly, 2004).

PMS on the other hand, is a way to evaluate the performance of an organization in quantitative terms (Cardy, 2003). It is thought to be a device which is mostly used by human resource department to propel performances of employees. It leads to cascade the overall organizational goals from top to bottom in hierarchy. If appropriately used, PMS can bring outstanding administration results for management. It can also be thought to be a step by step improvement guide which leads to instructing employees about what to do and how to do and it ultimately improves their performances (Rizwan, 2015). There could be different ways to measure the performance of an organization, as for instance: setting up performance targets to be achieved monthly, quarterly, half yearly or annually (Engelmann and Roesch, 2001). Moreover, the output of these performance measures is meaningful only when it is aligned with the organizational vision and mission. It is also required that the PMS should be implemented in an effective way so that it could motivate employees to do their best while doing their respective job functions (Kober et al., 2007).

Pakistan is a developing country and it needs to strengthen its financial sector through proper controls and systems (Husain, 2011). The concept of controlling bank's performance means to create better harmony between different risk-taking factors, profitability and growth. Studies have been undertaken to investigate the PMS and MCS activities as being practiced in the banking sector of the country but both of the terms (i.e., PMS and MCS) have been used alternatively to check their impact on overall OP or employee job performance (Shafiq, 2014). In this regard, research conducted by Khan, (2010) in Pakistan has shown that PMS or MCS are important tools to positively influence the job performance of employees. Hanif et al. (2012) also conducted their research on public sector banks in Pakistan using the variable of PMS and have discovered that the PMS have a positive impact on the performances of public sector banks, yet there is a need of improvements since the existing studies have focused only on limited aspects of PMS and MCS.

There are several studies in the context of PMS and MCS in developed countries, while the research in developing countries is lacking (Henri, 2006; Henri and Journeault, 2010; Lopez-Valeiras et al., 2016; Shafiq, 2014; Khan, 2010). Thus, Bin-Nashwan et al., (2017) has suggested that there is a need to investigate the influence of MCS on organizational performance in developing countries.

There is a lack of studies in previous literature in the context of Pakistan. Therefore, the current study is designed to investigate how PMS (FPMS and NFPMS) influence OP (FP and NFP) through MCS. The reason to investigate current was remarkable growth of banking sector in terms of profitability (SBP, 2020). The banking sector is considered as the target market because of the intense importance of this sector for the economy of Pakistan (Fazal-e-Haider, 2018). Being an important sector of economy, it is required to work even harder and put in place the more suitable control systems so that the economy which depends heavily on banking sector can be secured to a greater extent (Bhutto and Aziz, 2013). The number of commercial banks in Pakistan has been increasing rapidly since recent past. Pakistani banking sector is usually cited as a success story of an effective restructuring of a sector from public to private owned (Pakistan Economic Survey, 2018). Thus, it is imperative to understand the banking sector of Pakistan in terms of its PMS and MCS which helped it to grow at a rapid rate (Rehman and Ahmed, 2008). The recent introduction of e-banking or branchless banking services has further increased the importance of implementing a comprehensive controls system (Musa and Kurfi, 2015). Thus, owing to these reasons, the current research is aimed at investigating the PMS at Pakistani banks (Commercial and Islamic) which serves as a management control tool. In this regard, it has selected 22 banks operating in Pakistan with more than 10 branches. These 22 banks possess 96% assets of total banking industry in Pakistan (KPMG, 2019).

1.2 Objectives of Research

The aim of the study is divided between the following objectives to be achieved:

- To investigate the common forms of MCS working at banks in Pakistan;
- To examine the PMS working at banks in Pakistan;
- To find the effectiveness of PMS as a MCS at banks in Pakistan
- To understand the relationship between MCS and PMS at banks in Pakistan

1.3 Research Questions

The objectives of the research will be addressed with the help of following research questions:

- What are the different types of MCS working at banks in Pakistan?
- What are the main PMS at banks in Pakistan?
- What factors contribute to the effectiveness of PMS in Pakistan?
- How MCS affect PMS at banking sector of Pakistan?

1.4 Significance of Study

Owing to the growing importance of MCS and PMS, especially in developing countries, this study has been targeted to evaluate the impact of these two variables on organizational performance in a developing country 'Pakistan'. By doing this, the current study is aimed at making important contributions in two ways i.e., in theoretical terms, it will add to existing literature by investigating the probable link between MCS and PMS as to whether PMS is a major component of MCS or not which has largely been confused in literature (Lee et al., 2001; Yasin and Afghan, 2016; Fareed et al., 2016). Moreover, to the best of the researcher's knowledge, there are very limited studies that have targeted banking industry using the variables of PMS and MCS. As the current study has focused on banking industry of Pakistan because, this is one of the prime sectors of the economy (Husain, 2011), however, banks in Pakistan are not fully efficient (Ahmad, Mujaddad and Nadeem 2015) due to poor accountability and transparency. The current study has used both concepts of PMS and MCS in a single study to understand their relationships which has not been taken in any earlier study

in Pakistan. Moreover, the impact of these two variables has also been checked on both financial and non-financial performance. Thus, the findings of this study will serve an important guide to particularly banking industry and generally to all types of industrial organizations practically in order to better deploy the PMS for effective controlling and handling of the organizational activities.

1.5 Limitations of Study

This research has applied a well-defined and justified methodology to answer the research questions. However, the study bears certain limitations which are needed to be mentioned. In this regard, the scope of the study is limited to 22 banks in Pakistan out of total 26 banks. The study will access only those banks branches from which the information can be easily collected. Another limitation of study is that it will cover only those processes which exactly come under MCS and PMS and will not include the related concepts of these two areas. This has been done to investigate the processes of MCS and PMS comprehensively.

Moreover, the study also contains limitation of personal prejudice and biases of employees of banks from whom the data was to be collected in order to portray better image of their respective banks. However, despite of self-administration of questionnaires to be filled, this limitation still exists.

1.6 Research Methodology

This research has been based upon a quantitative research methodology. In this regard, the study has designed a clear research methodology which is based upon a mixture of positivist and interpretive research philosophies, quantitative research techniques with primary and secondary data collection where primary data collection has been made using structured research questionnaire from employees at selected banks while the secondary data collection has been made from previous researches to derive hypotheses of study. The study has used a

convenience sampling technique while the data collection instrument is a structured questionnaire. The data collected through questionnaires has been analyzed using SPSS (Statistical Package for Social Sciences) and different techniques including descriptive statistics, correlation and regression analysis as well as mediation analysis have been performed on collected data. The theoretical framework of the study has been derived from previous studies while the hypotheses have also been established accordingly.

1.7 Structure

The structure of the thesis has been organized into seven different chapters. Chapter One contains an overview of the study. It highlights the importance of this research, the aims and objectives and future contributions of this study. It has also provided the limitations, structure of research and a proposed methodology. The second chapter explains the main idea of this study in context of Pakistan as the research has been conducted in Pakistani context. In this regard, the geography of Pakistan, its politics and economic history have been provided while the evolution of banking sector of Pakistan has also been provided in detail. Chapter three provides a comprehensive overview of the literature available on the variables of study. For this purpose, the evolution of the concepts of PMS and MCS have been discussed while the types of both these variables and their usage in previous literature has been discussed. Finally, the importance and application of these variables for business have also been discussed. Chapter Four provides theoretical framework of study based upon existing studies. The hypotheses of study to be tested have also been provided as derived from previous studies. The Chapter Five explains the chosen methodology of study. Moreover, it explains as to why a particular methodology has been selected. In this regard, the research philosophy, research design, research approach, research methods, study population and sample, sample and sampling techniques as well as data analysis techniques have been discussed. Different types of research methodologies along with the justification of chosen methodology have been

provided. Chapter Six provides the results of study. Using the methodology explained in chapter five, data has been collected and analysis has been performed to obtain results. Moreover, the chapter seven contains discussion on the results obtained from study. Finally, chapter eight articulates the conclusion of study with recommendations, proposed future research and limitations.

CHAPTER TWO: CONTEXT OF STUDY- PAKISTAN

2.1 Introduction

This chapter explains the context of the study i.e., Pakistan. With the help of this study, the dynamics of Pakistani market can be analyzed in a better way. In this regard, the autobiography of Pakistan in terms of its geography, natural resources, political system, its economy and international relations have been provided with a glimpse. The banking system of Pakistan has also been discussed in detail in a historical perspective as well as its present and expected future. Moreover, it also elaborates the implementation of MCS and PMS in place at different banks in Pakistan.

2.2 Pakistan: A developing economy

Pakistan is located in South Asia and is a populous multiethnic country. It came into being in 1947 after the partition of British India. With an area of 881,913 square Kilometers, Pakistan has been ranked as the 33rd largest state in the world by area. The country is bordered by Afghanistan at Northwest, India at East, China at northeast and Iran at Northwest (Ziring and Burki, 2021). The country has had a challenging relation with its neighboring country India where both India and Pakistan have fought two wars over a disputed territory named 'Kashmir'. Though, talks between the two countries have started many times to resolve the outstanding issues but no results could have been achieved so far. However, both the countries are members of "South Asian Free Trade Area" and "South Asian Association for Regional Cooperation" and have bilateral trade relations with each other (Business Standard, 2021; Yhome, 2019).

On the other hand, it has strong and long standing relations with China. The strong ties between both nations are mutually beneficial. The formal relations between the countries were started in 1950 with boundary issues were resolved in 1963 and strategic alliance was formed in 1972. The economic cooperation between the two nations started in 1979. The recent contracts of CPEC (China Pakistan Economic Corridor) roads in the form of development of road

infrastructure in Pakistan and the deep seaport of Gwadar in Pakistan has provided new directions to economic and trade relations between the two countries (Allauddin et al., 2020).

The Northwest neighbor of Pakistan is Afghanistan with which the country has longest border. The country has a long history of tense relationships with Afghanistan due to five main reasons including: security concerns, trade and connectivity, cross – border ties, geopolitical dynamics and sovereignty concerns. Pakistan's support to US against war on terror further aggravated the situation but there has been an expected improvement in relations after the new Taliban government in Afghanistan (Threlkeld, 2021). The fourth bordering country of Pakistan is Iran located on northwest border. The relationships between both the nations have largely remained positive due to religious linkages and spiritual affiliations. At the time of independence, Iran was the first country to recognize Pakistan. However, the trade relations between both countries have remained inconsistent and challenging over the years which are now at transformation stage (MOFA, 2021). Thus, Pakistan is located in a region which has greater political, military and economic importance. Being positioned in a region where two superpowers including China and Russia strengthen its strategic importance (Wilson center, 2017). The sea routes of country remain opened throughout the year due to moderate temperature in the country.

Pakistan has also established some important relations with international community. In this regard, it is a member of Economic Cooperation organization for last three decades. It has also been a member of South Asian Association for Regional Cooperation (SAARC) for the same time period i.e., more than 3 decades. Additionally, it is also a member of 'Organization of Islamic Cooperation (OIC)' since 1969. It became a member of United Nations Organization (UNO) right after one month of its independence i.e., on 30th September, 1947. Furthermore, it has been a member of Shanghai Cooperation Organization, The Commonwealth of Nations, 'the Islamic Military Counter-Terrorism Coalition and others (Index Mundi, 2021).

In terms of geographical perspectives, Pakistan has rich diversity of mountain ranges including Karakoram, Hindukush and Himalayas. The Himalayan ranges are spread over an area of 320 km in the country while the Karakoram range is another range adjoining Himalayans. The elevation of these ranges has different varieties which ranges from 13,000 feet to even 26,000 feet above the sea level. Included in them the towering mountains of Nanga Parbat (26,660 feet) and K2 (28,251 feet). On the other hand, the Siachen Glacier located in Karakoram ranges is one of the biggest glaciers of the world (TAAP, 2020).

Additionally, it has other stunning landscapes with several big rivers including Indus and Kabul rivers (Ziring and Burki, 2021). This river system of Pakistan also originates from the snow covered in Karakorum and Himalayan ranges. They are mainly five named Ravi, Chenab, Jhelum, Sutlej and Indus rivers and the biggest river is Indus river which is also world's 21st largest river. There are various dams and barrages constructed on these rivers amongst which is the world's largest earth – fill dam called Mangla, constructed in 1967 with storage capacity of 5.9 million acre feet (Graana, 2020).

In terms of its religion and political system, it can be said that Pakistan is a Muslim country with democratic political system where Prime Minister is the ultimate political authority in the country elected for five years. The politics of Pakistan is formed within the framework of a national constitution organized in 1973. It has federal parliamentary republic system and the provincial governments are also provided with higher degree of autonomy. National cabinet is headed by Prime Minister of country who holds executive powers. The government system in country consists of three different types of branches: executive, judicial and legislative. Executive branch makes up executive government with a federal cabinet run by ministers and advisors. Cabinet headed by Prime Minister consists of executive branch while bicameral parliament makes up the legislative branch. It consists of the president senate and the national assembly and under national assembly, the provincial assemblies work (The Economist, 2020).

The representatives of both national and provincial assemblies are elected through democratic process for a period of five years. The judicial branch comprises of supreme court, high courts, mohtasib and lower courts whose aim is to interpret the constitutions and laws and regulations. The upper house is senate and lower house is national assembly (National Democratic Foundation, n.d).

The country consists of five provinces including Sindh, Punjab, Baluchistan, Khyber Pakhtunkhwa and Gilgit Baltistan. With a population of more than 207 million there is greater cultural diversity in the country. With a 59% of literacy rate, the unemployment rate in the country is 4.445% by the end of 2020. This indicates a shallow literacy rate in the country and even low for females. Moreover, a higher percentage of country's population falls in youth i.e., 63%. It indicates a great potential of youngsters in the country, which is helpful to derive its economy (The Common Wealth, 2020).

Pakistan is a developing country which is striving hard to accelerate its economic growth in order to keep pace with other growing economies of the area (The World Bank, 2017). During 1950s, the economy saw a growth rate of 3.1% while the decade experienced some instability in terms of political and macroeconomic indicators while there was also an acute shortage of resources. The trade relations between India and Pakistan were strained which were ultimately resolved in mid 50s while monsoon floods during 1951-1953 imposed further economic problems. The uneven economic development in East and West Pakistan was another economic challenge. However, later, under the reign of Prime Minister Ayub Khan, during 1958-1969 the economic growth averaged 5.82%. There was establishment of automobile and cement industries in Pakistan in addition to construction of various dams in country and launching of space program of the country. Prime Minister also started green revolution program where land reforms were made. The consolidation of holdings, provision of improved seeds, higher procurement policies, augmented allocation in agriculture sector and measures against hoarders

were also a part of green revolution of government (Dawn, 2017). Moreover, the tax incentives encouraged greater investments in country. During 80s under the government affairs in the country were run by military takeover general Zia ul Haq. He liberalized various controls and abolished different rules while the balance of payment was also kept under control resulting in self-sufficiency in almost all varieties of foodstuff with the exception of edible oils resulting in growth of GDP which reached to 6.5% (Anwer et al., 2017).

However, in 1990s, the economy of country deteriorated significantly due to poor governance mechanisms. The country has debt crisis while the GDP growth rate sank to 4%. There was consistent rise in external deficit while the exports stagnated and market share in international trade market also shrank. The governments largely supported privatization and liberalization policies yet these policies were poorly executed thus, created further implementation issues. Moreover, there was rise in inflation levels while the country faced international sanctions after its nuclear tests in 1998. Moving forward, in 2000s after the military takeover of General Musharaf as the president of Pakistan, the improved economic management and sound economic policies helped to improve the GDP growth rate to around 9%, reduction in debts, increase in exports and foreign reserves. The improved economic outlook during this period can be attributed partly to sound economic policies and reduction in debt while they are also resulted from billions of dollars of US aid granted to Pakistan to support US against war on terror (Khanna, 2002).

After the resignation of General Musharaf in 2008, the elected government of Pakistan peoples Party (PPP) took over the control of country. There was again a rise in corruption, violence, unsustainable economic policies which resulted in stagflation in country. From 9% growth rate, it reduced to only 4.09% and there was also lack of coordination between fiscal and monetary authorities (Husain, 2010).

After the completion of PPP government's tenure, the other political party i.e., Pakistan Muslim League 'N' came into power during elections of 2013. The government tried to reduce the debts and stabilize public finances through taking loans and grants from IMF (International Monetary fund) yet the country faced an acute shortage of energy, higher debt burdens, hyperinflation and there was mild economic growth (Sohail, 2013). The economy of country tried to keep growing until recent past in 2018 when the growth rate reached 5.8% mainly attributed to increased consumption. However, after the take-over of Prime Minister Imran khan, the economy tumbled like all the global economies, after the outbreak of COVID – 19 as the GDP growth rate reached 1.3pc in FY2021. However, it is expected to average 2.7pc in 2022-23 since there has been a rapid increase in foreign remittances, financial assistance provided by government under its 'ehsaas program' during COVID and the construction package of homes offered by the government (The World Bank, 2021).

The future outlook of Pakistan economy is seemed to be bright since the government has started various projects of economic growth which include the construction of dams, road infrastructure, the completion of CPEC projects, rising exports and increased remittances. The geopolitical position of Pakistan has also been strengthening with the emerging role of China in world politics and economics (Runde, 2018).

Industry in Pakistan is underdeveloped, yet it contributes to Gross Domestic Product (GDP) of Pakistan by 23%. Despite being underdeveloped, some of the industrial sector of country has earned worldwide recognition. As for instance, the cotton textile industry of Pakistan is well known, the biggest importers of this industry are Japan and Hong Kong. The other important industries of country include sports industry, sugar industry, cement industry and fertilizer industry (The Global Economy, 2020).

The size of GDP for the year 2020-21 stands at Rs. 47.709 trillion while the per capita income is Rs. 246,414. The biggest sector of economy i.e., agriculture sector has shown growth

prospects even in COVID situation while industrial sector has also turned back to a positive growth in 2020 after experiencing a negative growth rate in 2019 while the service sector which also includes financial services has shown positive growth rate 4.43pc during 2020-21 (Khan, 2021). The banking sector of country has primary role to play in successfully executing these policies (The World Bank, 2019).

2.3 Banking sector of Pakistan

Banking sector is a vital sector or section of economy of any country which is responsible for holding financial assets and use these financial assets for further wealth creation. In this regard, the banks play a very important role in providing depositors' money to investors and thereby play their role in economic development of any country. In the efficient distribution and allocation of country's scarce resources, the banking sector plays a vital role which is quite important for further economic wealth creation. A well-functioning banking sector also offers other facilities like money transfer, safety of deposits and lockers facility (Zafar and Aziz, 2013).

The banking sector of Pakistan has witnessed some massive changes since independence of the country in 1947. It has undergone distinct phases. Initially, the sector faced an acute shortage of resources, lack of trained and qualified staff which led to poor quality offerings of banking industry in the country. At the time of partition, there were only two banks in Pakistan performing their operations named Habib bank Limited and Australasia Bank Limited while the Reserve Bank of India was performing the functions of central bank in both India and Pakistan. Since the Reserve bank of India was felt to be performing its operations unfairly for Pakistani banking industry, thus, a need was felt to establish a separate state bank in Pakistan by the government of Pakistan. Thus, the central bank of country named as 'State Bank of Pakistan' (SBP) was established on July 1, 1948 in order to control the financials of country (Ahmad et al., 2010). Afterwards, National Bank, Allied Bank and Habib Bank were

established to start commercial banking operations in the country. The State Bank of Pakistan act 1956 was formed which enhanced and extended the control of State bank and it further encouraged the establishment of private banks in the country. However, due to bribery and corruption, it resulted in unhealthy competition as well as performance of unlawful practices. Owing to such a situation, the government of country ordered to nationalize all the private banks in 1974 which resulted in bringing 13 banks under full government control and their consolidation into 6 nationalized banks. At that time, Pakistan Banking Council was also formed to look after and monitor the working of these banks and also marginalize the operations of SBP. These steps were also taken to prioritize lending for industrial purposes which proved helpful for short run but long run gains were negligible. Thus, the banking sector grew largely to finance large businesses, governments and politicians which resulted in funneling of huge sums of money from financial sector of country which later declared as "bad debts". As per statistics, on an average 25% of all debts declared to be bad during periods of nationalization. The CEOs and board of directors were not appointed independently and the banks were not in control of the purposes for which they were formed. Thus, the nationalization of banks discouraged competition and thereby offering of inferior quality products while the private and foreign investors were also discouraged. Moreover, the banking industry was taxed at a higher rate of 58% while the other corporate sector was taxed at 35%. Thus, the higher tax rates, increased amount of bad debts, lack of trained and professional staff resulted in higher lending rates of 21% which was not affordable for small borrowers. This was the period when the banking business in country was subject to credit ceiling, controlled lending and deposit rates and subsidized credit. During 1979 – 1992, the government took several initiatives to start interest free products to customers with Meezan bank declared to be the first Islamic bank in country established in 2002 followed by Dubai Islamic Bank and Bank Islamic established in 2005 (Asdullah, & Yazdifar, 2016; Shar et al., 2011).

Finally, the privatization of banking sector was ordered again in 1992. It encouraged private local as well as foreign investors to invest in this sector. After privatization decision, various reforms were offered in banking sector while the regulatory powers of SBP were also restore through amendments in SBP Act 1956 and Banking Companies Ordinance 1962. It led to improvement in internal controls procedures and strengthening of governance structure of banks. The overall operating environment of banks was changed in country. The privatization of state-owned banks, encouragement of new entrants in banking sector, liberalization of branch license policies removal of cap on lending rates discontinuation of direct lending schemes and application of information technology in provision of banking services all led to promote healthy competition between industry players which also supported the growing economic activity (Rahman, 2017; Rizwan, 2015).

Currently, the Islamic banking in country has shown a remarkable growth rate of 30% for the fiscal year 2020. In this regard, the assets of Islamic banks have grown 27.8% while the deposits also doubled from 2015 to 2020. The total assets of Islamic banking in Pakistan reached $27.50 billion while deposits reached $21.3 billion by the end of 2020. Additionally, the financing of Islamic banking increased by 20%. Thus, the banking industry of Pakistan has turned to a competitive and profitable industry from a government owned industry (Abbas et al., 2014; Asdullah, & Yazdifar, 2016).

The banking sector of Pakistan is comprised of commercial, Islamic and foreign Banks. There are total 26 banks operating in Pakistan out of which 5 belong to public sector (KPMG,2019). There are 6 banks which are in high competition with each other and possess most of the assets of banking sector (The International Banker, 2017). To be more specific, these six banks possess 53% of total advances and 57% of total deposits in economy. These six largest banks include (The International Banker, 2017):

- National Bank Limited (NBL);

- Habib Bank Limited (HBL);
- Muslim Commercial Bank Limited (MCB);
- United Bank Limited (UBL);
- Bank Alfalah Limited (BAL);
- Allied Bank Limited (ABL)

Out of the six banks mentioned above, Habib Bank Limited is the private bank and is the largest bank of banks in terms of assets with an extensive branch network of 1751 branches. It does not operate only in Pakistan rather the bank has its branches in different countries of Middle East, Africa, Asia, Australia, America and Europe. The National Bank of Pakistan stands at number second in overall commercial banks of Pakistan while it is the largest state-owned commercial bank. Established in 1949, National bank has presence in 11 different countries of the world with 1313 branches. United Bank is another larger bank of Pakistan with a branch network of nearly 1390 branches, the bank operates in 19 different countries of the world. MCB was established in 1947, nationalized in 1974 and privatized in 1991. With a branch network of 1100 branches, the bank operates in South Asia, Middle East, Pakistan and Eurasia (Thakur, 2019).

The number of total banks in country have reduced from 36, only a decade and a half ago due to different mergers and consolidation operations in the country while the few foreign banks exited their operations. As per statistics, there are 15 mergers from 2002 to 2011 only while the number of takeovers in banking sector reached 72 during the same time period (Abbas et al., 2014).

However, the top 6 banks have been growing their supremacy in the market through increasing their branch network. It helps them to grab most of the deposits of customers which are further advanced to generate profits by these banks (KPMG, 2021).

The banking sector of Pakistan has been assisting the economy to perform better and flourish. As per data collected by World Bank, 57.9% of the total domestic credit in the country is provided by banking sector (Trading Economics, 2019). The overall banking industry is regulated and controlled by State Bank of Pakistan (SBP). In addition to it, they also have to follow the international Basel III standards (Asghar, 2018). There is huge potential in the banking sector of Pakistan where the numbers of account holders are just crossing 43 million in total population of nearly 195 million. The reason behind this huge gap is generally lack of access to technological tools and equipment. However, after the advent of fast speed e banking services and increased awareness of the consumers, the growth potential is actually increasing (Ahmed, 2018). These factors have attracted attention of researcher to undertake research on this important industry.

2.4 Performance Measurement systems (PMS) and Management Control System (MCS) in Pakistan

Gauging the performance of banks is very important and should be dealt with on regular basis. There are various techniques which are helpful to evaluate and monitor the performance of banks which largely include: analyzing the Key Performance Indicators (KPIs), Data envelopment analysis (DEA), Analytical Hierarchical Process, Delphi Analysis, Balanced Scorecard, financial ratios analysis, Balanced Scorecard and others. The banks may use single or a set of these tools to measure their performances under their MCS, PMS programs (Aryanezhad et al., 2011).

An understanding of these performance measures and controls have remained an area of attraction for academicians and researchers. However, in Pakistan, there are very few studies which have investigated the PMS and MCS in organizations. In this regard, Khan et al., (2013) did research study to find out the importance of PMS in Pakistan. They took the formal interview from the 30 human resource managers who are working in the different industries of

Pakistan. This critical analysis was done to find out the problems in the implementation of PMS. Management gives low level of priorities in the implementation of the PMS. They did the extensive study and found out the problems which effect the process of implementation of PMS. There are many issues which became the cause problem in the implementation of PMS like daily pressure of work and the time constraints which solve out the short time problems in organization and also become the cause to slow down the process of successful implementations of PMS. The insufficient resources like insufficient attention, effort and amount of the work cause the difficulty in the successful implementation of PMS. These insufficient resources also include allocation of budget and capacity of people in organization which cause the problem in implementation of PMS. It was also noticed that more time and effort required for the implementation of PMS then expected time and effort. The unstable phase also forms when organization focus on resolving out other important issues. These issues can include downsizing, financial crisis, reorganizations and acquisitions. These issues cause the hurdle for PMS implementation. Unclear goals, management strategic, negative attitudes, organizational strategy, change process, reward system and updating system, all these factors cause the hurdles in implementation of PMS in Pakistan. This research also revealed that there is positive relationship between Performance Measurement System and Information Communication Technology process (ICT). The organizational strategies, objectives and mission also influence the process of the implementation of PMS. If the strategies of organizations are not cleared by the employees, it leads towards the critical development of key performance indicators (KPIs) which directly influence the delay of the PMS implementation. KPIs are the indictors on the behalf of the employees who are unsuccessful to put their efforts in achieving the goals of organization. If KPI's are poorly defined which lower the level of goals and objectives of organization, it become the source of no alignment with strategies of organization. The failure of PMS implementations happens when there is weak

linkage between KPI, employees, department and team members. It is very difficult for employees to accept the change process in organization, when organizational management came with the idea change process; employees feel threat or are least interested in the adaption of change which becomes risk for the successful implementation of PMS. PMS is the main source which highlights the employees' performance accurately. This study also revealed no relationship between the reward system and KPI's which leads towards the slowing down process of PMS. It was also suggested that PMS should be updated to get the better results because of the changing environment of business and KPI's. This change also influences on the strategies of organization and critical success factors.

Moving forward, Aslam and Sarwar (2010) also undertook exploratory research in Pakistan about how PMS can improve firm performance. The aim of the study was to find out the steps which can be helpful in the implementation of the best practices of PMS. This study was qualitative and semi structured interviews were conducted from the director of the "We Care" firm of Pakistan. The results showed that objectives setting, rewards system, performance agreement, training, and performance reviews are the issues related to the employee's performance which are the main contributor in the job's dis-satisfaction, rigid environment and high rate of job turn over. Again this study included studying only PMS while MCS were not examined which has been examined in current study.

Another study in context of PMS were conducted by Yaseen and Afghan (2016). They conducted their case study analysis on Al Habib Bank Pakistan to find out the practices of performance management. The focus of this study was on to explore the relationship between the effectiveness PMS and different aspects of performances measures, rewards connection with performance and it is different from current study in a way that Yaseen and Afghan, (2016) have focused only on one commercial bank to understand the PMS of bank while the current study is wider in scope since it has included 26 banks of Pakistan while it has been aimed at

analyzing both PMS and MCS at banks. The sample was consisted of interviews of 30 employees. The results showed that financial institutions of Pakistan fairly focus on the performance of employee and outcomes and less concerned about the training and development of employees. This study results also explained about the different exercising aspects of performance measures, reward connection. The results indicate the direct relationship between effectiveness of PMS and performance measures and rewards connection. Finding also showed positive relationship between job satisfaction, performance appraisal, employee's loyalty and PMS. Employees opined about the monetary and non-monetary rewards from the management system plays important role in motivation building and creates loyalty which results in good performance. Performance appraisal has positive relationship with job contentment, devotion and motivation of employees which results in the improvement and implementation of Performance Measurement System. This research also showed that Al Habib bank Performance Measurement System fairly focused the employee's outcomes related to the performance and bank is less concerned about the training and development of the employees. There is positive relationship between reward and effectiveness Performance Measurement System of financial institution of Pakistan. Pakistani financial institutes are trying to improve the efficiency to get better and advance outcomes related to performance management.

In a similar study, Fareed et al., (2016) did empirical research on the employees of Mezan Bank to study the PMS and its effect on job performance of employees. This study was done on Mezan bank Lahore (Pakistan). The objective of this research was to find out the relationship between the job performance of management staff and the effectiveness of Performance Measurement System. This study also explored the different dimension of the PMS which are related to the job, goals, objectives and rewards, performance appraisal system (PAS). These variables are the active contributor in the employee's job performance. He took the data from 150 management workers. The results of the study showed positive relationship between the

PMS and PAS. The research finding also explained that PMS also predicts PAS. Dimension of job, recognition and rewards of PMS are positive factors which contribute to PAS. This study again left a gap to study MCS in combination with PMS which was covered in Hunjra et al. (2017).

Thus, in context of MCS, Hunjra et al., (2017) have investigated the influence of MCS on OP in financial sector of Pakistan. Using a sample size of 32 companies belonging to banking, insurance and investment sector, the study has provided that financial MCS positively influence the OP and they should be aligned in long run. Though, these results serve as a base line to conduct the current study, yet Hunjra et al., (2017) have focused only on financial MCS. Thus, the current study has been targeted to cover larger sample size while considering both financial and non-financial aspects of banking performance.

2.5 Chapter Summary

This chapter has provided a broader based overview of the Pakistan and its banking sector. More importantly, it has discussed the studies conducted in Pakistan on PMS and MCS to analyze the application of these two concepts in Pakistani financial sector. The results of studies already conducted are largely on exploration of the concept of PMS and its application by conducting a case study or using smaller sample sizes and there is only one study examining the impact of MCS on performance of financial sector where the non-financial performance has not been considered. Thus, the current study has been aimed at bridging the gaps in these studies by undertaking an investigation of both PMS and MCS using a larger sample size of 106 bank branches while studying both financial and non-financial performance of banks.

CHAPTER THREE: LITERATURE REVIEW

3.1 Introduction

The previous chapter has provided a detailed context of Pakistan and the banking industry in the country. The current study has looked into vast literature available on the topic, through which gap has been identified and new research framework to be tested for this study, has been drawn. The current chapter discusses the extant literature on variables used and a theoretical framework is drawn on the basis of such studies.

3.2 Performance Measurement Systems (PMS)

The measurement of organizational performance (OP) is very important. There may be different ways of doing this. As for instance the performance targets can be set on monthly, quarterly, half yearly and yearly basis and then the achieved performance can be evaluated with established targets (Courty, 2003). A good PMS should be one which not only serves the measurement of OP but can also motivate employees and align performance with overall organizational mission. It is because, a system can be very effective at production unit but at the same time, it may not lead to motivate or control employees in this global business environment which is changing rapidly (Bikker, 2010).

The origin of PMS can be traced back to the Tylor's theory of scientific management which was emphasized upon controlling organizational tasks in order to achieve standard output. However, the concept of PMS has been poorly defined while the definition varies in literature (Bento et al., 2014). Some authors have termed it as the process of making the quantified actions while in other researches, it has been elaborated as the quantification of effectiveness as well as efficiency of the actions of any business. For this purpose, business makes use of metrics (Bikker, 2010). Franco-Santos and Bourne, (2005) have showed their concern on the poorly defined concept of PMS as "the lack of agreement on a definition creates confusions and clearly limits the potential of generalizability of research in this area". The simple

definition of PMS in literature is: “a metric used to quantify the efficiency and/or effectiveness of an action” (Neely et al., 2003, p. 8).

Armstrong and Baron (2004) argued that PMS ensures how managers manage tasks effectively. It means that 1) manager ensured that teams and employees should know and understand what is expected from them, 2) they also know what skills and abilities are expected from them. 3) Manger should also support their skills and abilities by the organization to meet the expectation through the feedback on teams and employee’s performance. 4) mangers also have opportunity to contribute and discuss the teams and employee’s aims and objectives. Bhattacharjee and Sengupta (2011) suggested employees are the most valuable and crucial assets of any organization. They directly influence the speedy growth of the organization. Therefore, it is important to manage the teams and employees effectively by the manager. It is challenging for the manger to identify the gap between actual competence of the employees and expected competence and bridge the gap. Since the employees enter the company and till when they leave, it is crucial to identify the whole cycle of competencies which are expected and which they possess in actual (Amberg, 2014). So, that employee’s performance and be managed and achieved the strategical advantages.

Thus, PMS is all concerned with the management of performance in such a way as to control the future output (Lee et al., 2004). Though, businesses are not equipped with accurately predicting the future, yet a capability to make educated guesses is required on the basis of authentic and sound information (Melnyk et al., 2014). The definition of PMS has been determined on the basis of wide literature available but based upon objective measures while research indicates the involvement of subjective measures as well (Weatherly, 2004). The aim of any PMS is to determine and measure the key points which are responsible for the success of business. It has been rightly termed as one which is concerned with internal processes (Courty, 2003).

The concept of efficiency encompasses that the work should be performed and results are achieved in such a way that there is no wastage of time, resources or efforts which means that the needless activities are eliminated while more useful activities substitute the lesser useful. In this way, the production of standard performance with minimum resources is called efficiency (Aguinis, 2009). On the other hand, effectiveness is concerned with doing the right things in the right way which means to perform the right tasks or achieve the desired results (Melnyk et al., 2014). Grossi et al., (2017) have also pointed out two types of PMS: the first ones are related to efficiency while the second type is concerned with effectiveness. The efficiency aspect is short term and is concerned with results. On the other hand, the effectiveness is a long term concept and is related to drivers of performance. Sobis and Okouma (2017) have supported this point of view and have held that the businesses should establish hard metrics quantitative in nature for the measurement of economic performance. On the other hand, soft metrics which are qualitative in nature should be designed for outcome. Thus, the organizations should deploy multiple PMS which can guide organizational performance in different areas like quality, input, output. Tessier and Otley, (2012) argued that the four types of controls are needed to be studied in combination with PMS. In this regard, the formal BLCS is not a standalone control rather it is a part of social control. On the other hand, the DCS is a part of operational performance control while ICS belongs to strategic performance management. Finally, BCS has been divided into two levels i.e., operational and strategic. In this way, all levels are interlinked with PMS.

Whenever, a business tries to measure the performance, it is faced with a challenge as to selection of the right methods (Aguinis et al., 2011). While choosing any measure for quantifying the performance, the responsibilities towards all key stakeholders of business are kept in mind including employees, suppliers, customers, equity holders, debt holders,

government and the society. Moreover, the organizations need to determine as to which questions, they want to focus (Melnyk et al., 2014).

Researchers are of the view that the performance of any business can be managed when the desired results are defined, the expectations for performance are properly communicated, the activities to be performed are carefully specified and rewards are also controlled for those specific performances (Frigo et al., 2000). However, doing all this is not at all an easy task. It requires very careful consideration. It is because the wrong mix of measures often lead to negative results which indicate that PMS are not static rather, they should evolve with the passage of time on the basis of feedback provided (Merchant and Van der Stede, 2011; Appelbaum and Armstrong, 2003).

Researchers have provided greater recommendations for proper use of any PMS. They are of the view that PMS must be based upon strategy but should be easy to understand organization wide (Aguinis et al., 2011). The systems should be able to generate timely feedback and should include both the suppliers and customers in the whole process. They should be relevant and measure specific goals (Merchant and Van der Stede, 2011). They should be clearly defined and focus on improvements with the help of feedback. For this purpose, they must have clear formula rather than numbers which are absolute. PMS should be based upon trends and they should further provide information to management. Moreover, they are needed to be objective rather than based upon opinions (Bikker, 2010). The dynamic nature of the organization must be considered while designing as well as implementation of the PMS. They are also needed to be exact and precise about what is aimed at measuring. Moreover, external monitoring is necessary throughout the implementation process (Kallio et al., 2012).

3.2.1 Financial and Non-Financial Measures

The systems of PM should not be based upon single measures rather they should combine both the financial and non-financial measures which are able to evaluate the customer satisfaction,

flexibility, finances, time and human resources. The output of these systems must be helpful for senior management for further strategic framework (Tangen, 2005). The PMS are also required to be dynamic in nature in such a way that they correspond to the changes in the external environment of organization. The overall aim of such systems is to measure the performance of the whole organization and not just an individual employee. All stakeholders should be considered while designing the PM and the overall formula must be simple and easy to understand (Chiesa et al., 2009).

However, the perception of effective PMS is slightly different for a practitioner than an academician. It is because, the academicians pay lesser importance to time and more on generalizability and validity of the results while practitioners usually focus on ideas which can quickly generate results even if they are only 'good enough'. Tangen, (2005) is of the view that a good PM should be aimed at providing strategic support, accurate information, both operational and tactical objectives and the sub-optimization (Bronzo et al., 2013).

The field of PMS has been constantly evolving and has undergone different stages of development. Neely et al., (2005) has classified all the development in this field into five different stages:

- The era of 1980s – when the problems associated with using single financial performance measure started to develop and were found damaging for the competitiveness;
- The time period of early to mid-1990s – when the solutions to the problems arose in 1980s were presented in the form of BSC approach and various other measures including SMART technique, Integrated PMS, Cambridge performance measurement frameworks evolved. They started to serve quickly by filling the gap of non-financial measures highlighted in 1980s;

- The era of late 1990s – when the ways to successfully implement the PMS were introduced which included: the business excellence model, integrated PMS;
- The early 2000s – when greater research into the area started, thus, the data became readily available for the successful implementation of different approaches including BSC;
- The mid of 2000s – when questions about the theoretical validity of the selected performance measures started.

There are other researchers too who take a slightly different approach for the categorization of the development of PMS like in financial and non-financial measures (Chiesa et al., 2009; Salterio, 2012).

The broader knowledge discussed on the topic of PMS carries different themes. In this regard, the financial performance has been used extensively where a single measure has been used for performance evaluation or where the accounting based measures have been discussed (Chiesa et al., 2009). The use of operational performance measures has taken greater importance which are responsible for future business performance while financial performance measures focus on the already obtained financial information. The recent studies on PM have stressed on using the performance measures which are external to organization (Salterio, 2012).

The PMS have long been used also as a measure of OP in terms of Earnings Per Share (EPS) and Returns on Investment (ROI) but, later it was felt that such organizational controls are insufficient in this era of intense competition and globalization (Lee et al., 2004; DeNisi and Murphy, 2017). Thus, there is need of broader range performance measures which include both financial and non-financial measures (Alder, 2011). These systems are qualitative and quantitative, internal and external, absolute and competitive. However, in the next phase researchers have highlighted even diversity of design in PMS. Such designs have included analyzing the impact of various external factors including: technology, size of organization, its

strategy and structure and the uncertainty in external environment for different financial and non-financial variables of business (Coskun, 2005). Moreover, the manufacturing organizations, especially, deploy PM methods based upon cost and financial accounting practices. But these techniques are old fashioned and may not serve the purpose of organizations in a rapidly changing business environment. So, the failure of these financial measures, non-financials were also necessitated (Kipley and Lewis, 2009; DeNisi and murphy, 2017).

Although, the use of non-financial measures has been emphasized in literature but there are differing views as to how they are capable of measuring the financial performance (Shafiq, 2014). Yazdifar (2005) suggested that in independent companies, financial analysts believed non-financial managers are perceived management accountants in organizations. There are studies which have established a link between customers satisfaction and the financial performance measures including market values or revenues of business while the extent of this relationship varies with the nature of industry (Kaplan and Norton, 2004). McNamara and Mong, (2005) have also argued that organizations cannot effectively measure its performance using single systems rather they should organize their customized system of performance measures (Hammer, 2007). On the other hand, the organizations must also be adaptable to a range of performance measures, while the perfection of any performance measure depends upon time and experience (Musa and Kurfi, 2015).

As described earlier that the performance measures can either be financial or non-financial. The researchers have argued that a combination of financial and non-financial measures is beneficial for all types of organization either non-profit or profit making organization (Hunjra et al., 2017). The inclusion of non-financial measures has been made in order to overcome the limitations of financial measures which included: short term focus, lesser guidance for future

plans and strategies and focusing on smaller groups of stakeholders; there is an endless debate on how to perfect the design of non-financial measures (Cheng and Coyte, 2014).

The literature has also discussed a range of principles for the effective implementation of PMS. In this regard, Hammer, (2007) has provided that in order to ensure the effective implementation of any selected PMS, it is necessary to decide before-hand as to what is the purpose of measurement. The culture of measurement must also be friendly and according to the culture of the organization while the systems must also be used systematically. Neely, (2005) has emphasized that the PMS must be sensitive to the changes in external business environment. Moreover, the system must be able to review and prioritize the business objectives if the changes in external business environment are of substantial nature.

Kalle and Lind (2010) have discussed the critical success factors of PMS which led towards high performance culture. He emphasized on the provision of graphical information by the PMS at local level. He also provided that good PMS must assist people in controlling their job outcomes in the right direction. However, the system must be designed and implemented by keeping in mind all the consequences (Armesh et al., 2010).

The earlier studies on PMS have discussed even different concepts. In this regard, Bikker , (2010) has investigated on how effective the financial institutions provide their services to customers. Moneva et al., (2007) on the other hand, measured the relationship between external factors and financial performance for the purpose of evaluating their role in the overall performance of the business. The results of this study further added that the environmental factors provide a greater contribution for the financial performance (Antonsen, 2014).

For later studies, service quality served as a good indicator of PM (Deville et al., 2014). In this regard, different dimensions have been considered important for the purpose of strategic performance management. They include: responsiveness and communication, reliability and systemization while there are other studies which consider the size of banks as another indicator

for the measurement of its performance (Aranda and Arellano, 2010; Aguinis and Burgi-Tian, 2021). As for instance Spekle and Verbeeten, (2014) have provided that the banks which are larger in size, are performing better than those which are of smaller size. Deville et al., (2014) has examined the PM in hierarchical organizations while there are other studies which investigate the PM in organizations belonging to public sector (Kennerley and Bourne, 2003; Yigitbasioglu and Velcu, 2012; Spekle and Verbeeten, 2014). All of the studies provided that the organizations should control their performances for any variations in their set standards and actual performances. Moreover, the PMS should be in harmony with the organizational structure and its overall activities. The main goal of PMS should always be made clear and should never be forgotten). Moreover, the criteria of good performance should also be clear and communicated to everyone in the organization. For this purpose, both the financial and non-financial performance aspects must be balanced in the PMS adopted (Spekle and Verbeeten, 2014).

The PMS is not only becoming diverse but are also broader in perspective. The nature and the purpose of using diverse designs of PMS in an organization have different categories. As for instance, the use of accounting information has been classified as attention directing and problem solving (Deville et al., 2014). Others have provided three distinct uses of PMS including: coordination, monitoring and diagnostic while Henri, (2006) have provided four categories of PMS attention focusing, score keeping, legitimize and problem solving. Similarly, Ittner et al., (2003) had previously provided four uses of PMS which are: evaluation of performance, identification of problem, external disclosure and capital investment. Later-on Spekle and Verbeeten, (2014) updated the uses of PMS as attention focusing, legitimizing, monitoring and strategic decision making.

There are various issues related to successful design of the PMS. In this regard, Mettanen (2005) has highlighted many factors which are critical for successful PMS. The employees of

an organization occupy the greatest importance and even though the concerned organization is research based in which the employees are quite intellectual, the challenges for the good PMS are almost same to those of other service or manufacturing organizations. Tuomela, (2005) also conducted a similar kind of study and reported that interactive PMS are necessary in order to improve the quality of strategic decision making. Later Chiesa et al., (2009) confirmed with the researches of Tuomela, (2005) and Mettanen, (2005). Bisbe and Malagueno, (2012) argued that the organizations largely deal with their quantifiable performance and ignore other aspects of substantial importance including: quality of service, innovation, resources utilization and flexibility.

Thus, the organizations are needed to monitor and measure their performances regularly. However, the implementation of PMS requires significant resources both human and financial (Rudd et al., 2008). But once implemented, they provide dynamic and balanced solution. Researchers have found that the organizations which adopt performance management for controlling their organizational affairs, get significant increase in their outcomes (Vuksic et al., 2013). Such PMS help in translating strategy into performable actions which ultimately provide management with a greater degree of control (Bisbe and Malagueno, 2012). Furthermore, researchers have investigated that PMS not only control the current performance but also future performance of an organization (Zamecnik and Rajnoha, 2015). Using financial measures, the performance in areas including: growth in revenues, utilization of assets and cash flows etc. is controlled while the non-financial measures like product quality and customers' services etc. help to control future performance of an enterprise (Bento et al., 2014; Mouritsen, 2005). So, PM assists an organization to achieve as well as sustain the right alignment in their business decisions, allocation of resources for the purpose of controlling OP in not only stable time periods but also in the phase of strategic change (Bento et al., 2014).

3.3 Management Control System (MCS)

The concept of MCS has been extensively researched and examined in the literature. In this regard, different researchers have provided different definitions of this important concept, however; still they have not reached to a consensus with respect to its definition (Anthony and Govindarajan, 2004). *"Management control system is a standard-setting system, receiving feedback in the form of current performance and taking the actions needed to compare whether the actual performance occurred in accordance with the strategy planned before"* (p.4). Some of the authors have established that it is a system of influencing the other members of organization for the implementation of organizational strategies while others have recognized it as a combination of three controls within the organization, namely input, output, behavior (Mahama, 2006; Chenhall, 2003). An important aspect of management responsibilities is to have a comprehensive MCS. This system should assist best the management in decision making (Sather, 2004). The relationship between MCS, the structure of the organization and its culture should be developed in such a way which can control the working of organization as per the set strategies and plans (Malmi and Brown, 2008).

Organizations generally and traditionally consider that MCS are not needed when the employees of the organization are provided with the overall direction of work, the ultimate code of conduct to follow while in pursuit of organizational goals and more importantly they have the required capabilities and capacities to do work and are motivated throughout the whole process (Bititci et al., 2012). Merchant and Van der Stede, (2007) *"A strict management control system must provide a higher level of certainty that employees will act according to the wishes of the organization"* (p.118). However, the reality is different than what has been actually perceived as MCS are needed in all types of organizations and in all situations. Its core purpose is to make employees act in specific ways which is ultimately helpful in achieving the overall goals of the business (Mundy, 2010). Moreover, they are also needed to educate

employees on the required behaviors to work in the organization (Seal, 2012). Thus, the MCS with their tools and techniques are capable to motivate employees to work best on organizational aligned strategy (Kaplan and Norton, 2008; Mahama, 2006).

The MCS which originated in 1960s for monitoring the budget system has, extended its framework to meet the challenges and complexities of new era organizations. Simon (1995) stated the definition of MCS that *"Management Control Systems are the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities"* (p. 5). Nowadays, the MCS works with a diverse range of topics like governance, implementation of strategy and agency relationships (Bisbe and Otley, 2004). MCS, is thus a vast field and it includes the overall control of organizational activities and Performance Measurement System (Spekle, 2001; Alkhafaji et al., 2018). Researchers are of the view that regardless of the type of MCS, it should be stressed that what it will do to organization. Moreover, it is a kind of living organism which is, all the times, influenced by the interaction of people (Malmi and Brown, 2008). Merchant and Van der Stede (2007) state that *"organizations have goals to be achieved so employees must take actions according to what they believe they can complete well for organizational goals"* (p.25). In this way, formulating MCS at organization is the first step while its effective implementation is the main step which requires adjusting MCS as and when needing arises so that employees could be motivated more for the best OP (Speklé and Kruis, 2014). Measurement of the target performance is considered to be an effective tool of MCS. It is because the PMS have significant impact on employee motivation which in turn will support MCS. Authors have considered PMS as a subset of MCS (Tessier and Otley, 2012). Bititci et al., (2012), in their attempt to investigate the difference between MCS and PM, investigated thousands of articles and found no difference between these two concepts. Ferreria and Otley, (2009), pointed out that PMS is a tool of MCS for the control of organizational and management performance. This study has, however, investigated

the two concepts of PMS and MCS separately where the two are interlinked in a way that PMS has been taken as a subset of MCS.

3.3.1 Types of Organizational Controls

There are various types of organizational controls. Merchant and Van der Stede, (2011) have grouped all of these controls into four major categories including: action controls, results control, cultural controls, personnel controls. In this regard, the action controls concentrate on actions or more specifically behaviors of employees in such a way as to ensure that they are working in the best interest of organization (Van Der Meer-Koistra and Vosselman, 2012). In this way the behaviors which are undesirable can be prevented or eliminated completely. It also makes it possible to make employees accountable for their behaviors and actions (Kober et al., 2007). In order to function it in best way, the desirable actions should be specifically defined and are also communicated throughout the organization. To further reinforce the desired actions, they must be backed by effective rewards (Hua et al., 2009).

The second category of controls i.e., results control are those which measure the overall results of the organization for the purpose of rewarding good results and penalizing the bad ones (Vosselman, 2002). These controls focus on results instead of the actions of employees. In relatively larger organizations, the results control can be implemented by changing the organizational structure as decentralized (Hua et al., 2009). In such a system, every manager is held responsible for the results of his department but it can only be possible when the required results are effectively communicated to the managers and their respective employees and managers are provided with the authority to control the performance of his/her employees (Kober et al., 2007).

The third category of control is the personnel controls. Under this system of controls, the employees themselves are responsible for their actions instead of the managers unlike in actions and results controls (Østergren and Stensaker, 2011). Such type of control is effective in work

environment where the educated, self-monitored and experienced employee's work. Personnel controls often work best when employees feel personal satisfaction by providing best work and it is possible only when the employees are provided with all the resources they need for the job to be done (Firdaus et al., 2011).

The last category is of cultural controls. These types of controls are imposed with the help of strong organizational culture, under which the employees, by virtue of organizational culture perform their best for the achievement of overall organizational goals (Otley and Soin, 2014). The culture control may include rewards for best performances, social arrangements, intra organizational transfers and other codes of conduct (Kaplan and Norton, 2008). The top management must also introduce its all new rules which are consistent with organizational culture. Under cultural controls, the rewards are awarded on group performance and not the individual achievements (Firdaus et al., 2011).

Malmi and Brown (2008) have discussed MCS and divided the management controls into two types: formal and informal. The formal controls include systems like rules and regulations, setting up budgets and placing standard operating procedures within organization (Sandelin, 2008). These are easily visible and measurable that is why the researchers have focused primarily on formal controls in their reaches (Kaplan and Norton, 2008) while the other hand informal controls are those which are not in written form but are relics of the organizational culture. They may be in the form of standing instructions, workplace ethics, job description or in manuals.

Thus, the management can implement MCS with different purposes in mind like its successful implementation requires a number of activities to be taken (Malmi and Brown, 2008). As for instance, it needs planning as to what the organization needs to do; how should it coordinate the activities at various levels in the organization, how should it communicate and evaluate the information within the organization and what actions should it take to motivate the employees

or to influence their performance (Bikker, 2010; Cruz et al., 2011). It is very much necessary to answer the questions like ‘what is required’ or ‘what is needed to be done’ during planning phase for the establishment of MCS practices. It is because the MCS practices act in an organization like a thermostat (Brewer et al., 2005).

Researchers have argued that the need of MCS in an organization is different at different levels and at different states (Aranda and Arellano, 2010). As for instance, an organization which is run by few owners and is at low scale, does not need strict organizational controls but as it grows and enters into new markets, the risk-taking increases and here comes the actual role of MCS in that organization. At this stage, the employees may also feel that their capabilities are not being used in fullest way, consequently, they will get frustrated and their level of commitment will fall (Cosenz and Noto, 2015). Hence, the MCS should be implemented with proper reasons and the set standards as to its achievement, while the adverse effects which MCS may bring should also be considered (Aranda and Arellano, 2010). It is because MCS, for an organization is one thing while its successful implementation is another. The continuous monitoring and supervision of the whole implementation process is necessary in order to determine how it is perceived within the organization (Grabner and Moers, 2013). In this regard, it has been argued that the motivated employees help to increase the implementation process and ultimately the likelihood of getting MCS to work (McNamara and Mong, 2005).

The current study has interest in broader, formal system of controls. Such type of system was designed by Ferreira and Otley (2005) who categorized the organizational controls into four distinct categories and called them as levers of control. The four categories which they provided included: boundary controls, belief controls, interactive controls, and diagnostic controls. They proposed that the types of controls are useful for controlling business strategy.

3.3.1.1 Diagnostic Control Systems (DCS)

These controls ensure that the decision making of the organization is aligned with the overall goals of business (King et al., 2010). Simons (1995) stated that *"diagnostic control system seeks to ensure that decisions align with the goals of the organization"* (p.5). Simons (2000) also considered that *"a diagnostic control system is a control system to change the intended strategy into a realized strategy that focuses on achieving goals for the business and for each individual in the business"* (p.303). Simons (2000) also explained that *"The diagnostic control system is used by managers to monitor organizational output and correct deviations from established performance standards"* (p.209). It is the formal organizational control which is aimed at monitoring for the results and making correction for any deviation from what has been standardized with that of the actual performance. They are concerned with comparing actual performance with set standards for the identification of any critical deviation (Adler and Chen, 2011). Chenhall (2007) also suggested that DCS is a formal system of information in organization which monitors the product of tasks or results and corrected the deviations in the results from the expected performance. In this way, there are five main characteristics of DCS. First of all, the results of an entity or system should be quantified so that they can be measured. Secondly, the business must set certain targets to achieve for its employees. Thirdly, a feedback system should be developed and put in place which can determine any deviation from set targets. In the fourth step, the analysis should be performed between the set targets and obtained results. Finally, in the fifth step, the overall systems and procedures should be modified to address the difference in outcome. Thus, DCS is used to monitor and review the performance of business based upon certain critical success factors. In this way, such monitoring of performance has made DCS quite attractive for businesses (Grossi et al., 2017).

Researchers are greatly of the view that the supervision for monitoring the performance deviation should be done by an external (Arjaliès and Mundy, 2013). This is because, the

internal supervision may cause de-motivation or confusion for manager and he/she may refrain from taking opportunistic steps. In this way, the employees are properly communicated with the objectives to achieve and they thoroughly work for it but the negative aspect of these controls is that the opportunist behavior is reduced (Widener, 2007). In this way, the prime focus of DCS is on measurement of performance against certain set targets. The regular review of performances is made internally in board meetings or in other departmental meetings (Berry et al., 2009).

Another way DCS help an organization to perform better is through their impact on organizational innovative process. It contributes positively to the internal environment of business (Adler, 2011). However, traditionally, it was believed that DCS limit the innovations in business since their prime focus is on achievement of set targets. This is because the managers usually apply coercive powers which restrict organizational potential for innovations (Grossi and Thomasson, 2015). Bisbe and Otley, (2004) have also approved that the DCS are beneficial only when are used less frequently since they are aimed at bringing efficiency and not the innovations**.** Chenhall et al., (2010) have also supported this point of view and argued that there is no association between the use of DCS and technological innovations, thus, the use of DCS provides organizations with additional challenges of dealing with innovation factors. Bedford, (2015) has, however, hold a conflicting view that the activation of DCS in a facilitative and enabling environment, fosters benefit of innovation. Bisbey and Otley, (2004) have argued that the DCS have two important moments of control in business: first of all: ex-ante when business goals and objectives are defined and established for all short, medium and long term. At this time, a common view of the organization is taken and critical success factors are focused. The second moment is related to monitoring when the organizational goals and plans are reviewed to be implemented effectively and discussions are conducted for causes of variations as well as for adjustments of variations. Bedford and Malmi, (2015) have suggested

to capture the existence of DCS through putting different questions on different tasks performed and it cannot be done through artifacts. However, Sue et al., (2015) have provided its measurement using artifacts. Hoffmann et al. (2011) have discussed that the artifact use of DCS leads to create dynamic tension when changes in existing plans and objectives is observed and a response is demanded thereof. As for instance, when tax rate is increased, the DCS may observe it through the reduction in profit margins, thus, discussions are invited to articulate a different course of action for it. This may include keeping the existing business strategy or going through a changed plan.

The studies have also figured out certain criticism on DCS. As for instance, an effective DCS is important to identify the short comings and problem areas, however, it has also been argued that it may lead to affect employee behavior negatively since they will be more inclined to use unethical means for achievement of set targets since their benefits and rewards are attached with performance (Chenhall et al., 2010). Additionally, in case of realistic goals achievement when the employees are empowered, they may manipulate the ways to do certain things and they take their own decisions. In such a situation, the manipulation may be beneficial in short run but may create problems in the long run. The DCS are more of a traditional form of control and is not widely used in today's organizations (Pujiati et al., 2019).

Authors have suggested that an effective approach to DCS, the strategies, goals and objectives must be explicit. Identification of right stage and its implementation is very important to exploit the true merits of DCS. In this regard, the organizations have to go through an uncertain business environment which makes it difficult to set clear goals and targets. Thus, the use of DCS at birth stage of organization is not recommended. As soon as the organizations move towards their growth stage, employees are more likely to make decisions as per their choice. Thus, there is always a risk that they will make decisions to their importance, thus, the implementation of DCS is imperative at this stage which is helpful to restrict the decision

making in un-desirable ways (Kober et al., 2007; Grossi and Thomasson, 2015). However, Heinicke et al., (2016) have argued that this stage includes more uncertain environment which restricts use of DCS. They have further provided that as the organizations reach maturity stage, the growth is slower down and there is relatively a stable environment and they can establish clear goals and objectives, thus, the use of DCS is more suitable at this stage. Ferreira and Otley (2009) have also supported this point of view and further provided that at maturity stage organizations have relatively competitive communication channel which makes the use of DCS more appropriate at maturity.

Su et al., (2015) have discussed that the maturity stage require focus on larger innovations and diversifications. The top management plans more about competitive pressures and dynamic environment. thus, DCS help management to focus such issues while they control performance and monitor results. However, Malmi and Brown, (2008) have disagreed with this approach and provided that the use of DCS restrict the ability of employees to create and innovate which is critical at this stage. Thus, they recommend using DCS at revival stage rather than on maturity stage. Kantola (2017) has concluded this discussion and provided that the best stage for application of DCS is maturity and revival.

Authors have however, provided certain other disadvantages attached with DCS. In this regard, it has pointed out that the employees are not included for drafting of plans and strategies thus, it is quite possible that the organizational vision and strategy may not be properly understood by the employees which can create difference of opinion and ultimately the implementation of planned strategies may suffer. Moreover, at certain times, there is difference between set targets and desirable targets depending upon the changing business scenarios, however, the same are not known to employees since the approach encourages status quo. Though, it leads to achieve business excellence but at the same time creates conservative culture Thus, an environment of suppressing creativity and innovation occurs in business which is not the requirement of new

business world making functionality of DCS questionable. In such an environment, it can be safely said that DCS are not sufficient to ensure effective and efficient controls (Sobis and Okouma, 2017). In fact, the pressure created by DCS to meet deadlines and achieve targets lead to failures of control and ultimately crises. Management is needed to realize that a culture where employees are held accountable to meet deadlines and achieve targets especially the difficult targets, problems occur. Such a framework exerts the need to think of the other three levers of control.

3.3.1.2 Interactive Control Systems (ICS)

The interactive control systems emphasize on improving manager's attention and the environment of communication throughout the organization (Arjaliès and Mundy, 2013). In this way, these controls are helpful for stimulating emergent strategies for every possible opportunity or threat within and outside the organization. The combined use of diagnostic as well as interactive controls is very helpful in promoting risk management behavior and exploiting the opportunities as well at the same time (King et al., 2010) but the overall controls start with diagnostic use. It is because the diagnostic controls provide means to enhance communication and dialogue in the organization. So, both diagnostic and interactive controls are used simultaneously in the organizations to enhance the efficiency of systems (Waldersee et al., 2003).

Simon (1995) argued that interactive system circumvents the problems, in order to provide the solutions to the management elements which were not encountered in the development of the pervious strategic planning process. Simons (2000) also suggested that *"interactive control systems are management control systems where managers must communicate to be involved in decision making in organizations. Interactive control system is used to identify risks due to external factors namely environmental changes"* (p.216). Therefore, interactive control

system concerned with the involvement of the manger in order to take the decisions of the employees. ICS focus on control over information systems that do not appear in regular routine It is based upon dialogue between top management and middle management. With this, it is helpful to establish new initiatives to achieve superior performance. It enhances creativity dialog and learning within the organization since it is a double loop system for learning. Schaffer et al., (2014) have postulated that there are five essential characteristics for establishing ICS within the organization. In this regard, there should be clarity of mission of business, the top leadership of business should be committed and practices delegation of duties, practices problem solving, rewards those who are better performers and disseminate knowledge. The top management encourage learning within the organizations which also results in establishment of new and innovative strategies, however, the organizations must have the capacity to learn more and adapt. Tessier and Otley, (2012) have discussed three main features of ICS: a) intensive involvement of superiors, b) intensive involvement of subordinates, c) intensive communication between the two parties where managers/superior take control of the overall position to manage the overall business processes and uncertainties. In this way, they can also foster organizational learning within the business and a cycle of learning and development is organized in business which start with organizational attention and end with emergence of new ideas and strategies (Gond et al., 2012). As a tool of value creation, ICS is helpful to transmit the management's vision to its subordinates in the first step and supports in designing strategies to work against uncertainties created in business environment due to competitors' actions, changing government regulations (Langevin and Mendoza, 2013). Thus, the ambiguities in the overall system are identified and removed. This is done through organization wide discussion and dialogues in the light of new information obtained. The discussion concludes as to whether the new ways of performance are needed or not. This creates an environment of democracy in the organization where future course of

action is decided with the help of discussion made with subordinates. Simons, (2000) has discussed that in changing business environment, ICS is very helpful to differentiate business activities from others.

ICS is entirely different from DCS and is meeting the needs of new business era. The managers using ICS make companywide communication of ideas and make interaction possible at levels in business. ICS help management to put a clear focus on the main issues. As for instance, Pepsi focus on US market share which was captured by Coca Cola. Thus, at all levels in meetings the company focused at discussion of market share and everyone in the company understood the meaning of market share and the strategies used in this regard. It also helped to put a focus on a single issue throughout the company (Tsamenyi et al., 2011; Sobis and Okouma, 2017). Lababidi et al. (2020) have argued that ICS led to single out issues to give them special attention. Moreover, the senior executives also come up with a single voice and create consensus as to what is needed to be done. The main characteristics which make a control interactive include: a) a theme which is recurring at height level of organization, b) it needs continuous and significant attention of middle management, c) the theme is discussed and regularly interpreted in different meetings of management, d) it undergoes various challenges about data plan and action plans.

Authors have discussed the suitable stages for application of ICS at organizations. In this regard, Kantola, (2017) has provided that the birth stage involves a centralized structure of organizations where top management makes all of the decision, thus, the sharing and coordination of different types of information is not needed at this stage. However, the ICS focuses more on communication and interaction, thus, it is not a desired control to set at this stage. The next stage is growth stage, which is also known as innovation stage, thus, the use of ICS is helpful in assisting organizations to collaborate and coordinate knowledge within the organization. Tam and gray, (2016) has also provided similar discussion and hold that the use

of ICS is helpful in generation of fresh ideas and initiatives. From this discussion it can be recommended that the application of ICS is more useful at growth stage.

At stage of maturity, the decision making is again centralized which is partially decentralized during growth stage. Moreover, the overall business environment is characterized as stable. Thus, there are lesser meetings over uncertainty and unstable environment which makes application of ICS at this stage less prevalent (Silvola, 2008). Finally, the revival stage requires more turnaround strategies, product diversification and innovation. Thus, the organizations must be able to understand the threats and opportunities in the environment which requires frequent discussion and meetings. This makes a favorable situation for the implementation of ICS. This discussion provides that the use of ICS is more suitable in birth and revival stage than in growth or maturity stage (Tubagus et al., 2012).

3.3.1.3 Belief Control Systems (BLCS)

The belief controls are used in organizations in order to "define, communicate and reinforce values, purpose and direction for the organization" (Alder, 2011). In this regard, the mission statements of the organizations are normally used in order to get guidance about what is needed to be done. The role of top management is highly important for this purpose since the top management with their actions create a culture and provide course of action for the rest of employees within the organization. Hence, employees are provided with a clear sense of purpose (Chenhall, 2007). They are value driven and are inspirational in nature. They are drawn in a broader prospective so that everyone in the company can be attracted and inspired for core values of business. However, they are effective only when the employees believe the systems in a similar way as supposed by management. Sometimes, the management adopt the mission and core values just as a part of fashion. While others may use it as a real living document which makes its application quite effective (Sobis and Okouma, 2017).

Simons (2000) argued that *"belief systems are corporate values and culture. Senior managers communicate formally about providing the basic values, goals, and direction of the organization"* (p.275). The belief control systems are the set of statements related the identity of organization which formally communicated by the systematical and executive echoed related to the core values of organization, its values, goals and directions. Simon (1995) suggested BLCS focus on how company's values are created in the context of the level of human relationships and desired performance. BLCS also express in the company's vision, mission statement, values, credo and purpose statement. Executives of company uses BLCS to motivate and inspire the employees to create, seek, explore and implement all their efforts, skills and abilities to improve their performance (Widener, 2007). Therefore, managers are the important elements in the organization who can establish the effective belief system to improve the performance of employees (Simon, 1995). The senior managers of the company create their own substantive drafts, to evaluate the employee's performance, to communicate and facilitate them, to provide feedback and awareness. Basically, BLCS is directly related with the belief system of individual. Belief systems are mostly self-controlled system which influence the performance of individual, therefore, BLCS are effective MCS and play vital role in the organization performance. In this context, organizations should prioritize the establishment of the effective BLCS.

In other words, BLCS are aimed at communicating the wider paradigm of business to its employees so that they can understand what the business is trying to achieve and how it will do that. The overall belief systems work in a very powerful way to communicate people and give them a sense of purpose. Companies do communicate their values but guiding these values in routine tasks is difficult which is made possible through BLCS (Mundy, 2010). The belief system of business is composed of its vision, mission and value system. BLCS is considered to be very effective since they generate self-control that originates from within. However, the

measurement of belief controls is not easy and cannot be easily linked with rewards and punishments. However, they provide with strategic objectives to employees and in return they adjust their actions accordingly. In a flexible work culture, BLCS are implemented and are beneficial (McAdam et al., 2019).

In past, the mission of business was not understood by the employees as a part of value creation or create an environment of beliefs and values. The employees knew only what the organization is engaged in production in supply. However, with the passage of time, the business environment has changed significantly. A formal belief system is imperative nowadays so that the employees can understand the direction of business in a complex decentralized business. Nowadays, the absence of a clear belief and value system, employees are unable to understand the required behavior in business, thus, they make certain assumptions to behave in a certain way in any unpredictable situation. Thus, they need a clear understanding of organizational purpose and the required contributions from them in order to pursue the overall organizational purpose. This can only be done through communicating the core beliefs of business (Sobis and Okouma, 2017).

In a study conducted by Manhor and Pandit, (2014) examined that innovations in a business are translated and influenced by beliefs and core value system in business. It has also provided that the mission statement of company positively affect the performance of business. It requires that establishment of effective belief system should be the priority of any business.

Creativity arises as soon as the management adopt a maximal approach and coordinate tasks in a frantic way. The adoption and implementation of BLCS is dependent upon the life cycle stage a business is going through. In this regard, the birth stage of business is characterized by fast and simple decision making system, unstable environment in terms of finances and structure while the owner is held responsible for everything (Su et al., 2014). It reveals that the businesses usually do not have the formal system which can define and communicate core

business principles to employees and to inspire and motivate them. Moreover, there is centralized system of decision making. This makes BLCS less suitable to this stage (Merchant and Van der Stede, 2011). Later at growth stage, after the introduction of BCS, the values are shared among employees. The businesses are focused to generate more sales at this stage and the growth is backed by either purchasing new units or to merge with another business depending upon the vision of its leaders. In this way, they take all possible steps to make market dominant for which different strategies are formed and implemented. Thus, the beliefs of employees are needed to be built to motivate them and make them perform better and achieve more growth. The BLCS are implemented at this stage to guide employee behavior and motivate them to pursue the set targets. It makes BLCS more useful at this stage than at birth stage (Mohamed , 2014).

Finally, as the stage of maturity comes, organizations become more conservative and they do not go for much of the innovation. The overall decision making process at business becomes more risk averse and less innovative. Moreover, they are also less proactive. The focus is on solution of problems rather than on formulation of explicit strategies. Thus, there is not much use of BLCS at this stage. At the end, when revival stage comes, a proactive approach is adopted where the decision making style is risk taking while proactiveness and innovative decisions are to be made. The leaders prefer to be innovative rather than imitating the strategies of competitors. Sine a shift in strategies is needed, thus, BLCS is needed to be implemented at this stage. Sobis and Okouma, 2017) have also held that communication of core values and vision of business is needed to be made at revival stage and it requires implementation of BLCS. This is also consistent with Pujiati et al., (2019) who argued that the mission and vision of organization are implemented in the organization when they are mature. This confirms the application of BLCS at growth maturity and revival stage.

Over the years, a reassessment of BLCS has been made which shows that with the passage of time, the workforce of businesses has changed. Employees are largely educated and they have the higher level of personal desires and accordingly more ability to work with. The individual abilities of management and employees are transformed in order to achieve better output and for this the organizational goals and objectives must be clearly stated and clarified. Moreover, the corporate goals should be understandable which can guide to develop new ideas for achievement of competitive advantages for business (Bedford, 2015).

3.3.1.4 Boundary Control Systems (BCS)

The boundary control systems as the name suggest are those which set limits or boundaries for the potential steps to be taken. This type of control clearly expresses as which actions need not to be taken, therefore, it works best to restrict employees for certain actions and at the same time their creativity or innovativeness is not damaged (Mundy, 2010). BCS motivate employees to work in the light of already established morals (Rezania). Simons (2000) emphasize that *"Boundary system is an internal control system that limits the areas where employees will look for opportunities related to the goals achieved by the company"* (p.289). Moreover, clear codes of conduct are also provided in order to ensure the ethical behavior of employees. In this way, belief and BCS are used in combination of each other in order to provide employees with a broader perspective of what to do in belief control systems and what not to do in BCS (Simons, 2000).

In simple words, BCS are said to be statements about what the company is not expected to do. In this way, it helps employees at all understand the ideas or opportunities which the company is not going to pursue and therefore should not be focused. A common example of Bill Gates' statement about Microsoft that the company has not planned to go into computer word and software integration. Thus, BCS help to save time which is otherwise wasted on exploring ideas which fall beyond the scope of business. However, they are needed to be clearly drafted since

a careless draft may not only prevent wastage of time but also prevent relevant creative ideas to flourish in the company. Thus, the boundary controls are always needed to be very carefully drafted so that they can better guide development and at the same time block only restricted avenues (Su et al., 2015).

Tuomela (2005) suggested that organizations need BCS in terms of financial terms. BCS is important to handle the financial risk in organization. BCS also used to maintain the timely accomplishment of the tasks (Pesalj et al., 2018). They are usually expressed in negative form or like minimum standards since they restrict doing something. They involve employee empowerment but within the boundaries and established rules and regulation in the best interest of business (Tam and Gray, 2016). The essence of this empowerment is that the employees who are empowered should be given the authority to perform whatever they want. Whenever employees are empowered, they are provided with the instruction to have a physical control, have task control system, contain written guidelines to perform certain tasks and others. As for instance, a code of ethics is a written statement which is helpful to form the formal attitude of management and employees as required by business. This is the reason businesses are looking for employees who have more ethical behavior at workplace since the employees with ethical behavior are likely to succeed more (Malmi and Brown, 2008). The corporate challenges can be overcome by incorporating the ethical culture and improving value system of employees which can serve to attain higher levels of trust and loyalty. This in turn, reduces the legal, financial and reputational risks and ultimately improves business performance (Su et al., 2014).

A business may implement BCS at different stages of its life cycle with different intensity. As for instance, at the time of birth of organization, there is greater focus on innovations and formulation of new and diversified product line. The offering of new products are aimed at fighting with competitors in a better way. This requires production of innovative products and taking of bigger risks. Thus, the application of boundary controls at this stage results in limiting

the search of opportunities (Mohamed , 2014). They tend to avoid risks and implement code of conduct as well as rules and regulations. As the organization grows, the organizational structure becomes complex while decision making also becomes less centralized. Thus, analytical capabilities of managers are needed who are involved in decision making. However, there are certain risks at this stage of business since the employees may work for their benefits and interests. They feel more freedom as the duties are delegated at this stage. Though, the organizations at this stage are involved in empowering their employees for quick decision making, however, BCS are implemented at this stage to limit the decision making powers of managers so that they cannot take every decision they want. In this way the clear guidelines as to making certain decisions and prohibiting others are designed and communicated. These guidelines are designed by top management for their subordinates. In the next stage as maturity reaches, the organizations are less interested in innovations and diversification rather they focus improvements and productivity. Such a stage requires lesser proactiveness and innovative behavior which requires implementation of DCS instead of BCS (Bedford, 2015; Hermawan et al., 2021).

Finally, at revival stage, organizations are more involved environmental challenges and greater competitive pressures which requires diverse leadership. It leads to more diversification, innovation, expansion of market share and launch of new product line. This stage requires the implementation of BCS since the organizations at this stage require employees to be creative and innovative and achieve certain standards. The implementation of BCS is helpful to achieve more flexibility and creativity and a more formal analysis is performed at this stage (Kantola, 2017). The flexibility in decision making at revival stage is helpful to mitigate the risks of higher level like increased market heterogeneity. The organizational risks are controlled through management at each level through delegation of duties. In this way, the use of BCS at this stage is quite helpful to guide managers to use their wisdom and judgement for decision

making and apply their innovative ideas while the managers will also know their limitations of decision making. Thus, a widespread implementation of BCS at revival stage is made (Pujiati et al., 2019).

These four levers of control are important and they complement each other. The DCS and BCS are constraining in nature while BLCS and ICS are designed for growth and development. The main challenge of these controls is that they are needed to be kept upto dated so that they remain relevant and applicable. Harmawan et al. (2021) have reported that the four levers of control should be coordinated to function since they jointly perform well for business and reduce strategic risks where strategic risks are those which can adversely affect the performance of business and the ability of management to work with a strategy. The belief and boundary system are complementary for each other. The BLCS creates positive attitude of employees towards organizational values while BCS provides with certain constraints to employees to pursue different ideas and creativity. A clear and strong BLCS and BCS ensure that the organizational resources have been used positively and are not directed where a positive outcome is not obtained. This is helpful for managers to concentrate on core areas of business and achieve a competitive advantage (Tuomela, 2005).

Harmawan et al. (2021) have however, provided that there are weaknesses of four levers of controls along with certain strengths. In this regard, the main criticism is that the four levers of controls focus mainly on top management and they do not attend to informal issues in business especially in small scale businesses. Thus, they do not play an important role to strengthen the control system within the organization especially when there are informal controls are implemented in business. On the other hand, the core values of firm are often misunderstood since they are interpreted subjectively. Bisbe and Otley, (2004) have also discussed that the organizations with higher levels of innovations, ICS are not effective rather they negatively influence the innovations of business while they are useful at companies with lower levels of

innovations. Henri, (2006) has examined that the strategic capabilities of business are negatively influenced by DCS. Different strategic capabilities of business including innovations ability, entrepreneurship and market orientation are negatively influenced by DCS and positively by ICS. Widener, (2007) has suggested that management should carefully examine the nature of business, the business cycle stage and to determine the needs for different types of control system.

3.4 Relationship between PMS and MCS

Organizations exist for the purpose of achieving some specific goals. Resource Based View (RBV) of research points out that differentiated capabilities provide organizations with competitive advantages and ultimately, the overall performance of business is improved. The capabilities which are generally recognized as those helpful for providing competitive advantages include: innovativeness, advanced technology, skilled employees, reputation, knowledge based expertise and architecture (Lynch and Baines, 2004). These sets of capabilities make positive contribution for OP (Henri, 2006; Lee and Pennings, 2001). Researches have shown that interrelationship between firm culture, firm performance and proper management of human resources in an organization are helpful weapons to get valuable results from MCS and put strategy to work. In other words, the measurement of performance in an organization and its controls are interlinked and they must function effectively to achieve organizational goals (Lee et al., 2004). It has been widely held that firm level resources are the key for OP rather than industry specific factors. The organizational capabilities are the base which are employed to integrate and reconfigure the organizational resources for required gains. The RBV implies that business should pay special attention that use organizational resources which result in achievement of sustainable organizational competitive advantage. The overall controls of business are emphasized to work in a way which creates an environment of learning, idea creation and knowledge dissemination i.e., through interaction of BLCS and

ICS. However, the system should be updated regularly. It is needed to be monitored using DCS and proper measurement of performance is made using both financial and non-financial measures of performance. Widener (2007) has discussed that PMS is a part of MCS which assists MCS in quantification of effectiveness and efficiency of business procedures. Grossi et al. (2017) have discussed that PMS uses different measures like balanced score card (BSC) to provide information about financial and non-financial performance of business. Grossi and Thomasson (2015) have also figured out that PMS are helpful to understand the performance of business and societal values which are important to increase accountability within the organization. The accountability aspect is related to BLCS.

Earlier researchers like MacPherson (2001) also hold that PMS are important to measure the output which leads to anticipate the future outcome. In this way, there are two types of measures: short term and long term where short term measures are called measures of efficiency and long term performance measures are known as measures of effectiveness. Later, Sobis and Okouma (2017) have discussed that the organizations should measures their economic performance using quantitative measures which are also known as hard measures and qualitative measures or soft measures should be used for outcome. In this regard, balanced scorecard is one of the most widely used approaches to measure the performance. Vieira et al. (2017) have also argued that BSC is a comprehensive tool which connects budgets and controls and it includes both financial and non- financial performance. Grossi and Thomasson, (2015) have elaborated that BSC is a type of MCS which does not operates in isolation rather works in combination with several other controls.

Researchers have investigated and developed three broader models of control for PMS. These included: Strategic Performance Measurement System (SPMS), levers of controls and finally performance management and control. In this regard, the SPMS is concerned with linking organizational strategy and objectives to PMS (Martyn et al., 2016). However, understanding

of internal and external controls is important for implementation of SPMS. One such example is BSC approach. However, the lack of attention towards informal controls and the context of organization leads to failure of implementation of SPMS. The second category of controls is related to four levers of controls which included diagnostic, boundary, interactive and belief control system. It has been observed that different controls contained different limitations, however, when used in combination, result in required benefits of performance measurement and control to business (Berry et al., 2009).

Braumann et al., (2020) have provided that MCS is helpful tool to trigger action plans which in turn enhance OP. As for instance, interactive use of MCS leads to enables to tear down the functional obstacles and encourage dialogue process. This ultimately leads to promote discussions as well as innovations (Janke et al., 2014). It leads to reduction of information asymmetry between employees and the managers. With this, the preferences of managers are revealed and flow of information sharing is facilitated which enhances OP.

There has been extensive research conducted to understand the difference between MCS and PMS. There are some authors who consider that PMS is a subset of MCS. As for instance, Drury, (2012) has defined it as "an array of controls and management accounting control systems can be described as a form of output (results) controls". The author has further provided that PMS involves four stages including: a) setting the performance measures which are helpful to reduce the un-desirable behavior, b) establish targets for performance, c) measurement of performance, d) to reward or punish for the undesirable results. This shows that PMS is a part of DCS or is closely linked with it. However, Bititci et al. (2012) conducted an extensive research to understand the difference between PMS and MCS and they ended up with no difference between MCS, PMS, performance indicators and performance management. However, contrary to it, Ferreira, (2009) has established that "much of the literature on this topic has been categorized under the heading of management control system, following the

seminal work of Robert Anthony (1965). However, in our view, this has become a more restrictive term than was the original intention and we prefer to use the more general descriptor of Performance Measurement System (PMS) to capture a holistic approach to the management and control of organizational performance". Siska (2015) has explained that the concept of MCS has broadened over times. Nowadays, MCS are considered to be formal controls in the hands of management to monitor OP towards predetermined goals. the author has further argued that the ultimate objective of both MCS and PMS is the same i.e., the achievement of organizational goals, thus, both MCS and PMS are often considered as synonyms. However, MCS are preferred when organizational structure is considered while PMS are preferred in case of behavior of the system. Finally, the author concluded that still there is no clear line which can differentiate MCS and PMS, thus, new researches are invited in this era.

3.5 PMS and MCS at Banks

The concept of controlling banks performance means to create better harmony between different risk taking factors, profitability and growth. The performance of organizations is enhanced with broader set of performance measures (Adler and Chen, 2011). The conventional MCS were aimed at focusing on enhancing the operational efficiency; however, this is not adequate to get the sustainable competitive advantage. The managerial practices for employee co-operation, creativeness and development of new businesses must also be included in the MCS. The banking industry is in special need of diverse and effective PMS for better controls of its business (Soin and Collier, 2013).

In today's changing business environment, an effective PMS is required even more at banks for the effective operations management and to rapidly adjust against the changes in external business environment (Sandelin, 2008; Aguinis and Burgi-Tian, 2021). The researchers have argued that the lack of efficient PMS for controlling the operations of banks has always resulted in crisis in the past (Simons, 2000). Moreover, there is a serious criticism that the banks do not

think about the controls which can measure its performance beyond financial perspective. To further support this argument, the recent banking crisis has also been attached with abundant use of only financial measures. Thus, the banks need to deploy efficient performance measures which include both financial and non-financial measures for better controlling their performance and assisting it for the achievement of strategic objectives (Munir and Baird, 2016).

Oyewo and Babatolu, (2014) have investigated that the most commonly used PMS at banking industry of UK include: financial performance measures, BSC and different performance dash boards. Similar results have been found for the banking industry in Australia i.e., financial performance measures and BSC are commonly used PMS at banks in Australia (Munir and Baird, 2016). Despite of the perceived benefits generated by the use of financial measures at banking industry, there is now an increasing emphasize on using non-financial measures in combination with financials in order to successfully manage the business.

Ittner et al. (2003) have argued that in addition to financial measures, service quality, customer satisfaction and products encompass greater importance when it comes to evaluate the business performance of banking industry. Furthermore, they have ranked short term financial measures at number four after the non-financial measures but in practice they are either not used or used after financial measures (Otley and Soin, 2014). The pertinent reason behind this was the industry pressure to provide good to the stakeholders in short term. However, the actual situation suggests that there must be a mixture of both financial and non-financial measures in order to attain greater flexibility for the use of different performance measures and to adjust the business operations accordingly (Munir and Baird, 2016).

Studies have also shown that one of the most commonly used PMS used at banks was the BSC (Alder, 2011). It is because the BSC approach uses both the financial and non-financial measures in a balanced way although have shortcomings (Askarany and Yazdifar, 2017). It

contains four important perspectives: financial perspectives, customer perspective, learning perspectives and process perspectives (Growe et al., 2014). The financial perspective is used to examine the growth in revenues, returns on investments and changes in cost of deposits. The customer perspective is focused on customer retention and checking the market share of banks in different segments while processes segment is focused on examining the cross sell ratio, error rates of services, revenues of new products and the fulfillment time needed for inquiries. Finally, the learning perspective determines the employee satisfaction as well as revenues generation per employee (Bikker, 2010).

The need is to make right mix of both financial and non-financial measures (Brown et al., 2019). Thus, with the passage of time the approach of BSC also started falling short of the requirements especially in banking industry. It is because it focuses on four areas which do not portray the whole scenario. This may be used in combination of other tools but cannot be relied solely on it (Zhang and Li, 2009; Wu and Chang, 2012). On the other hand, it has also been considered as an over emphasize on monitoring the internal affairs and ignoring the externals which may have greater aberrance on business affairs while practitioners have also provided it as a very cumbersome technique and the one which provides just a generalized performance of the employees working at banks (Malmi and Brown, 2008). It was also cited by many managers as a technique which involves the subjectivity which, if not managed properly by employees, the results will all be vague (Namazi and Abhari, 2010; Zhang and Li, 2009).

Growe et al., (2014) have practically analyzed the drawbacks of implementing BSC approach. They mentioned a case of evaluation of branch manager's performance where the performance was evaluated on the basis of quarterly meetings and talent retention. He was failed on both the parameters because he used to spend lesser time in meetings and also was engaged in train and upgrades the talent but it led to failure in talent retention. He was frustrated by the

evaluation parameters and ultimately, it resulted in failure of employee morale, loyalty and satisfaction.

3.6 Hypotheses:

3.6.1 Association between PMS and MCS

The relationship between PMS and MCS has been studied in different ways in previous studies. Some of them have focused only on Financial Performance Measurement System (FPMS) and MCS, some have considered studying Non-financial Performance Measurement System (NFPMS) and MCS while there are also studies which have examined both FPMS and NFPMS and MCS. In this regard, Leitner and Wall, (2015) have discussed that the controls are exercised using different performance measures where effectiveness of performance is influenced by the right type of controls in place. According to Hoque and Chia (2012) the four levels of controls work together to achieve the desired results and these controls should match with performance measures. The performance of these four control measures can be enhanced through effective and a range of performance measures (Otley, 2016; Leitner and Wall, 2019).

Spekle et al., (2014) has investigated that the four types of controls in combination, put a strong influence on performance of business. Tung et al., (2011) argued that performance measures have significant association with all levels of MCS. The PMS may be diverse and multiple which were traditionally limited to focus on areas of financial measures. However, gradually it was believed that broadening the scope of performance measures enhance the success of business (Hoque, 2014; Kruis et al., 2016). Both FPMS and NFPMS are connected with four levels of controls. PMS assist businesses through problem resolution and support in decision making. Hoque and Chia (2012) have conducted their research to analyze the usage of PMS in combination with four different levels of controls. The study found that there exists significant relationship between PMS and levels of controls. They further added that the organizations

with intense degree of controls needs to incorporate more intense PMS preferably multiple PMS. Henri (2016) has further added that constraining controls concentrate on financial measures while enabler controls use much broader non-financial based measures for performance improvement. Similarly, Frow et al., (2005) have discussed that managers must balance between multidimensional PMS and different types of controls in an organization so that the requirements of each control type is effectively addressed. Therefore, with increased intensity of control levels requires increased stress on usage of multidimensional PMS (Epstein and Wisner, 2005; Ferreira, and Otley, 2009).

Traditional view of strategic control implies that performance of employees is often consistent with predetermined strategy. However, with the passage of time, the strategies strategy evolving and they became more complex which emphasized the need to control strategies. The four levers of control developed by Simons works simultaneously to control strategies. Though they are designed for distinct purposes but they are used in combination for best results. The basic idea is to balance the needs for innovations as well as constraints. The DCS hold that the results of business are measurable, thus, the PMS both financial and non-financial normally fall into this category of controls. However, the debate has also been focused on whether the PMS are diagnostic or interactive. Toumela (2005) has however, pointed out that PMS are linked with all four levers of controls. Toumela has further argued that the nature of relationship between different levers of controls and strategic PMS is often reciprocal and is dynamic. The PMS can be used by businesses like traffic lights for signaling the success in critical areas. Critical areas can be of strategic beliefs and boundary which require the prime need for PMS. When the strategic PMS are set in line with the intended strategy, they are likely to strengthen the beliefs and boundary controls. Moreover, when used interactively, they support “double loop learning”. They assist in identification of emerging strategies which leads to reformation of existing strategies. Whenever, such reformation occurs, the existing beliefs and boundaries

are also questioned. In this way, interactive use of MCS is likely to influence the strategy and thereby all levers of controls (Chenhall, 2003).

Over the years, DCS have been widely used as FPMS. The performance is largely required to be measured in terms of financial results since they are measurable and are also verifiable. However, financial performance may in short run be quite helpful but in long run it could be detrimental. Thus, the use of non-financial measures is also made at a larger scale and it is not a recent idea but has been used since two decades. Both financial and NFPMS are intertwined with four levers of controls. The financial measures are aimed at evaluating whether the strategy is able to achieve financial targets. In an uncertain business environment, the financial measures are linked with interactive controls to initiate discussion as to deal with uncertainties and achieve financial performance. FPMS are used to strengthen shareholders value while boundary controls play their role to set restrictions for uncertain business risks at the same time. FPMS are used to create value for shareholders while restrict the excessive risks while NFPMS emphasize value system and strengthen the boundaries.

Baird (2017) investigated that multidimensional PMS cover a variety of performance drivers which help to improve OP. It is because, they act as strategic tools which identify priorities and align organizational objectives. Franco-Santos et al., (2012) argued that the use of multidimensional PMS attract employee attention towards different areas of business and lead to bring improvements in all areas. De Geuser et al. (2009) conducted study on 66 Australian organizations and concluded that using BSC as a PM is helpful to bring all round improvement in business performance and thereby require different types of controls in place.

Ahmad (2013) has argued that non- financial performance measures are largely used in large scale manufacturing organizations while small sale organizations also use them upto certain extent. Ahmad and Zabri (2016) have provided that the application of non-financial measures

is limited to large scale organizations, however, the need of both types of PMS has been increasing.

Lau, (2015) has conducted research on 103 large manufacturing firms in UK to investigate the impact of non-financial measures on firm performance. The results of study indicate a significant positive impact of non-financial measures on performance of business. Senftlechner et al. (2005) suggested that choice of MCS influence the non-financial performance goals.

Over the years, there has been increased focus on investigation of the impact of MCS and PMS over OP. The momentum has been shifted from exploring the design of MCS and PMS to explore how they affect the overall OP (Pavlov and Bourne, 2011; Bititciet al., 2012). Using these measures, the organizations are able to implement the strategies which foster positive behavior and improved organizational performance both in short and long run (Pavlov and Bourne, 2011; Bititciet al., 2012). The empirical results show that the organizational PMS and MCS positively impact OP in terms of performance improvement and employee engagement, however, the positive results are dependent on the way these systems are used and are interconnected with each other (Bititci et al., 2012; Melnyk et al., 2014). Basuony (2014) has asserted that the underlying objectives of using BSC is to focus on company's mission and vision and its strategic plan. Bianchi et al. (2013) have discussed that the adequate use of PM is positively linked with identification of organizational controls and strategic resources which derive sustainable development of business. Despite of different studies conducted on PMS and MCS, the studies are largely descriptive and are not explanatory. In short, they do not sufficiently discuss the role of PMS and MCS in building positive performance of business (Pesalj et al., 2018). Thus, the current study has been primarily aimed at examining this important focus.

Jamil and Mohammed, (2013) have investigated that PMS is quite helpful to support MCS in this era of increased business complexity. The study was conducted in Malaysian hotel industry

to determine the relationship between FPMS and NFPMS on MCS. Using the contingency theory approach, the study found that there exists significant relationship between PMS and each level of MCS.

These results suggest that there is a relationship between PMS and four levers of controls (DCS, ICS, BCS, BLCS). However, the specificity of relationship and magnitude of impact of one variable on the other has not been investigated in detail in previous studies and also it is new in the context of developing countries and in this case, Pakistan. Thus, the following hypotheses have been generated to examine the strength of relationship between two variables in Pakistani banking industry:

H1: FPMS have significant relationship with MCS;

H1(a): FPMS have significant relationship with DCS;

H1(b): FPMS have significant relationship with ICS;

H1(c): FPMS have significant relationship with BCS;

H1(d): FPMS have significant relationship with BLCS

H2: NFPMS have significant relationship with MCS;

H2(a): NFPMS have significant relationship with DCS;

H2(b): NFPMS have significant relationship with ICS;

H2(c): NFPMS have significant relationship with BCS;

H2(d): NFPMS have significant relationship with BLCS

3.6.2 Impact of MCS on Organizational Performance (OP)

MCS are largely considered to have influence on OP both in financial and non-financial aspects (Salterio, 2012). Effective MCS are imperative for better performance of organisation. Different types of control measures are used to improve OP. As for instance Cheng and Coyte, (2014) and Chen et al., (2013) have provided that different types of incentives to employees

which serve as ways to enhance their performance ultimately leads to enhance organizational profitability. Melnyk et al., (2014) have supported this point of view and provided that the rewards and incentives system are quite helpful to provide organizations with financial benefits including tax advantages and others. Kallio et al. (2014) have discussed that the financial benefits of organizations also depend upon the nature of control system in place and how it is implemented. Davila and Foster (2005) argued MCS influence performance of business. It is management tool which allow the organization to plan, analyze, measure, evaluate accounts and financial information. Zahra et al., (2004) found financial control system focused on the short term business goals. Therefore, Ittner and Larcker (2003) found no impact of non-financial performance measures on OP.

The controls placed for short term are beneficial to improve the performance in short term while those with a longer term focus lead to enhance financial results of business for longer time period. Anthony and Govindarajan, (2004) have however, provided that narrowly focused control systems and those with shorter time span, tough targets may even create frustration among employees and the results may be negative i.e., reducing financial performance. Merchant and Van der Stede, (2011) have also argued that before implementing the control systems, their purpose and direction should be well defined are clarified. The clarification of performance dimensions should be well defined and they should also measure the performance accurately which ultimately leads to enhance business profitability and other financial indicators. Catasus et al., (2007) have argued that MCS lead to provide objective measurement of firm performance in the form of profits and net income.

Lazzarotti et al., (2011) have analyzed that the measurement of OP, as affected by MCS, in financial terms is limited. Nudurupati et al., (2011) have also discussed that MCS leads to improve the performance of business in subjective ways including organizational efficiency and team spirit. It has been argued that MCS especially diagnostic controls are helpful for OP

through ensuring time management and thereby saving time. These are helpful to achieve OP without involving management in continuous monitoring. Bedford and Malmi (2015), however, have provided that all four types of controls including diagnostic, boundary, interactive and beliefs controls should be included when designing MCS for increased OP. Spekle et al., (2014) argued in another way and emphasized that it is not the types of techniques rather how are they implemented and the focus of performance area which needs to be improved. Otley, (2008) focused that the aim of MCS should be to increase non-financial performance aspects since they provide base for financial performance improvement. In this way, multiple dimensions of non- financial performance measures are needed to be focused to improve all round OP (Baird, 2017; Tung et al., 2011). It has further been argued that constraining controls including diagnostic and boundaries lead to control the behavior of employees to achieve certain type of performance level while the enabling controls including interactive and beliefs are helpful for innovations and creativity in business (Herath, 2007). In this way, beliefs and interactive controls are important for creating positive aspirations of employees while boundary and diagnostic controls are constrained on employee's behavior to remain stick towards achievement of organizational objectives (Henri, 2006). On the other hand, other researchers are of the view that the four types of controls including ICS, DCS, BCS and BLCS work together to improve organizational performance. Spekle et al., (2017) have argued that the four levers of control are interdependent and they have positive impact on performance. In this regard, it has been argued that BCS positively influences the attitudes and beliefs of employees to perform certain tasks and in turn impact other three types of controls to motivate employees for their performance improvement (Kruis, et al., 2016). Spekle et al. (2017) have however suggested that the effective combination of controls is dependent on contingent factors and the managerial response to such factors.

Atkinson et al. (2004) have added that DCS are used to monitor the performance of business on exceptional basis leading to achievement of organizational goals. Koufteros et al. (2014) conducted a longitudinal study for 10 years on 386 Italian organizations and found evidence that MCS are helpful to improve OP by way of enhancing capabilities. DCS are the formal systems of information which monitors performance and takes corrective actions in case of any deviation. The DCS lead to measure the performance of business and lead managers to corrective actions for any deviation. Acquaah, (2013) has discussed that DCS measures the excellence of business performance which is usually considered as conservative approach which restricts and organization's ability to seek new opportunities. DCS are helpful for organizational performance in the form of promotion of goal attainment. As for instance, Koufteros et al., (2014) have discussed that organizations use DCS in order to determine and monitor the results and to track the organizational performance for goal attainment as to whether the goals are being pursued in right direction. Pavlov and Bourne, (2011) have also discussed that DCS act like a "single loop" learning and is a mechanistic type of control which foster organizational learning and thereby improves performance. For organizations where innovations are priority, DCS may not be helpful and it is not the strategic priority of business. This control measure is used at organizations with routine work practices and it influences their productivity and efficiency. Businesses implementing DCS come up with cost reduction as the main targets for performance improvement as it helps by way of providing easy access to raw material and reducing the general expenses of business. In new business environment where the competition is intense, the functionality of DCS is limited however, quality, flexibility, rationality and efficiency of business operations is needed to be monitored which is done through DCS (Spekle and Kruis, 2014; Dossi and Patelli, 2010). Koufteros et al. (2014) also argued that innovations are curbed through DCS since it only focuses on compliance with organizational objectives, thus, it negatively influences behavior of employees for creativity.

Mundy, (2010) has also discussed that DCS is a constraint which restricts employee behavior for innovations.

The earlier researchers have provided that DCS are not much suitable for meeting with quantitative performance measures (Chapmen, 1997). However, later researchers McGrath, (2001) have argued that when goals and objectives are specified and are clear, DCS help. Mundy, (2010) have discussed that DCS impact the performance of business through highlighting the problem areas and thereby motivating the managers to take corrective actions. The author has further provided that DCS are helpful in improving the efficiency of business through finding solutions to specific problems. Adler and Chen, (2011) have argued that DCS help in improving the financial performance of business through communicating and coordinating specific actions targeting certain performance targets. Straub and Zecher, (2012) pointed out that DCS are helpful in improvement of both financiall and non-financial performance of business through focusing on critical performance variables and ensure effective resource allocation. Thus, there are certain pre-conditions of DCS to derive the required organizational performance, like setting performance targets, ability to measure performance and put performance measures in place and then taking corrective actions based upon performance. Arjalies and Mundy, (2013) have discussed that for successful attainment of organizational goals, both financial and non-financial, the role of DCS is very crucial. Koufteros et al. (2014) have discussed the importance of DCS in achievement of OP that DCS reduce the uncertainty in organizational processes which is helpful to achieve target performance. They lead to quantification of processes for both financial and non-financial and short and long term performance. Chenhall and Moers, (2015) have found that DCS are positively linked with financial performance of business through identification of problem areas and motivating managers to take planned corrective actions. Bisbey and Otley, (2004) have pointed out that DCS are very attractive for businesses since they are helpful in better

resource allocation, better monitoring and reviewing performances. However, they have also discussed the negative impact of DCS on overall organizational performance in the form of suppressing the organizational creativity and innovation.

Bedford, (2015) have however, argued that DCS is unlikely to influence the performance of exploratory innovative firms since such firms need the performance activities to be loosely connected. However, on the other hand, they are likely to control the performance deviation and facilitate to realize the emerging opportunities. Wijethilake, (2017) also added that DCS are helpful to achieve target performance through taking corrective actions against pre-set standards.

The overall empirical evidence explained about MCS and different control measures effectively Improve OP. MCS and different control system enhance employees' performance which ultimately increase organizational profitability (Cheng and Coyte., 2014; Chen et al., 2013; Melnyk et al., 2014; Salterio, 2012). Financial benefits depend on the nature of control that is used in organization while financial control system focus on short term business goals whereas non-financial performance measures have no impact on OP (Davila & Foster, 2005; Ittner & Larcker, 2003; Kallio et al., 2014; Zahra et al., 2004). The implementation of control system should be well defined and clarified to improve performance and business profitability and other financial outcomes (Anthony and Govindarajan, 2004; Merchant and Van der Stede , 2011). MCS provides objective measures to increase firm's profit, net income and performance while MCS has limited effect on financial terms (Catasus et al., 2007; Lazzarotti et al., 2011). MCS also improve performance of business in subjective ways. MCS enhance organizational efficiency and team spirit. MCS especially DCS ensure time management which help to improve OP with continuous monitoring (Nudurupati et al., 2011). Researches also argued that MCS influence non-financial performance measures to increase OP (Otley, 2008). DCS and BCS control behaviors of employees to improve performance. These control systems

also constrained employee's behavior to stick with the organizational objectives and achievements (Baird, 2017; Herath, 2007; Tung et al., 2011), while ICS and BLCS are helpful in enhancing innovation and creativity in business. Both of these control systems also important to create positive aspiration in employees (Herath, 2007; Henri, 2006). Thus, studies have shown inconclusive evidence for the impact of MCS on OP. In this regard, studies of Houqe, (2004); Henri, (2006); Griffith and Neely, (2009); Grafton et al. (2010) Cruz et al. (2011); Lau (2015) have found positive influence of MCS on firm performance both financial and non-financial. Another set of studies including: Kihn, (2007); Bisbe and Malagueno, (2012) have provided mixed results for impact of MCS and firm performance arguing that MCS affects OP in combination with PMs. Griffith and Neely (2009) have discussed that the impact of MCS on firm performance is dependent upon the way these controls are designed and are used in an organization. For good working of an organization, the four types of controls are important to work in organization, however, keeping balance of all these four types of controls is critical. Therefore, following hypothesis were established for current research.

H3: MCS has significant positive impact on Financial Performance (FP)

H3 (a): DCS has significant impact on FP of business.

H3 (b): ICS has significant impact on FP of business.

H3 (c): BCS has significant impact on FP of business.

H3 (d): BLCS has significant impact on FP of business.

H4: MCS has significant positive impact on Non-Financial Performance (NFP)

H4 (a): DCS has significant impact on NFP of business.

H4 (b): ICS has significant impact on NFP of business.

H4 (c): BCS has significant impact on NFP of business.

H4 (d): BLCS has significant impact on NFP of business.

On the other hand, Interactive Control System (ICS) is helpful for businesses working in a change situation. It leads to help management to reveal towards employees about the preferences of business. This control usually creates positive inspiration for employees and enhances their motivation level to work. In this way, they are helpful for organizational learning process and thereby foster innovative culture in organization. Cruz et al. (2011) have laid down that ICS keep organizations focused and help their decision making process and also result in emergence of new strategies. Thus, in this way, they ensure employee involvement and participation which is effective for boosting their motivation and creativity. Pesalj et al. (2018) have argued that ICS are helpful to trigger change, initiate dialogue and foster the culture of innovation where DCS fail. Managers often use dialogue and interactive sessions with employees and subordinates in order to focus their attention on critical areas. They lead to develop a new strategy of innovation rather than stressing upon the existing ones. Gond et al. (2012) have discussed that ICS are helpful in formulation of interactive strategies based upon changing business environment. it fosters a dialogue between top management and employees of organization to respond to uncertain situation through emergent strategies. It positions organization into a strategic position by scanning the external environment. Arjalies and Mundy, (2013) have discussed that interactive use of MCS is helpful in bringing the sustainability into organizational procedures. They have further argued that ICS led to manage opportunities and then signal the top and junior management for their strategic priorities. In this way, it provides an impetus for superior performance in a change environment while they are also vital in presence of multiple performance measures. ICS use of MCS lead to foster discussion at different levels of organization which facilitates learning processes at business and thereby improves performance through different ways. Using ICS, organization can apply emergent strategies in response to identification of different risks and opportunities. Another way ICS is helpful in boosting organizational performance is through relational risk

management tactics. Chalos and O'Connor (2005) have explored that ICS and performance risk management are strongly correlated with each other since it promotes organizational learning and reduces the chances of failure. L-Valeiras et al. (2016) have conducted their study using sample size of 230 firms employing least square regression model to determine the role of interactive use of MCS on organizational performance. The results of study revealed that ICS are helpful in building innovative culture of business. Moreover, the study also confirmed the moderating role of MCS between innovation and financial performance of business.

This discussion leads to formulation of the following hypothesis:

The Boundary Control Systems (BCS) are another level of control in organizations which leads restricts employees from wastage of organizational resources. However, at the same time, the employees are encouraged for freedom of innovations and achievement within certain prescribed boundaries (Cardinal, et al., 2017; De Geuser et al., 2009). Spekele and Widener, (2016) have argued that BCS determine the boundaries of organization within which employees have to balance the opportunities for innovations and complexities within organization. In this regard, the firms with larger sizes and complex organizations need stricter boundary controls for their performance improvements. Merchant and Van der Stede (2017) have discussed that with the increase in firm size and increased complexities, informal controls become insufficient, thus, more formal controls in the form of boundary controls are important to monitor the performance and keep everyone in the business on track. Samagaio et al., (2018) have however argued that higher complexity requires more flexibility instead of greater controls for employees to work better. Davila et al., (2009), argued that exploitative innovations along with controlled and tight system limiting risk taking are ensured using BCS, however, the long run innovative capabilities of employees are hindered.

Tessier and Otley, (2012) have explained the importance of BCS for organizational performance using example of car and breaks. The authors have discussed that BCS are like

breaks of a car without which car cannot operate at a high speed. The use of BCS is helpful in avoiding risks thereby attaining positive organizational performance. However, authors have further provided that BCS are considered in negative way as they restrict an organization's ability to look for innovations and exploit new opportunities which influences OP in a negative manner in long run since it restrict employees' innovative capabilities and put a bar or a limit on their working.

Finally, the belief control systems (BLCS) motivate employees by inculcating the values of organization. Employee commitment to achieve organizational objectives is enhanced, therefore a positive energy is created among employees (Kruis et al., 2016). BLCS aspire employees to look into better opportunities and solutions. In this way, BLCS include different communication channels, code of conduct and mission statement and other rules and procedures which guide and motivate employees to improve performance. In this way, they serve as positive inspiration and leads to improve OP (Jamil and Mohamed, 2013; Collier, 2005). Kerr et al., (2015) have discussed that BLCS are very critical in implementing sustainable business strategies which result in superior performance.

3.6.3 The mediating role of MCS on the association between PMS and OP

There are few studies which have provided the indirect impact of different MCS on OP (Henri, 2006; Widener, 2007). In this regard, Bisbe and Otley (2004) have investigated that interactive controls affect the performance of business with the help of product innovation. Henri, (2006) has discussed that diagnostic and interactive controls affect the performance of business using four distinct capabilities including: innovations, organizational learning, entrepreneurship and market orientation. On the other hand, Bisbe and Otley (2004) have provided that OP is improved applying different levels of controls which are governed by different PMs. Eker (2016) studied the interaction between MCS and PM both financial and non-financial measures. The findings indicated positive association of ICS and DSC with financial and non-

financial performance measures. They also found ICS and DCS has significant influence on OP.

Firms are trying to implement the PMS both financial and non-financial performance measures to evaluate managerial performance and also tried to track down the non-financial metrics which include employee satisfaction, innovation, customers, market share, productivity, products and service quality. In organizations, non-financial measures are considered as more future oriented than the non-financial performance measures. Therefore, managers relay PMS to make decisions that are in benefit of organization in future (Jusoh et. al., 2008; Shah, 2009). Hoque (2005) recent studies provided the mix findings related to the impact of PMS on OP. Ittner and Larcker (2003) studied PMS in terms of non-financial performance measures impact on OP. The findings of study found no significant relationship between non-financial performance measures and OP. But Jusoh et. al.,(2008) revealed that effective implementation of PMS (non-financial performance measures), internal business process, learning and innovation improve the OP while financial performance measures did not influence OP. Hoque (2004) argued that traditional control system act against the organization success because traditional financial performance measures do not provide information about the future OP. Financial performance measure influence the performance of family and non-family organizations (Durendez et al., 2016). Both PMs and MCS lead to create positive impact on employee behavior in organizations in the form of increased coordination, communication, participation and cost reduction. Well-designed and implemented MCS guide employee behavior for the achievement of organizational goals in a positive way while DCS and BCS also guide employees about the unwanted behavior which employees may perceive as threat (Chow and Stede, 2006; Dillman, 2007).

However, the perception of employees and management may differ for implementation of MCS. Tessier and Otley, (2012) have based their study to analyze the perception of both

managers and employees towards implementation of MCS in an organization. In this regard, the managers, once the controls are designed and they are ready to be implemented, present these controls to employees. The way these controls are presented to employees lead to create a gap between intentions of managers and perception of employees. The managers through their personal attributes including attitude, communication and culture are the first who influence the communication of MCS to employees. Similarly, the attributes of employees are also as much important as those of managers while understanding the controls being implemented. Thus, the presentation of controls connects the managerial intentions to employees' perception of control process (Sutton and Brown, 2016).

The effectiveness of NFPMS has been identified by Ittner and Larcker, (1998) as reported by Fullerton and Mcwatters, (2003). The information has been perceived to play an important role in influencing the performance where PMS must provide feedback which is helpful to improve the performance.in absence of required information, managers are unable to make the required changes. Said et al. (2003) have investigated that NFPMS are helpful in influencing the business strategy as well as its vision to motivate employees for required financial results. Businesses failing to measure the areas of their non-financial performance are way off from their strategic objectives. Fullerton and Wempe, (2009) have discussed that tracking the NFPMS helps in boosting the financial performance of business.

A wide body of knowledge suggests that feedback assists in goal attainment. This feedback is helpful in adjusting the required actions of employees which leads to higher financial performance. It is expected that using NFPMS should help companies in achievement of required performance objectives, however, the researches measuring the financial performance by virtue of NFPMS are limited.it has been observed that organizational settings where formal quality programs are not implemented, NFPMS are helpful in improved financial performance measures. However, Callen et al. (2000) have, however, not found any evidence of NFPMS

and financial performance of business in both manufacturing and non-manufacturing organizations. Later Baines and Langfield-Smith, (2003) have confirmed positive association between NFPMS and improved OP. Van der Stede and Lin (2006) have also contradicted with earlier research of Callen et al. (2000) and reported that as the breadth of PMS is increased, it leads to improving Organizational Financial Performance (FP) of business. These inconsistencies in results invite to investigate the following hypotheses:

H5: PMS have significant impact on OP

H5 (a): FPMS have significant impact on FP;

H5 (b): NFPMS have significant impact on NFP;

H6: MCS mediate the relationship between PMS and FP

H6(a) MCS mediate the relationship between FPMS and FP

H6(b) MCS mediate the relationship between NFPMS and NFP

3.7 Hypothesis Development:

S.No	Hypotheses	References
H1	FPMS have significant relationship with MCS	Leitner and Wall, (2015); Hoque and Chia (2012); Otley, 2016; Leitner and Wall, (2019); Tung et al., (2011); Spekle et al., (2014); De Geuser et al. (2009)
H2	NFPMS have significant relationship with MCS	Hoque, (2014); Kruis et al., (2016); Henri (2016); Frow et al., (2005); Wisner, 2005; Ferreira, and Otley, (2009); Baird (2017); Lau, (2015); Ahmad (2013); Ahmad and Zabri (2016)

H3	MCS has significant positive impact on Financial Performance (FP)	Kruis, et al., (2016); Spekle et al. (2017); Koufteros et al. (2014); Acquaah, (2013); Spekle and Kruis, 2014; Dossi and Patelli, (2010); Melnyk et al., 2014; Salterio, 2012
H4	MCS has significant positive impact on Non-Financial Performance (NFP)	Cruz et al. (2011); Lau (2015); Bisbe and Malagueno, (2012); Griffith and Neely (2009); Griffith and Neely, (2009);
H5	PMS have significant impact on OP	L-Valeiras et al. (2016); Cardinal, et al., (2017); Samagaio et al., (2018); Cruz et al. (2011); Pesalj et al. (2018); Gond et al. (2012); Arjalies and Mundy, (2013)
H6	MCS mediate the relationship between PMS and FP	Bisbe and Otley (2004); Eker (2016); Jusoh et al, (2008); Durendez et al., (2016); Chow and Stede, (2006); Dillman, (2007)

3.8 Conceptual Framework:

In this way the following conceptual framework has been drawn as under:

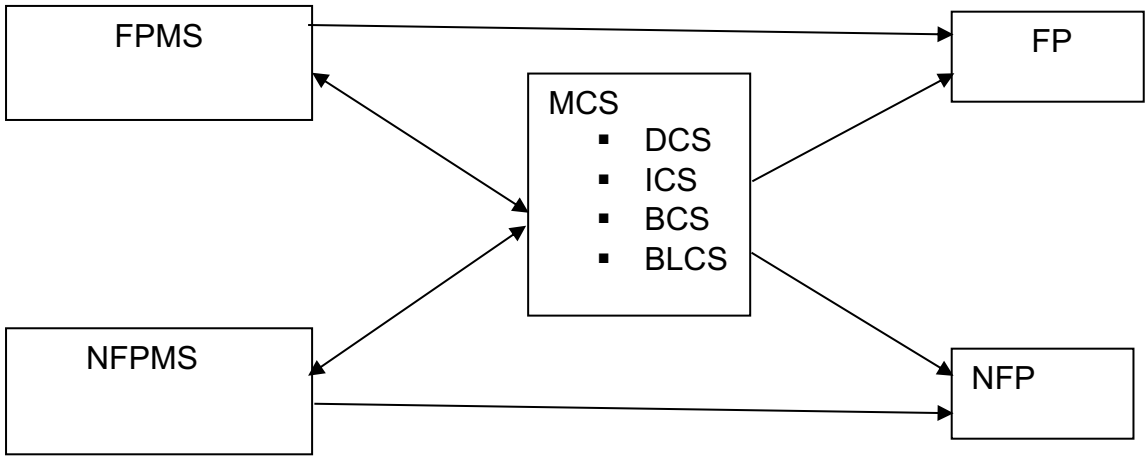

Figure 1: Conceptual Framework

3.9 Chapter Summary:

This chapter has discussed in detail the literature available on PMS and MCS and they have been implemented in banking sectors of different countries. It has elaborated the types of PMS and MCS in place as proposed by researchers. In this regard, the study has discussed the evolution of PMS and its importance. Moving further it has explained the FPMS and the eventual need and emergence of NFPMS. Moving further, it has discussed the definition and need of MCS as well as different types of MCS including Diagnostic Control System (DCS), Interactive Control system (ICS), Boundary Control System (BCS), Belief Control System (BLCS). The combination of PMS and MCS to be used at banks have been provided with discussion on different PMS both financial and non-financial mainly balanced scorecard has also been highlighted. This chapter has provided detailed overview of existing literature about PMS and MCS. Literature review provided comprehensive information about how different researchers measured PMS and MCS in their studies. Therefore, literature was used as secondary data for the formulation of current study. Pervious researches provided the base to propose the relationship between variables for current study. This proposed relationship between variables has been shown using theoretical framework and the hypotheses of study have been generated accordingly. The next chapter will analyze the collected data and thus, the hypotheses of study will be accepted or rejected based upon results.

CHAPTER FOUR: THEORETICAL FRAMEWORK

4.1 Introduction

The current chapter has been aimed at extracting a theoretical framework of study based upon existing studies. In this regard, the relationship between variables of study has been explored from previous researches and finally the theoretical framework has been drawn indicating the proposed relationship between variables while hypotheses for these proposed relationships have also been drawn which will be tested in next chapters.

4.2 Theoretical Paradigm

The PMS is a primary part of Human Resource Management which is responsible for optimizing the employee performance and aligning it with the overall organizational performance. Various approaches are used to align the employee performance with better organizational results. Control theory perspective is one such approach which is used to establish controls between an organization and its systems. (Barrows and Neely, 2011) have provided that the overall actions of business should be sync and aligned with the overall organizational goals and objectives.

There are wide ranges of management control theories which can be used to explain the problems related to management and accounting (Hopper et al., 2009). Researchers argued that the management control theories are grounded from the neoclassical economic theory (Berry et al., 2005). The mainstream theory of management control evolved in the field of management accounting, therefore, the accounting perspective of theory dominated. Due to its accounting dominance, it was thought to be more suitable for upper echelon in the mainstream manufacturing organizations. The theory has undergone three distinct stages including: classical era of management, modern control theory and post accounting era. The classical management era has focused on bureaucratic as well as administrative controls. On the other hand, the era of modern control, theory emphasized on budgets and costs while the post

accounting era focused on controlling accounting biases. Many controls were introduced in this time period which included: action control, clan control, personnel control, prospect controls, strategic controls, interactive controls, output controls or results controls, behavioral controls, balanced scorecard approach which further included customer perspectives, financial perspectives, learning perspective, internal business perspective and innovation perspectives.

The theory assumes that the relationship between owners, workers and managers are of principal and agent nature. Thus, there are two significant theories which include agency theory and rational anticipation theory (Bouquin and Pesqueux, 1999 as citied in Demartini, 2014). The agency theory deals with homo economics through top management and shareholders while the other theory which is rational anticipation theory deals with the newer appointed executive managers and their right decision making, and tried to achieved the rational correlation between the preset objectives and forecasts (Raimo, et al., 2021; Ting et al., 2015). The assumption of agency theory is that there are two parties: principal and agent. All contracts are conducted between these two under a rational approach in a utilitarian manner under the motivation of self- benefits. It entails the delegation of power to agent or managers who perform on behalf of principal or owners. However, it implies that the agent may not always act in the best interest of principal, thus, the need of auditing or other controlling mechanism arises.

However, due to criticism on the existing approaches led to invoke a broader perspective to cover issues like power, conflict and other cultural perspectives. The main theories, in this regard, included: Foucauldian theory of power, structuration theory of Giddens, theories of political economy (Ahrens and Mollona, 2006; Efferin and Hopper, 2007; Hewege, 2011).

Moving forward, Demartini (2014) argued that there are two main lines of research for the management control theories. The first line deals with the corporate governance perspective and socio-political perspectives while the other deals with the management behavior of all

levels. Arrow (1964) interpreted the idea of two rules which are operative rules and enforcement rules. Operational rules are related with the accounting computer systems and its influence on the employee's tasks. Enforcement rules deals with the manager's behaviors and how to motivate them to reach the organizational goals (as citied in Demartini, 2014). Therefore, Demartini (2014) stated that management control has strong association between individual and organizational goals. He further divided organizational management control in four categories like economic, social, psychological and behavior. The economic theories and social theories are considered as traditional theories. Economic theories included agency theory and transaction cost theory, while sociological theories include contingency theory and general theory. Psychological and behavioral theories viewed as modern approaches (Mitnick, 2015).

4.2.1 Agency Theory

Agency theory was stated in late 60's and 70's. It was first proposed by Barry Mitnick and Stephen Ross in 1973. The theory was formulated to solve out the two problems. The first problem aim is to find the solutions of conflicts between the principal and agents commonly known as reduction in agency loss. These conflicts are caused by agent due to different desires and objectives. Usually, conflicts are appeared when the agent face the difficulties to be verified by principal. The second problem is related to the risk sharing when agent and principal have different attitudes and practices towards risks (Eisenhardt,1989; Jensen, 1983 as citied in Shogren, Wehmeyer, and Palmer, 2017). According to Mitchell and Meacheam, (2011), agency theory has been defined as: "Agency theory is based on the relationship between one party, the principal, who designates certain tasks and decisions to another party, the agent. The focus of agency theory stems from assumptions that the agent will behave opportunistically, particularly if their interests conflict with the principal". With the passage of time, the paradigm of theory was extended to include cooperation between different people in organization with similar interests. In 80s, the theory was extensively used in literature to monitor and control behaviors

of employees which is one of the main functions of agency theory. The theory works in a risk and uncertainty situation where it is assumed that both the agent and the principal are risk averse. Moreover, there are multiple contracts and agreements entered into by the firm with different entities for resource allocation of business.

The agency theory has developed two types including: principal agent and positivist. The researchers in positivist paradigm largely focus on governance mechanism of larger organizations like the governance structure and compensation of executive employees of business. The positivist approach holds that the aim of MCS is to achieved effectiveness as well as efficiency which can also be related to cost accounting system at the times of industrial revolution in UK and US where the prime aim of cost accounting system was to measure efficiency and effectiveness. On the other hand, the agent principal form of agency is more of a technical and mathematical in nature which focuses more on the nature of relationship between agent and principal and the duties implied by it, it also determines the nature of contract between principal and agent (Bendickson et al., 2016).

The theory has been used by researchers across various disciplines which include: law, organizational behavior, governance mechanism, accounting, healthcare, family business, marketing and others. The main focus of the theory in on principal agent relationship or governance issues of business. In essence the ultimate aim of the theory is to sought problems between agent and principal both of which have different attitude and mechanism to solve agency problems. The agent is supposed to show cooperative and like- minded behavior to provide the desired results of agency. However, if the agent instead of working in the best interest of principal, works for his/her own benefits, the agency problems arise. In this situation problems of information asymmetry are created where principal becomes unable to monitor the behavior of agent which results in second problem of agency. In order to solve these two problems, governance mechanism is needed. However, authors criticize agency theory on the

grounds that it is mere a description and is needed to be much more explained. It can only be used when someone is guilty (Boučková, 2015).

MCS can be studied through agency theory which assumed that organizations are composed on employees (individuals). They have explicit and implicit contracts with each other. MCS are designed to investigate and monitors these contracts. The contracts between the individuals are constructed on the base of principal and agent. Two parties are involve one is principal party while other are agents of that principal party in order to performance certain tasks. The information between principal and agent are asymmetrical, whereas agent has greater possession of more accurate information than the principal. The agents can also misrepresent this information. Therefore, principal tried to design such MCS which can control the actions of agents (Mitnick, 2015). Agency theory focuses on to resolve the issues between the business principal and agents. These issues are commonly aroused between the shareholders as business principals and executives of company which are their agents.

The literature on management accounting has been focused on one of the most important function of management which is related to exerting control over business affairs. The span of control has been extended to include: operations, strategic position and also dealing with behavioral issues like providing incentives to employees. The main elements of a MCS are control cycle and strategic planning (Namazi, 2013). The agency framework for MCS can be explained using example of a simple firm which has only two individuals where one is agent and the other is principal. Principal invests money in business and delegates the duties to agent to handle the business affairs under certain contractual terms and conditions. Now the agent may undertake certain actions which can jeopardize the interests of principal. Thus, in order to safeguard the interests of principal, control measures are important. In this way, the agency theory also emphasizes the importance of maintaining controls in the business (Vimrova, 2017). There are various tools and techniques which can be used to mitigate the agency

problems. Among several evaluators, performance measures and MCS are prominent which are applied to both organizations as well as at individual level.

Agency theory has however, not been used in this research due to criticism on it. In this regard, the theory has been found insufficient to address in depth the intricate power relationship between principal and agent since the power struggle between principal and agent determines the extent to which the agents i.e., the management encompass the powers to exercise controls over organizational affairs (Parporato, 2011). Moreover, the agency theory is also criticized for its lack of context in which the agency contract is entered into. Since there is rapid change in external business environment and the agency contract may not hold to exercise controls in all situations which restrict its utility to implement control procedures and measure the OP (Hewege, 2012).

4.2.2 Transaction cost theory

Transaction cost theory is most commonly used theory in the literature of management. The economists have classified the transactions into two categories: first of all, the transaction is related to which coordinate between purchaser and seller while the second type of transaction is one which supports coordination and communication within an organization. The selection of a particular transaction depends upon different factors including interest, ambiguity, specificity of assets and others. The costs related to these transactions is divided into coordination and production costs (Yu and Chen, 2013). In this regard, the coordination costs are those which are incurred for information processing related to employees and machines engaged in performing primary functions for business. On the other hand, the transaction costs are those which are incurred while generating any economic value (Williamson and Ghani, 2012). The transactions costs are ideally kept low since an increased transaction cost is likely to reduce the economic activity. The transaction cost may include contracting cost, search cost,

monitoring cost, adaptation cost where search cost includes cost related to searching for new buyers, sellers, and product while contracting cost is related to carrying out and setting projects. Monitoring cost is the cost which is related to ensuring that the contract have been met while adaptation costs is the cost in incorporating the changes over the life of contract. Businesses choose those transactions which include minimum costs. Organizations with strong MCS are able to put a check on their transaction costs. The theory of transaction cost is built on the premise of bounded rationality. With the passage of time, the uncertainty in business markets has increased while the quality requirements of buyers have escalated. Thus, based upon bounded rationality businesses are trying to step forward on traditional theory of transaction cost by focusing on measurement of performance as against incurring of costs (Rindfleisch, 2019).

The theory has been based upon two behavioral assumptions which included: bounded rationality and opportunistic behavior. In this regard, the assumption of bounded rationality was presented by neo- classical theorists who argued that the human beings can make a rational decision but not a perfectly rational decision. It is because they are constrained by various factors due to which the perfect information is not available. Thus, instead of perfect rationality, bounded rational decisions are taken. The next assumption is of opportunistic behavior which articulates that the human beings are opportunistic in nature and they always let go of one alternative for other if they feel other one is more beneficial (Williamson, 1991).

Apart from assumptions, the theory has been based upon three main features of costs which may result in increasing or decreasing cost of any transaction. First of all, it includes asset specificity which includes how much an asset belongs to a transaction. The asset specificity may be of different types including physical asset specificity, human asset specificity or site specificity. In this regard, physical asset specificity includes the degree of dependence of a transaction on a particular physical asset. The human asset specificity is the dependence of a

transaction on a particular employee or manager. Finally, the site specificity is the dependence of a transaction on a particular location. The site or human and physical asset specificity is a contributing factor which may increase or decrease cost of a transaction (Coase, 1937).

The second category which determines the cost of a transaction is the level of uncertainty surrounding the transaction. In this higher uncertainty involves higher costs while lower uncertainty results in reducing cost of transaction. Finally, the frequency of transaction also matters to determine cost of transaction where the recurring transactions involve lower costs while those which have lower frequency of occurrence involve higher cost of transaction.

Coase (1937) studied the transaction cost theory and suggested that "the Entrepreneur should fulfill his duties with the lowest cost considering that he should obtain factors production at the lowest transaction cost on the market . . . as he can always return to the free market if he does not manage to get the best price" (as citied in Demartini 2014). The theory focuses on handling the activities within the firm and within the market. Theory predicts that when and how governance form of the market, hierarchies or alliances can be used. Williamson, (1991) suggested that company's internal activities are depended upon the transaction cost. Broadly, transactions are the transfer of the services and goods to different interfaces. He also argued that transaction are high costs and internalizing of transaction are due to the appropriate decisions of hierarchy (as citied in Rindfleisch, 2020). This theory also suggested that a manger should assess on the base of his abilities and knowledge and contracts on the lower prices as compared to the market. The organizations should focus on the "nexus of contracts" in order to investigate the transaction costs (Cuypers, et al., 2021). In this stance, the company property is a condition of existence. Therefore, the focus is on the executive manager and his decision-making for the allocation of resources (Rindfleisch, 2020).

The theory is not useful in current study since it is more related to marketing activities. Moreover, the theory is criticized since it distorts rather than illuminating. The theory also

contains ethnocentric bias which restricts its generality.it has also been criticized for presenting over socialized view of organizational controls and under socialized view of human actions and emotions.

4.2.3 Resource Based Theory

Braganza et al. (2017) stated that resource-based theory focuses on the management control theory, the performance perspective. Resource based theory suggested that resources are valuable, attractive, unique, non-transferable, imperfectly transparent, rare, and non-substitutable position of the firm for the long period of time and success. The resources are said to be valuable if they are able to create such strategies which are able to capitalize on opportunities and fight with threats. On the other hand, they are inimitable if the competitors find it quite tough to duplicate those resources or capabilities. They are often difficult to duplicate due to certain legal restrictions like trademarks, copyrights and patents. However, some of the resources evolve in an organization over a period of time thus they are hard to duplicate using the similar unique capabilities of business which has developed them. The resources are said to be non-substitutable if competitors are unable to find alternate ways to create similar resources. Thus, the resources fulfilling the conditions of non-imitability, valuable and non-substitutability, it is said to have competitive advantage.

These resources are a source of competitive advantage for business. The organizations hold a collection of unique resources and capabilities which are helpful to achieve competitive advantage. They build on new capabilities as well as creation of new resources. However, holding of resources is not sufficient rather their effective utilization is important.

The resources become a source of sustained competitive advantage when they hold for a longer period of time and the other firms in the industry cannot imitate them. Ruduan et al. (2009) have also argued that resources are sustainable if they are rare, non-imitable, valuable and non-

substitutable. Also, these resources should be immobile since if they are mobile, other organizations can deploy the similar resources, the competitive advantage cannot be sustained for a longer period of time.

The resource-based strategies provide the foundations to the firm to develop more capabilities which can lead the firm on higher position with the passage of time (Nura, 2014). Newbert, (2008) has investigated that valuable and rare resources as well as capabilities lead towards creation of competitive advantage for business which in turn leads to superior performance. The resources and be tangible and intangible assets of the firm. The tangible assets are physical resources like capital building land, equipment, supplies, plants while intangible assets involve the non-physicals resources which are invisible like firms' culture, processes, strategies, capabilities, reputation, knowledge, brand equity, attributes and intellectual property. Kürschner, (2013) argued that this attributes the MCS to strategy. MCS package include the administration control, planning control, rewards and compensations, cultural control and cybernetic control which have direct relationship with the implementation of the strategies.

It includes to measure, quantify and understand the resources of organization. Raduan et al. (2009) are of the view that Resource Based View (RBV) can be used to analyze and evaluate the extent to which the organizational resources are used to determine the extent to which the organizational resources are helpful for business to create value. Using resources, the organizations are able to achieve competitive advantage. With the help of resources, the market opportunities can be detected and exploited. These resources should be linked to organizational goals and strategies. However, these resources are usually rare, valuable, inimitable, and non-substitutable. These resources help organizations to improve their financial performance in the form of increased sales and higher profitability. The dynamic capabilities of business change due to changing business environment. They are changed to make them relevant to business needs.

This theory has been based upon an old saying i.e., “the whole is greater than the sum of its parts’. Specifically, it is tried that the resources are created using multiple strategies so that they cannot be copied or duplicated. It has evolved over times to guide businesses to use resources in order to make excellent performance.

The Resources Based View (RBV) theory is also known as the theory of resources and capabilities and therefor it has direct relationship with the MCS. The theory was originally developed to measure the field of strategic management. The aim of the theory was to explain the reasons about why organizations get different results. The theory was also tried to measure how different organizations have sustainable competitive advantages. Therefore, organizations are able to control the tangible and intangible assets and resources which enables the organizations for sustainable competitive advantages. The capabilities are linked with resources and where these resources can be deployed.

The theory is a bit confusing since it contains the term ‘resources’ where resources can be interpreted in different ways in common language, however, strategic resources are different than other types of resources while the environment can also change a resource from common to strategic. On the other hand, capabilities are also an important term in RBV where resources and capabilities are also differentiated in a way that resources are what an organization owns and capabilities are what an organization can do. It relates to how the economic value creation is done and resource allocation is made and the overall role played by business in this overall process (Barney et al., 2021).

The MCS perspective is focused on efficient usage of organizational resources. Strauss et al. (2013) have discussed that using proper management controls, businesses are able to ensure that the resources are used in a balanced way. Moreover, they avoid conflicts of interest and therefore direct resources in the best interest of business.

However, the theory has faced some serious critique from many scholars. In this regard, the main criticism is that RBV do not have managerial implication. It is because the theory asks the managers to acquire and utilize the resources of business in best possible manner but is failed to guide managers on how to use resources. Secondly, the theory creates an infinite regress as it requires to build second order capability after experiencing a first order capability by competitors. However, there is no end and the process of creating higher order capabilities always continues. Kraaijenbrink et al., (2010) have pointed out that RBV is not applicable to smaller firms rather it is useful only to larger firms with substantial market power. Moreover, this applies to firms who look forward to create competitive advantages while the businesses which are satisfied with their current market position, the RBV is not relevant. Foss and Foss (2008) on the other hand, have argued that creation of sustainable competitive advantage at firm level is often possible in a static environment. since today's business environment is dynamic in nature, thus, dynamic resources instead of unique are needed. They further added that the acquisition of competitive advantage on regular basis is not possible or practical in this dynamic environment. Lockett et al., (2009) has put forward that the value of resources is indeterminate and it is not useful for theory building. Moreover, its law like generalization is difficult to be tested.

In such a scenario, it is not possible to use the theory in current research since the generality and ability to measure and test is the main requirement of PMS as well as MCS to determine the true OP of business.

4.2.4 Institutional theory

The institutional theory was presented by Meyer and Rowan in 1970s. The aim of theory is to explore how the organizations fit into and is shaped by the external environment. over the years, the theory has seen various extensions. The understanding of institutional theory starts from

the definition of ‘institutions’ which refers to the norms, rules and regulations and governance structure (Yazdifar, 2004, 2011). Thus, institutional theory explains the fulfillment of norms and rules which allow an organization to operate as a legitimate entity and survive in the market. During late 80s and early 90s, the theory saw a shift from being theoretical conjunction to an empirical support. Quantitative measures were normally used to analyze and evaluate processes of institutionalization. Later on, the theory saw massive progress after the publication of famous book known as ‘orange book’ and organizational institutionalization. Thus, new themes like institutional entrepreneurship, institutional logic and institutional work emerged. Moreover, the dimensions of institutional complexity and institutional plurality were also explored (Kodeih and Greenwood, 2014; Yu, 2013). Moreover, from 2008 onwards, the institutional theory was blended with some theories like translation, boundary work, project management, identity, emotions, linguistic tropes, framing, cognitive frames, social networks (Tukiainen and Granqvist, 2016, Palla et al., 2016).

Herremans and Nazari (2016) suggested that institutional theory help in the understanding of the cognitive structures, cultural norms and organizational behavior of the company. Literatures also revealed that institutions are influenced by the three elements, which include normative, regulatory and cultural cognitive. The normative influences are related to the organization reaction towards the multitude of norms, company’s requirements and client pressure. Regulatory influences are related to the pressure that is imposed by the company to follow the rules and behaviors of the company in order to get the high standards. The cognitive influences are the product of transfer of conscious to unconscious of the pressures. Researchers argued that these three categories are worked separately (Herremans and Nazari 2016).

Organizational influences are formed on the base of organizational logic which operated collectively rather than separately. Therefore, organizations are supposed to perceive the

messages and respond to the pressure according to their value and beliefs (Herremans and Nazari 2016).

Kasumba, (2013) has discussed that in the light of institutional theory, the forces in external environment effect the accounting system of a business while the internal forces like powers and interest of its management also influence the way management accounting practices are implemented in a business. Hopper, et al., (2008) have highlighted that the actions of leaders are shaped the forces in external institutions while the individual possess the authority to accept or reject the actions of institutions. It is because organizations are passive entities which seek legitimacy in presence of environmental pressures. Doluwarawaththa and Gooneratne, (2017) have used the concept of isomorphic the congruence between external institutions and within organizational arrangements. It implies that the actions of institutions are shaped by cognitive, regulative and normative structures of external environment.

A more robust performance of MCS requires the institutional reforms which can enhance OP. this has also been supported by Malmi and Brown, (2008) who argued that control processes change over time due to change in external environment in presence of certain institutional pressures. Thus, the MCS must be in accordance with the institutional environment since it requires the need to adopt a new set of MCS. The external institutions like government and other interest groups can put significant pressure on business to design and implement control procedures in accordance with changing business environment (Asdullah, & Yazdifar, 2020).

The institutional theory discusses management performance, following rules and regulations and dealing with pressure situations. The theory is quite useful in understanding the organizations in a decontextualized and rationalist way and clarifies organizations to be a part of complex social systems. It has arguably become the powerful tool for explanation of business performance and the issues related to it (Cai and Mehari, 2015). However, in doing so, the institutional theory has gone too far away from its basic focus which is understanding

of the basic structure of organizations and their management. Institutional theory has few weaknesses and was not suitable for current research. These weaknesses are highlighted in previous research. Like, Greenwood et al., (2014) have also pointed out the similar weakness of this theory. In their paper, they have provided comprehensive overview and evaluation of the theory but argue that with the passage of time, the theory has started substituting institutions for organizations i.e., its independent variable for dependent variable. In this way, it has gone too far to explain institutional processes rather the working of organizations. Moreover, the theory stresses its focus on identification of similarities between organization which has led to ignoring the comparative studies between organizations. Meyer and Höllerer (2014) have however, objected the point of view of Greenwood et al. (2014) and argued that putting too much focus on organizations may lead to ignore the contemporary developments. They asserted that the focus should be on institutions and their organization while the understanding of similarities between organizations is quite important as well.

Alvesson and Spicer, (2019) have pointed out that the early institutional theory also known as Neo classical institutional theory started becoming vague with the passage of time since it had unclear boundaries. Moreover, there was a great confusion as to whether the theory has been a lens or it is a phenomenon. Moreover, the theory takes passive assumptions of organization and is failed to consider its strategic look. The organizations through resistance strategies can address the change in a good way which can enhance efficiency and effectiveness. The resistance to social pressure tends to enhance internal efficiency. Thus, such a response leads to different standards to measure and evaluate the OP. Resistance helps organizations to be more stable, legitimate and innovative. Thus, the institutional theory does not seem to be applicable in current research since it focuses only on adaption of institutional change for enhanced OP and ignores the resistance strategies. It implies the theory can take only BCS and

DCS while it will not consider ICS and has limited acceptance for BLCS which makes its application not suitable in this research.

4.2.5 Upper Echelon Theories (UET)

According to Hambrick and Mason (1984) the Upper echelon theory (UET) focus on individual top managers who are strongly influenced the organizational outcomes by making the right choices which are also heavily affected by the characteristics of managers. Upper echelons perspective explained that top managers are also called as upper echelons. Top managers (upper echelons) are the reflection of the organization. Upper echelons characteristic and choices in making strategies help to explain performance of organization (Hambrick and Mason, 1984). Hambrick and Mason (1984) explained "administrative complexity as one important dimension of strategic choices that is influenced by upper echelons". They also mentioned *"thoroughness of formal planning systems, complexity of structures and coordination devices, budgeting detail and thoroughness, and complexity of incentive compensation schemes"* (p.199). Guenther (2013) identified these factors as an ingredient of "administrative complexity" which has special role in classification of management control practices. In their MCS influential paper, Malmi and Brown (2008) explained that organizational controls are *"something that managers can change, as opposed to something that is imposed on them"* (p. 294). Hambrick and Mason (1984) gave the idea about how managerial characteristics influenced or predict organizational out comes. The choices of upper echelons are psychological construct which are influenced by cognitive values and bases. The psychological constructs are hard to observe, therefore they suggested demographical characteristics of upper echelons. Demographic characteristics are used as the proxies of cognitive values and base.

UET basically emphasizes on the demographical characteristics of upper echelon which can explain how organizations adopts innovations and improve performance. Demographic characteristics of upper echelons involve their age, education, management team heterogeneity and tenure. Wang, Holmes Jr, Oh, and Zhu (2016) studied that observable characteristics of upper echelons like gender, age, academic background, group characteristics, experience, tenure and origin are the proxies which involve in making the choices and decisions by the top managers. The demographic characteristics of upper echelons are the predictors experiences and manager's cognitive basis. Upper echelons values, ability to influence and beliefs are already form on the base of previous experience which can affect on right decision making (Kleine and WeiBenberger, 2014). Therefore, UET explained about understanding of the factors which are influence the adoption of innovations and making of changes in practices of management which is the result of top managers characteristics. Andersen and Lueg (2017) suggested that UET explained about values experience and personalities of firm executive which can influence the interpretation of the situations through which they came across and as result they make their choices. Recent research on UET focused on the individual personality constructs of upper echelon. The results of research explained that narcissism and internal locus of control are strongly related to the self-concept of upper echelons (Wang et al., 2016).

in the present research focus is on PMS and MCS, while UET deals with the individual characteristics of the top managers. UET has limitation and criticized because of managerial discretion because managers' characteristics become reflect in outcomes of organization. In reality, top managers have more control and influence on what happens in their organization than other employees. Top executives view their organizational decisions and situation on their own personalized lenses (Finkelstein et al., 2009). Hambrick and Mason (1984) UET provided the definition and implementation policies which are driven by the organizational activities, by having the upper echelons to make decision related to the organizational practices. while MCS

is an important strategic implementation, assessment, controlling and planning in the light of provided information (Simons, 1995; Reheul & Jorissen, 2014). In current research, linkage between PMS and MCS is measure through OP in the light of financial and non-financial organizational performance. Therefore, the theoretical framework of current study is based on adoption of contingency theory. Frim level contingency factors and environmental factors which involve frim size, frim strategy, industry characteristics and environmental uncertainty influence the organizational performance (Chenhall, 2003).

4.2.6 Theory of Planned Behavior

Ajzen and Fishbein, (1980) theory of planned behavior (TPB) is the extension of theory of reasoned action (TRA). The original theory of TRA focus on individual intentions to perform given behavior. Intentions are linked with the motivational factors which influence the behavior. Motivational factors indicate how much a person put effect to perform a behavior. It is general rule that stronger the intentions of the person to involve in a behavior, strong will be its performance. Behavioral intentions are the expression of behavior and behavior is under the question of violation control in which person can decide if he will perform certain behavior or not. While TPB defined the intentions as the indicate of person's willingness to perform given behavior. The intentions of person are based on three determinants. Person's attitude is first determinant which is conceptualized as the evaluation of person's positive and negative behavior of interest to perform given behavior. Subjective norms are considered as second determinant of person's intentions. Subjective norms are the reflection of perceived social pressure to perform given behavior or not. While perceived behavioral control reflects that how much a person perceived that behavior is under violation control. Perceived behavioral control indirectly affects the behavior through intentions and has direct effect on behavior (Ajzen, 1991). Fishbein and Ajzen (1977) suggested that human actions are triggered by three factors

which include 1) beliefs related to behavioral outcomes and their evaluation which is called behavior belief, 2) normative beliefs are people expectation beliefs, which motivates them to keep those beliefs, 3) control beliefs are the presence of those factors that facilitate or inhibit the behavior and factors related to power perception.

In the context of organizational settings, TPB used to predict employee's intentions to perform a behavior to bring the specific change in organization. Attitude, subjective norms and perceived behavioral control predicts employee's intention to support organizational change (Jones, Jimmieson, and Griffiths, 2005). TPB especially explained about the behaviors and intentions of employees. Ajzen (1991) identified limitation of TPB which is related to the role of subjective norms which predicts intentions. Pervious research also identified that average regression weight related to the employee's attitude were higher than the subjective norms which predicts intentions (Armitage and Conner, 2001). Another limitation of TPB, theory does not account the factors which are involve in the behavioral intentions and motivation like past experience, mood, threats and fear of employees. Theory also criticized by the proposition that subjective norms, behavioral control and attitudes are sufficient to predicts the behaviors and intentions. Individuals acquired opportunities and resources to perform successfully in the desired behavior instead of intentions (Ajzen & Fishbein, 2005). Thus, TPB plays effective role in the behavior and intention change of the employees. But in the current research scenario, intentions and behaviors of employees are not measured. The main requirement of current research is to test PMS and MCS in the context of OP.

4.2.7 Contingency Theory

Contingency theory identified the variables that can influence the MCS design. Early researches in accounting revealed that these important factors include the structure, size, environment, technology, national culture and strategies to design the MCS. Hofstede (1967)

adopted the concept of contingency perspective. It was suggested that functioning of budgeting system is influenced by the economic, technological and sociological factors (as cited in Abba et al., 2018). Further research suggested the impact of culture on management control system of an organization (Abba et al., 2018). Contingency theory follows positivist approach. The main purpose of the theory is to identify the factors which are correlated for higher organizational performance.

Elgharbawy and Abdel-Kader (2013) argued that empirical researches explained that contingency theory played an important role in the management accounting. Otley (1980) gave the main idea of theory which focused on the environmental factors of the companies and stated that organizational structure of companies is the response to the contingency. Contingency theory focuses on the identification of the elements which are highly correlated with the OP. The recent researches argued that OP can be enhanced through the MCS. In this stance, MCS must be purposefully designed which can facilitate the management strategies. It is also considered that contingency theory suggested that there is no specific applicable MCS but organizations implement their own choice of control techniques according to the circumstances. The only central variable of contingent is the objectives and strategies of company which they decided to pursue as citied in Otley, (2016).

Contingency theory primary focus is to identify the correlated of OP. Hofstede (1980, 1991) worked on influence of culture on MCS which might consider as the variation in contingency theory. Later on, research suggested that contingency theory is emerged from strategy research and contingency theory, which suggested that OP can enhanced by effective designing of which can facilitate the management strategies (as citied in Abba et al., 2018).

Contingency theory emphasizes on the MCS in terms of non-financial performance measure (Ittner and Larcker 1998), "in the role of ABC and ABM (Anderson and Young 1999; Gosselin 1997)", variation analysis and balanced score card (Davis and Albright 2004; Emsley, 2000;

Hoque and James 2000) (as citied in Granlund, and Lukka, 2017). Jokipi (2010) gave the idea about the four main factors of contingency theory which influence the structure of internal control. These contingency features include the company size, company strategies; perceive uncertainties related to environment and organizational structure (as citied in Gunarathne, and Lee, 2021).

Therefore, agency theory, transaction cost theory and contingency theory considered as the traditional theoretical approaches of the MCS. These approaches continue in the 21st centuries but there are few modern management control approaches that plays effective role in finding the solution of problems related to the macroeconomic level. These approaches include the resource-based theories, institutional based theories, upper echelon theories and planned behavior theories.

4.3 *Comparison of theories*

The table below summarizes the key issues discussed in the previous sections:

Theories	Strengths	Limitations
Agency Theory	• Relationship between Principal and Agent • Positivist, Technical and mathematical in nature	• Problematic relationship between principal and agent • Lack of context in which agency contract can entered
Transaction cost theory	• Transactions between purchaser and seller • Transactions support coordination and communication within an organization • coordination and production costs	• Ethnocentric bias • Restriction in generality

	bounded rationality and opportunistic behavior	
Resource based theory	• Valuable resource which capitalizes opportunities and fight with threats • resources are sustainable, non-imitable and valuable for longer period of time • useful only to larger firms with substantial market power	• Strategic change in resources • Environmental change in resources • Capabilities and resources are different • Do not have managerial implications • Creates infinite regress as to build second order capability after experiencing a first order capability by competitors • Not applicable in smaller firms
Institutional theory	• Organizations fit into and shaped by the external environment • Cognitive structures, cultural norms and organizational behavior • Through resistance strategies can address the change	• Substitution of institutions for organizations • More focus on institutional processes rather the working of organizations
Upper Echelon Theories (UET)	• Focus on top managers and their characteristics • Predicts organizational outcomes • Cognitive values and bases • Demographical characteristics of Upper echelons	• Managerial discretion • Executives have more control on what happens in organizations

Theory of Planned Behavior	• Explain behavior intentions • Predicts likelihood of intention that led to perform specific behavior	• Subjective norms which predict intentions • Does not account the factors involve in behavioral intentions and motivation like past experience, mood, threats and fear • Subjective norms, behavioral control and attitudes are sufficient to predicts the behaviors and intentions. • Individuals acquired opportunities and resources to perform successfully in the desired behavior instead of intentions
Contingency theory	• Influence the MCS design (structure, size, environment, technology, national culture and strategies) • Functioning of budgeting system • Correlated for higher organizational performance • Managers apply the right type of control mechanism and PMS boost OP	• Factors to be analyzed before taking an action, but it may not be possible all the time.

4.4 *Adoption of Contingency Theory as Theoretical Framework*

The adoption of contingency theory assumption is not based on signal type of company's structure; it is equally applicable on all the companies. But the effectiveness of company depends upon the best fit or match between the size, type of technology, features and structure of organization, environmental volatility as well as its information system. The contingency theory was developed from the functionalistic theory of organizational structure (Smith and Farquhar as cited in Abba et al., 2018). It is suggested that organizational structure is contingency on the base of dimensions of environment, technology and size of organization. Contingency theory is still a dominant paradigm in the management account research. The designing of MCS requires management to consider various cultural and environmental factors which impact the effectiveness of control procedures and the contingency approach is quite helpful to understand the context for application of MCS (Ivana, 2013). The theory says that a good match between contingent factors and MCS is helpful to increase the OP many times. The prior researches on contingency theory have examined both MCS and PMS taking them both dependent and independent variables. The use of theory is quite helpful in understanding the role of contextual factors in designing and implementing MCS and PMS for effective decision making which can enhance OP (Chenhall, 2006). The similar concept is applicable in case of PMS since the literature on PMS also discusses that there is no universal PMS which is equally applicable to all types of organizations. As Ferreira and Otley, (2005) have argued that the effectiveness of system is dependent on organizational context. Lecy et al. (2012) have also added that the effectiveness of PMS is dependent upon the environment as well as organizational context. The different contingency factors which influence the adoption of PMS include technology, culture, organizational size, leadership and others. Moreover, the external environment is another significant factor contributing to selection of PMS. These factors include uncertainty in external environment, turbulence of external environment and the

magnitude of competition or hostility. The previous researches (Alexander et al., 2010; Wadongo et al., 2011) have found that style of leadership is quite important to address the challenges in adoption of PMS in businesses while the other factors including the size of organization and technology adoption are all positively linked with adoption of PMS (Wadongo et al., 2014). Therefore, the current research is based on contingency theory and how it influences the MCS designs and organizational performance. The key features of contingency theory based on behavioral theory and therefore, theory claims that there is no best way to make the corporation in making decisions and to lead the organization. The internal and external actions are contingent while they are quite important in controlling and measuring the organizational performance. The role of environmental uncertainty is vital which has been laid enhanced importance while designing the control measures. The overall research approach has been based upon the premise that the control and performance measures of business have been designed considering the contingency factors in external environment.

The central contingent variable in any organization are the objectives and strategies which every organization tried to pursue. These objectives and strategies are not only to influence the performance measures of organization but also considered as the criteria against the choice of contingent which is evaluated as the goodness of fit system. Otley and Berry (1980) argued that control system in every organization have goals and objective which assess the performance. Not a specific contingent assessed the different performance measures and controls. Therefore, current research designed to explore the aims, objectives and mechanisms that can be measured and monitor the attainment of the goals of organizations.

The contingency theory approach extensively used in the organizational behavior studies. In studies, contingent factors considered as culture, technology and external environmental factors affect the function and design of organization. Islam and Hu, (2012) suggested that effectiveness of organization directly depends upon contingent fit between factors. Pervious

empirical studies examined the contingency theory and studied how business strategies, interactive control and diagnostic control are contingent fit (Bedford, 2015). Contingency theory in the context of MCS, extensively focus on the how control system types become the contextual factor according to strategy choice. Previous studies also explore the contingent fit between the contextual factors and strategy choices. The contextual factors include the type of management, degree of centralization, accounting system and control type. The appropriate harmony and combination between the chosen strategy lead towards the contingent fit which is positively related with the performance of organization business unit (Jermias and Gani, 2005).

The prime focus of contingency theory is that the type of MCS to be used and its design is dependent upon the organizational context and its broader settings. When there is a match between organizational settings and the context of organization is helpful to enhance the overall OP, the theory provides a realistic view of the overall organizational context which categorizes managers to be situation oriented and not stereotype. However, a minor criticism of the theory is that since it assumes all the factors to be analyzed before taking an action, but it may not be possible all the time. However, the underlying research assumes a near to perfect scenario where banking companies in Pakistan have been operating in quite a competitive business environment, thus, managers try to gather all the information before taking a final decision. Thus, the implementation of contingency theory is quite suitable in this case. The managers apply the right type of control mechanism and PMS in order to boost OP in a given situation. Thus, selection of contingency theory for this research is the suitable approach.

4.5 *Chapter Summary:*

This chapter was aimed at understanding the theoretical paradigm of study. In this regard, different theories including agency theory, institutional theory, transaction cost theory, UET, resource-based theory and contingency theory relevant to study context were discussed. The

actual context of theories as well as their relevance and limitations for all theories have been provided. Finally, the contingency theory has been selected to be used in this research for its wider relevance to the concepts of MCS and PMS which lead towards higher OP.

CHAPTER FIVE: METHODOLOGY

5.1 Introduction

Chapter three has provided a detailed review of the available literature on PM and MCS, thus, it has served to provide an understanding of the existing literature on the topic. Going in the sequence, current chapter has provided the methodology used to carry out the research. It has comprehensively mentioned about different types of methodologies used in research and then provided for the methodology used in this research with proper rationale behind its selection. The detail of it has been provided in the following paragraphs:

5.2 Research Philosophy

Research philosophy is the intellectual structure or it includes the assumptions upon which the research study is based. It is believed that the whole methodology to carry out research is dependent on which type of research paradigm or philosophy is employed. It is the process of making things believed from what are known. Broadly, there are two types of research philosophies: positivist and interpretive. Under positivist philosophy, it is believed that reality is objective and stable. It can be studied without making personal interference into the phenomenon being researched. This philosophy also assumes that phenomenon must be isolated and repeated observations of it should be possible. "Positivism has a long and rich historical tradition. It is so embedded in our society that knowledge claims not grounded in positivist thought are simply dismissed as a scientific and therefore invalid". However, positivist is considered to be more accurate approach for natural and physical sciences and there is a long debate on its suitability for social sciences (Kaczynski, et al., 2014).

Interpretive, on the other hand, is also called as anti - positivist. Interpretivists are of the view that reality can best be understood by making subjective judgment and making intervention in reality. It is normally considered best in social sciences. However, researchers are often of the view that one approach cannot be considered to contain greater advantages than the other and

accordingly, it is better to used combination of methodologies for best results than a single approach. The main thing is that research questions should be answered in a best way and the purpose of research should be achieved (O'Reilly et al., 2014). Keeping in view these facts, the current research has adopted a relative mixture of type of philosophies in a way that positivist dominates the interpretive in the study. It is because it has collected the facts with the help of a data collection instrument and analyzed them accordingly in a software. The reporting has been discussed by making a short interference as to the personal judgment of researcher as well. The reported results have been supported with the help of existing literature but again the positivist or interpretive behavior of those external studies is also not possible to determine.

5.3 Research Types

In any research, the research type is very helpful to manage the study effectively and to make the overall research stronger. It includes the process of research starting from designing research questions till final data analysis. There are different types of research types including case study, cross sectional, longitudinal and experimental research studies.

A case study research design provides in depth findings related to a particular organization. It is best to analyze the processes and designs of a single subject (Garcia and Gluesing, 2013). In this type of research, an individual person or organization is selected for its detailed study. Such types of studies are normally used in descriptive and exploratory researches. It is based upon natural settings which enhance the validity of its data collection and results reported. However, being collected from one individual unit, the generalization of results is either not possible or is difficult. The examples of this type of research include studying a single organization for its HR procedures or to analyze its strategies on continuous success.

The second type of researches include: cross sectional studies which collect the data at one point in time. This type of research is conducted when its scope is broader than only case study research and it involves a systematic approach to data collection. A drawback of this type of

research is that it does not take into account the changes which have occurred over a period of time i.e., the cause and effect. These types of research may also be descriptive or exploratory but sometimes they may also be explanatory. An advantage of cross-sectional study is that it provides better generalization of results for the organizations of same category. It is because they collect sample from large observations rather than just a single organization (O'Reilly et al., 2014).

Another type of research is longitudinal which study a phenomenon over a period of time rather than only at a single point of time. They have further three categories: trend studies which examine changes over a period of time in the subject matter; cohort studies which examine changes in subgroups of population over a period of time while the third category is panel studies in which the same set of sample is examined over a period of time. These studies are very helpful in analyzing how different variables have changed over a period of time and they offer advantages over other types of researches but conducting research over a period of time is time consuming as well as expensive (Garcia and Gluesing, 2013).

The last category of research is experimental research type which involves two types of groups: one is experimental and the other is control group. In these types of researches, a stimulus is introduced to experimental group but not control group and then results for both the groups are observed and reported. It helps to determine that more changes are always observed in experimental groups than the control groups (Speckbacher et al., 2003).

The current research is aimed at collecting data at one point of time from a sample of banks in Pakistan which simply falls into cross sectional research type. Thus, it will help to generalize the results of study for all banks since a representation of all banks has been made in the total sample collected.

5.4 Research Style

Mainly there are two research styles: inductive and deductive which are quite opposite of each other. Under deductive approach, a researcher collects empirical evidence for the purpose of theory testing. For scientific researches, deductive research styles are considered standard. The researcher begins with the hypotheses and main theory and conducts research under proper procedures to check if the established theory and hypotheses are true in a certain specific situation. Thus, it starts with a general idea and goes down with more specific facts. Furthermore, if the results obtained are true for the specific category under study, they are considered true for all items in that category in general. However, it is considered as narrow and used to test a confirm hypothesis set under inductive style (Speckbacher et al., 2003).

Comparatively, an inductive research style is a bottom-up approach in a way that it starts with specific facts and the researcher works way up to formulate abstract theory. Under this research style, the researcher identifies certain trends in a data set then the hypotheses are set to test and it ends up by formulating a new theory. This style is considered more explanatory and open ended. A common example of inductive style is the use of grounded theory (Garcia and Gluesing, 2013).

While making selection between the two research styles, the important things to consider include the purpose of research, first of all and then the methods to test hypotheses basing upon the nature of hypotheses i.e., whether they have been aimed at testing an existing phenomenon or to explore some new insights into a discipline. Thus, for the purpose of current study, deductive research style has been used. It is because the aim of study was not to explore new ideas but to test the existing theories, the hypotheses drawn from a review of existing literature. It follows in a sequence from establishing specific hypotheses and the results have been generalized for the whole category.

5.5 Research Approach

Broadly, there are three research approaches namely qualitative, quantitative and mixed method. These three types of approaches are not as discrete as they have appeared at first. They are neither rigid nor entirely opposite of each other rather research may be more qualitative and less quantitative while a mixed method approach usually contains equality of both qualitative and quantitative approaches in single research.

A qualitative research approach is used where the main purpose is to explore what meanings a group of people ascribed to a certain phenomenon or an existing human problem. The collection of data is generally made through observations or through emerging questions in an interview with participants while the analysis involves building themes from particular to general. The people who use this type of research normally look at research using inductive research style. Normally, no numeric calculation is performed under this research approach. This research approach is mostly used in explorative studies where a new theme is required to be emerged or new ideas and insights are to be searched.

On the other hand, a quantitative research approach is feasible to use when objective theories are to be tested for the possible relationship between variables. This methodology is considered appropriate when it comes to testing of examine the relationship between two or more variables for the purpose of testing theory. Tsang, (2014) has differentiated the two main techniques of quantitative and qualitative research in a way that quantitative research is mainly concerned with determining the relationship between variables while qualitative research is used where a phenomenon is to be explored from research study. Thus, it has been established that quantitative methodology is used when causation in the form of existence of relationship between the variables or the difference between different variables of study is to be examined. Allwood, (2012) has also provided that the use of quantitative research is made for when there is quantifiable data to be processed in the study. In social sciences, the quantitative studies

use questionnaires to collect data which is analyzed numerically using statistical techniques. This type of research studies normally starts with introduction, followed by a thorough review of literature, selection of appropriate methodology, analysis of results and drawing conclusion based upon the results obtain, thus it follows a deductive research style. In this way, quantitative researches test for the theories established under qualitative researches (Yin, 2014).

The third type of research approach i.e., mixed method research approach is one which is focused to obtain results by collecting both qualitative and quantitative data and performing analysis on both accordingly. This approach works under the assumption that a mixture of both qualitative and quantitative research approaches provides more accurate and in-depth understanding of the phenomenon under study. However, mixed method research approach is used only in advanced studies for make a thorough investigation of subject matter (Tsang, 2014).

For the purpose of current study, it has largely emphasized on quantitative research approach as the methods of data collection and analysis are purely based upon quantitative techniques. It has followed the same pattern as those of quantitative research approaches. However, qualitative research approach has been also made in a way that the theoretical framework of study has been based on previous researches.

5.6 Research Designs

There are three main designs to conduct research. They are explanatory, descriptive and exploratory. Yin, (2014) has provided that exploratory research design, also called formulative design, is helpful when a new a situation is to be explored with the help of research. Poulis et al. (2013) have argued that exploratory research approaches are helpful in answering research questions of why, how and what. The central theme of this approach is on discovery of new ideas and thoughts, so it needs to be flexible in order to study the problems from all aspects. It generally goes with three techniques including: a review of the concerned literature, survey of

experienced elements in population and an analysis of stimulating. This design is commonly used to identify issues in social and business organizations.

On the other hand, explanatory research approach is used when an explanation as to the existence of relationship between two or more variables of study is needed to be made. A descriptive research design is used when the description as to the cause and effect analysis is made. In descriptive research studies, research starts by establishing objectives followed by methods of data collection sources, selection of analysis techniques and finally reporting of the results of study. In these studies, often a small sample is selected in order to conduct a pilot study. Thus, the descriptive research design also called diagnostic design is based upon research objectives and also keeps in view the availability of data sources. Some researchers also called it a survey design since it follows a sequence to undertake a survey (Yin, 2014).

The research design for current study is also descriptive. It is because it has opted the same procedure as that of descriptive. It has formulated objectives at the start of study and after that the sources of data collection have been determined, the selection of analysis techniques has been made and finally the analysis and reporting of results have been made. This type of research design is best for current scenario since it was not going to explore new ideas or insights rather it has been aimed on describing an existing phenomenon with more recent knowledge in a new geographical era. The current was formulated to provide the descriptive analysis influence of PMS and MSC on performance of Banks in Pakistan. The primary data collected from the Pakistani Banks while secondary data retrieved from pervious researches, literature and articles. The primary data collected from already established questionnaire. The collected data analyzed through descriptive and inferential statistical analysis thoroughly. All data analysis discussed in results and discussion chapters.

5.7 Population

Population is the totality of all observations with which the study is concerned. As for instance, the population of a country denotes all of the people living in a country and every resident is called an element of total population. When few elements are selected out of the whole population, this is called as sample. In both qualitative and quantitative research studies, a representative sample is drawn out of the total population due to unsuitability to investigate the whole population (Yin, 2014).

The total population of this research comprises of 22 banks operating in Pakistan belonging to private sector. There are a total of 26 banks working with large number of branches spread all over Pakistan, however, due to the budget and time constraints, it is not possible to collect data from all branches of all banks. Accessibility issue is also major reason for excluding 4 banks, as those banks has less than 10 branches in Pakistan. Such a sample collected using convenience sampling technique is representative for all population since the qualitative researches use relatively smaller sample sizes due to their in-depth nature of engagement. Thus, purposefully selecting sample respondents keeping in view the requirements of study can better serve the purpose than those selected using random sampling techniques (Turner, 2016).

5.8 Sample

Sample is a part of the population which is used as a representative of the total population. The size of any sample depends upon the size of the population i.e., greater the population, higher will be the sample size. If the sample does not make adequate representation of the population, it is called as sampling error.

As for current research, it is not possible to collect data from all bank branches of banks operating in Pakistan which are 26 in total. A depiction of total banks (Commercial and Islamic) and their branches operating in Pakistan has been made in the following table:

Table 1: Name of Banks and Number of Branches

S. No	Banks	No. of branches by 31/12/2019
1	Albaraka Bank Pakistan Limited	192
2	Allied Bank Limited	1343
3	Askari Bank Limited	535
4	Bank Alfalah Limited	698
5	Bank Al Habib Limited	718
6	Bank of China Limited (Pakistan Operations)	1
7	Bank of Punjab	624
8	Bank Islami Pakistan Limited	334
9	Citi Bank Pakistan Branches	3
10	Deutche Bank AG Pakistan Operations	2
11	Dubai Islamic Bank (Pakistan) Limited	235
12	Faysal Bank Limited	555
13	Habib Bank Limited	1667
14	Habib Metropolitan Bank Limited	392
15	Industrial and Commercial Bank of China (Pakistan Branches)	3
16	JS Bank Limited	359
17	MCB Bank Limited	1410
18	MCB Islamic Bank Limited	185
19	Meezan Bank Limited	760
20	National Bank of Pakistan	1530
21	Samba Bank Limited	40
22	Sindh Bank Limited	330
23	Soneri Bank Limited	308
24	Standard Chartered Bank (Pakistan) Limited	61
25	The Bank of Khyber	169
26	United Bank Limited	1376

Out of this list of 26 banks, 4 were excluded which had fewer than 10 branches due to accessibility issues. Thus, the sample of has been selected from remaining 22 banks. In order to determine the sample size rule of thumb of minimum 100 observations for population size of more than 5000 with 10% margin of error has been selected (Turner, 2016). According to the tables provided by (Israel Glenn, 1992), 100 obtained responses for the population size up to 15000 is adequate sample size.

On the other hand, using the 'Yamane' formula, the sample size of study has also been determined which is as under (Yamane, 1967):

n = N/(1+Ne^2)

where n = sample size

N = population size

e = margin of error

For current study;

N = 13,830 bank branches

e = 10% as suggested by Wanjala et al. (2017)

Thus, n = 105.57 Approximately 106

Thus, a sample of the total population has been selected i.e., 106 bank branches in such a way that at-least one bank branch of every bank. Thus, the sample will be able to make a thorough representation of each bank. Moreover, selection of 106 bank branches for this type of research is quite reasonable to collect data.

5.9 Sampling Technique

In any research study, the selection of sample determines whether true representation of the whole population is made or not i.e., the selection of sample is very critical. It is actually the selection technique which determines to a greater extent as to whether the selected sample is biased or unbiased. There are several techniques through which sample can be drawn from the whole population. These techniques are mainly grouped into probability and non-probability sampling (Kaczynski et al., 2014).

A probability sampling technique, also called as random sampling technique is considered to be an unbiased way of sample collection in which sample is selected from total population with no prior prediction. Putting it in simple words, this sampling technique gives equal chances of selection to every unit of population. On the other hand, in a non-probability or non-random

sampling technique, the prediction as to whether an element of total population can be selected in sample is possible to some extent. Both probability and non-probability sampling contain sub-categories. In this regard, stratified random sampling, cluster sampling, systematic sampling and simple random sampling are type of probability sampling while purposive sampling, quota sampling and convenient sampling are types of non-probability sampling techniques (Kaczynski et al., 2014).

Simple random sampling technique is one in which all elements of population are listed down and then sample units are selected randomly out of them in such a way that each unit has the equal chances of being selection. The biggest advantage of this method is that it provides the most representative sample. However, it has some limitations as well. As for instance, a complete list of the total population is difficult to obtain and if the whole population is obtained, the process becomes very expensive and is also time consuming.

A stratified random sampling is a type of random sampling technique in which the total population is divided into groups on the basis of certain specification as to class, sex, income level or education. After dividing the population into groups, simple random sampling technique is used to draw sample for each of the groups called strata. This type of sampling technique is more helpful than any other technique to select a most representative sample, however, it takes more effort to select sample under this technique and also cannot be used in every situation as the total population in every case may not be known so construction of strata is not possible. On the other hand, a cluster sampling is closely related to stratified sampling in a way that cluster sampling also makes distinct groups on the basis of age, gender, income level and then a representative sample is selected through collection of elements from each group. This type of sampling technique is also difficult to obtain yet it provides advantages of greater representation of population. The last category of random sampling is systematic sampling in

which sample is selected in a systematic way. As for instance, the sample selection out of a class may be done by selecting every student with roll number multiple of 5 (Yin, 2014).

Convenience sampling is a type of non-probability sampling under which the sample is selected on availability of sampling units and the personal convenience of researcher due to time and cost constraints. Thus, it is convenient, quick and easy way of sample selection. This type of sampling technique is used where it becomes impossible to select sample by identifying all the population units. The advantages of this technique include easy and quick sample selection. However, the sample selected through this technique may not be representative of the total population. A purposive sampling technique is one in which the sample is selected based upon personal judgment of the researcher as to which elements can best serve the purpose of research. On the other hand, snowball sampling is a technique in which few respondents are selected to take information who are identified to have certain knowledge about the subject matter and then the same persons are asked to refer someone else who might contain required knowledge and so on. This process continues until the required level of information is achieved (Kaczynski et al., 2014).

There are two types of sampling techniques which have been used for current research as samples were selected in two phases. First of all, the sample was selected from total population i.e., at-least one branch out of all banks. Thus, in constituted as stratified random sampling technique. In current research, data was collected from the Pakistani Banks through stratified random sampling because Banks in Pakistan was divided in small subgroups which were considered as strata. In current research, sample was collected from 106 banks in which at least one branch of every bank was selected as subgroup or strata. In the next phase, non-probability convenient sampling technique was used to complete the sample size of study to 106 branches. In convenient sampling, data was collected from the participant of 106 branches of bank who are convenient in the access of researcher.

5.10 Data Collection Instrument:

Since, it is a quantitative research study, the method used to collect data was a 5-point Likert scale questionnaire. For all types of researches in social sciences, questionnaires form the most important instrument for data collection in quantitative studies (O'Reilly and Parker, 2013). Questionnaire is a simple, quick and economical way to collect data. The questionnaire for the purpose of current study has been extracted from previous research. Since an already developed and used questionnaire in any research has already established its reliability and validity, thus, it becomes more appropriate to use.

There are two parts of the questionnaire used in this research. First part deals with demographics information of the bank branch as to the number of employees working in branch and the type of bank as to whether public or private. In second part of the questionnaire contains questions of different variables of MCS including boundary controls, interactive controls, belief controls and diagnostic controls as well as PMS of both financial and non-financial measures. This part contains total 43 questions: 7 for each financial performance measures and non-financial measures obtained from research of Alzoubi, (2014) while 14 for MCS extracted from the research of Shurafa and Mohamed, (2016) and Bobe and Taylor, (2010) in a way that 6 for interactive controls, 5 for diagnostic controls, 4 for belief controls and 4 for boundary controls. The questions of MCS have been measured on a five-point likert scale ranging from strongly agree to strongly disagree while those measuring financial and non-financial performance measures have been measured on 5-point likert scale ranging from 'to small extent' to 'very greater extent'. On the other hand, there are 10 questions on actual performance 5 for financial and 5 for non-financial performance obtained from Crucke and Decramer, (2016) measured on five-point likert scale ranging from strongly agree to strongly disagree. A copy of complete questionnaire used for study has been attached in appendices. This questionnaire was discussed thoroughly with 2 academician and 3 bank heads of HR divisions

before distribution. Using this questionnaire, the data was collected from branch heads or next to his rank from each bank branch. The use of self-administered questionnaires helped to collect data in a transparent and quick way. The questionnaire was adopted and extracted from the previous researches which were available in literature financial as performance measures and non-financial measures taken from Alzoubi, (2014) research, while for MCS extracted from Shurafa and Mohammed, (2016) research and for interactive controls, diagnostic controls, belief controls and boundary controls were taken from Bobe and Taylor, (2010) study, whereas Crucke and Decramer, (2016) research was considered for questions of actual performance; financial and for non-financial performance.

5.11 Data Analysis Technique

The collection of accurate and reliable provides the basis for valid analysis so that the results can be generalized. For current research, best effort has been made to collect data personally by researcher, so it provides a better foundation to obtain authentic results. In this regard, the analysis of data has been performed in SPSS using a range of test statistics.

The analysis of data was done in two stages. The first stage is to check the data fit for analysis purpose while in next phase the actual analysis was made using different tests. Thus, first of all, for the purpose of establishing reliability of scale, Cronbach's Alpha test has been performed while the normality of data has been checked using skewness of data as well as PP Plots. Moreover, for missing values, the missing values test was performed which eliminated the responses with more than 4 missing values while replaced missing values of equal to or lesser than 4 for any respondent using linear trend method.

After fulfilling all assumptions normality and checking for frequency distribution, the next stage of analysis started in which, descriptive statistics were performed, first of all, which helped to understand the average response of respondents against different variables of study which mainly included: PMS (financial and non-financial), MCS (DCS, ICS, BCS, BLC) and

OP (financial and non-financial). All the variables are expected to contain positive relationship with each other and are also expected to put positive impact on OP. This average response in the form of descriptive statistics provides an overall idea of results as well as determines the overall variation in responses. Going further, Pearson' correlation test was performed to understand the significance of relationship between variables of study as used in a similar study of Jamil and Mohamed, (2013); Shurafa and Mohamed, (2016). Moreover, correlation also helps to identify for the existence of any multicollinearity within variables. In the next step, the linear regression test was performed in order to ascertain the impact of financial and non-financial PMS on different MCS. In order to determine the impact of mediation analysis both linear and multiple mediation analysis has been performed. Thus, a comprehensive analysis of the data was performed using different test statistics in SPSS.

5.12 Validity and Reliability

For any research, the reliability and validity of data are the prime factors on which the whole research is based. For the purpose of current study, as have been provided earlier, the reliability and validity of data was performed using Cronbach's Alpha test as well as correlation test of internal consistency respectively.

5.13 Ethics of Research

The current research has met all the ethical requirements to conduct a research study. In this regard, it was made sure that the data was collected with complete permission of the banking organizations which were selected for data collection for this study. Moreover, the privacy of respondents has been ensured. The selection of respondents was also made equitable as per the selected sampling technique. Furthermore, the participation to respond was total voluntary not forced in any way. Researchers have provided that the voluntary response is important to determine the accuracy of results (McLaughlin and Alfaro-Velcamp, 2015).

Moreover, the current research has duly acknowledged all the sources of information and research work of other authors. This is important for the purpose of avoiding any type of plagiarism in the study (APA, 2012). The ethics of research also require to make independent judgment and interpretation of data which I have made, thus, I did not face any conflict of interest which resulted in influencing my interpretation (Boblin et al., 2013). Ethics approval from university panel of ethics committee has also obtained after providing required details.

5.14 Chapter Summary

The current research has provided in-depth analysis of the various types of methodologies available and the selection of most suitable research methodology for current study. In this regard, it has opted for positivist research philosophy, cross sectional research type, quantitative research approach, deductive research style. On the other hand, it has collected data from 22 banks making a total of 106 branches with the sampling techniques of both stratified and convenience sampling. A structured questionnaire has been used for the collection of data. Moreover, the ethics of research have all been considered and fulfilled.

CHAPTER SIX: RESULTS AND ANALYSIS

6.1 Introduction:

The previous chapter has provided a detailed methodology to conduct this study. Using the prescribed methodology, the data collection has been done and analysis has been performed using SPSS and AMOS. In this regard, the chapter has been divided into different sections. The first section discusses the demographics of study while the second section tests for the basic assumptions of data to run further analysis. The next section discusses the model fit of study variables by running path model in AMOS. The model fit along with the common method bias of data has been examined. Moving further, the descriptive statistics and correlation analysis of study have been examined. The next section tests the hypotheses of study for which the linear regression has been run between study variables and afterwards the mediation analysis has been performed. Finally, the discussion on results has been provided at the end of chapter.

6.2 Demographic Analysis

This section includes a brief description of different demographics of study including: gender, age, education and experience.

Table 2: Demographic Analysis

Gender	**%**	**Age**	**%**	**Education**	**%**	**Experience**	**%**
Males	84.9	Below 25 Years	0.9	Masters	61.3	1 to 5 Years	52.8
Females	15.1	25 to 30 Years	10.4	Bachelors	20.8	6 to 10 Years	34
		31 to 35 Years	29.2	Others	17.9	11 to 15 Years	7.5
		36 to 40 Years	29.2			16 to 20 Years	0.9
		Above 40 Years	30.2			Above 20 Years	4.7
Total	100%		100%		100%		100%

The respondents of this study were employees of banks operating in different areas of Pakistan. Table 2 summarizes results for demographics of study which mainly included gender, age, education and experience. The details of these demographics have been provided as under:

- ***Gender of Respondents:*** Gender includes males and females of study. In this regard, males of study consist of 84.9% which indicates that majority of respondents of study are males as the study targeted the branch heads of banks who are mainly males. On the other hand, only 15.1% are females.

- ***Education:*** In terms of education, there are three categories of respondents including bachelors, masters and others. In this regard, it has been observed that the highest percentage of respondents are masters i.e., 61.3% while 20.3% are bachelors. However, 17.9% have other professional qualification like ACCA and others.

- ***Experience:*** In terms of experience, there are 5 categories ranging from 1 to 5 years to above 20 years. In this regard, the highest portion of respondents fall in the first category which include 52.8% of the entire respondents. Secondly, there are 34% of the respondents who have 6 to 10 years of experience, 7.5% have 11 to 15 years of experience, 0.9% possess 16 to 20 years while 4.7% have above 20 years of experience.

6.3 Assumptions of Data

Before proceeding towards next analysis, the underlying assumptions have been verified. In this regard, the three basic assumptions including normality of data, collinearity, adequacy of sample size and reliability statistics have been examined which have been discussed as under:

Table 3: Normality Assumptions

	Skewness	**Kurtosis**
DCS	-1.78	3.746
ICS	-1.15	3.342
BLCS	-0.881	0.246
BCS	-1.414	3.518
FPMS	-0.381	-0.632
NFPMS	-0.965	2.061
NFP	-0.615	-0.542
FP	-0.754	0.136

DCS = Diagnostic Controls Systems, ICS = Interactive Controls Systems, BLCS = Belief Controls Systems, BCS = Boundary Controls Systems, FPMS = Financial Performance Measurement System, NFPMS = Non-financial Performance Measurement System, NFP = Non-Financial Performance, FP = Financial Performance

Skewness and kurtosis statistics have been used to examine the normality of data. For this purpose, skewness apprises about the spreaders of data while kurtosis explains peakness of data. As suggested by Creswell, (2013), the values of skewness should be in the range of +2 and -2 while the kurtosis values should lie between +7 and -7 to confirm normality. The results of study have shown that both the skewness and kurtosis values are within the prescribed range of all variables of study. Thus, the data fulfills the assumption of normality.

Table 4: Collinearity Diagnostics

	Tolerance	**VIF**
DCS	0.332	3.011
ICS	0.293	3.410

BLCS	0.484	2.065
BCS	0.500	2.001
FPMS	0.466	2.146
NFPMS	0.419	2.387

DCS = Diagnostic Controls Systems, ICS = Interactive Controls Systems, BLCS = Belief Controls Systems, BCS = Boundary Controls Systems, FPMS = Financial Performance Measures, NFPMS = Non-financial Performance Measures, NFP = Non-Financial Performance, FP = Financial Performance

Values of tolerance are greater than 0.02 while those of VIF are less than 10, thus, there is no problem of multicollinearity in data as verified from above table (Bryman and Bell, 2015). Thus, another assumption is fulfilled.

Table 5: Adequacy of sample size

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.853
Bartlett's Test of Sphericity	Approx. Chi-Square	3069.305
	Df	861
	Sig.	.000

The test of "Kaiser-Meyer-Olkin" is used to check the adequacy of sample size.in this regard, the values within the range of 0 to 1 indicate the adequacy of sample with values of KMO closer to 1 confirm better adequacy while the minimum cut off value of KMO is 0.5 where the values within the range of 0.5 to 0.7 indicates average fit, 0.7 to 0.8 is good fit and 0.8 to 1 is excellent fit (Bryman and Bell, 2015).

On the other hand, Bartlett's test of Sphericity test is used to examine the status of original correlation matrix as to whether it is an identical matrix. If the results of this study are significant then it indicates that the correlation matrix is not identical matrix (Creswell, 2013). The results of study as indicated in above table provide the value of KMO as 0.853 which confirms excellent adequacy of sample size while the Bartlett's test of Sphericity is also significant since $p = 0.000 < 0.05$, thus, the data fulfills the assumptions of adequacy of sample size.

Table 6: Reliability Statistics

Variables	Cronbach's Alpha/CR	N
DCS	0.870	6
ICS	0.767	5
BLCS	0.859	4
BCS	0.805	4
FPMS	0.770	7
NFPMS	0.832	7
FP	0.852	4
NFP	0.902	5

DCS = Diagnostic Controls Systems, ICS = Interactive Controls Systems, BLCS = Belief Controls Systems, BCS = Boundary Controls Systems, FPMS = Financial Performance Measurement system, NFPMS = Non-financial Performance Measures system, NFP = Non-Financial Performance, FP = Financial Performance

The reliability of construct has been examined using two statistics including Cronbach's alpha in SPSS and composite reliability (CR) in AMOS. As suggested by Bryman and Bell, (2015),

the values of Cronbach's alpha greater than 0.7 indicates reliability of constructs. In this regard, the table provides reliability statistics for each construct of study is greater than 0.7 since DCS = 0.87, ICS = 0.767, BLCS = 0.859, BCS = 0.805, FPMS = 0.770, NFPMS = 0.832, FP = 0.852 and NFP = 0.902 as measured by both indicators i.e., Cronbach's Alpha and CR, thus, the reliability of all individual constructs of study has been established.

These results indicate that the preliminary assumptions of data have been fulfilled which sets the foundation to proceed for the advanced analysis.

6.4 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is used to test whether the collected data fits within the model of study or not. This study has used CFA under Maximum Likelihood Estimation (MLE) technique since the model has been drawn using already established constructs from previous studies. On the other hand, MLE requires that multivariate normality assumption should be fulfilled. This test works in a best and unbiased manner to find the most likely values achieving the fit of the model. CFA is a part of Structural Equation Modeling (SEM) and the common fitness measurements used in this regard include Chi Square, CFI, IFI, TLI, RMR and others (Hooper et al., 2008). The current study has also used CFA since it has used the constructs already drawn in previous studies.

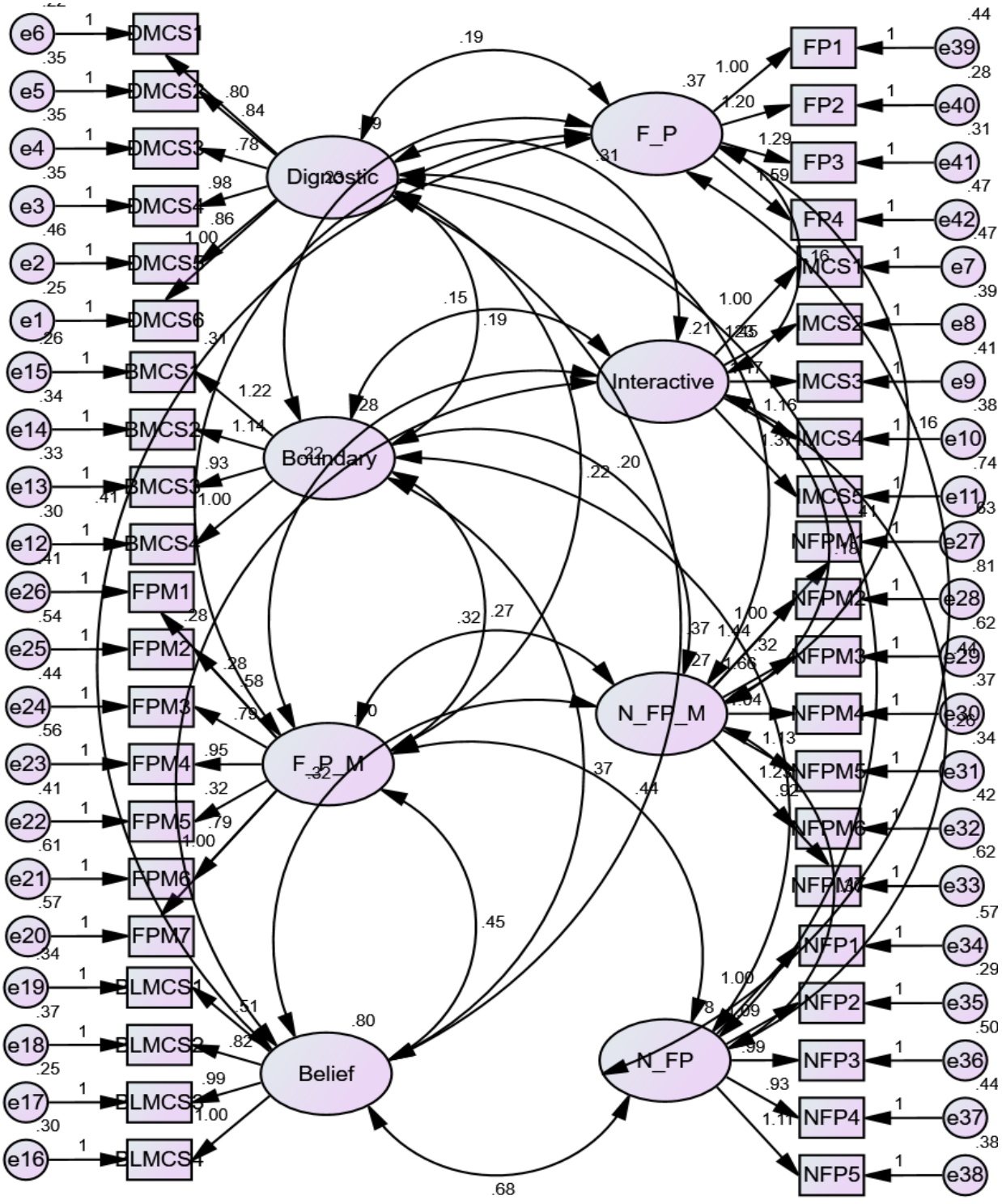

Figure 2: Confirmatory Factor Analysis

The study has drawn a complete measurement model in AMOS using all constructs of study. After loading the indicators on their parent constructs, the measurement model was run in AMOS. The primary model of study has provided better fit of the model using the fit indices

as $\chi 2/df = 1.766 < 3$, CFI, IFI and TLI = 0.8 (indicating better fit) while the value of RMR is 0.06 which is equal to cut off value of 0.06. Thus, the original model of study indicates a good fit as suggested by Hooper et al. (2008).

6.5 Test of Common method bias

In the next step, the examination of common method bias for study variables has been examined. In this regard, as suggested by Hair et al. (2010) the collection of data from a single source and a single point in time is subject to common method bias which must be addressed. First of all, a pre-remedial strategy of placing the values of each variable and mediators in separate constructs has been applied. However, for robustness of evidence, two separate diagnostic tests including Harman single factor test as well as alternative plausible models have been used to determine whether the data from a single source is subject to common method bias or not. In this regard, the Harman single factor test has provided that the first factor accounted for 14.32% of the total variance (which is lesser than 50%). It provides that the common method bias does not pose any threat to results of study. Additionally, the 7 plausible models have been run including the original model to examine the distinctiveness of the original model. For this purpose, first of all, the measurement model was constructed by drawing the variables on relative constructs. In the next step, two constructs were merged to make one, thus, total constructs were six and gradually, the constructs were reduced to make a single factor model and the results of model fit were computed. In this regard, out of all seven models of study, the original model has provided the best fit which confirms its distinctiveness. Thus, the results of study have provided that the common method bias does not exist for study variables.

Table 7: Fit Indices of Plausible Models

Measurement Models	CMIN/DF	RMR	CFI	IFI	TLI
7 Factors Model	1.766	0.060	0.80	0.80	0.80
6 Factors Model	1.847	0.072	0.751	0.757	0.731
5 Factors Model	1.873	0.073	0.741	0.747	0.723
4 Factors Model	2.110	0.079	0.669	0.675	0.648
3 Factors Model	2.320	0.085	0.601	0.607	0.579
2 Factors Model	2.350	0.085	0.593	0.599	0.571
1 Factor Model	2.357	0.085	0.591	0.597	0.570

Table 8 provides for descriptive statistics including mean and standard deviation for variables of study. Moreover, the correlation between variables of study has also been provided. In this regard, the mean values for all the variables of study are closer to 4 indicating respondents are agreed for different questions asked from them on PMS and MCS. The values of S.D also provide that the values are lower than 1 indicating lower variation in responses. This also points to normality of data.

Table 8: Descriptive Statistics and Correlation between study variables

	M	S.D	DCS	ICS	BLCS	BCS	FPMS	NFPMS	NFP
DCS	4.02	0.658							
ICS	4.01	0.648	.795**						
BLCS	4.07	0.797	.501**	.563**					
BCS	4.25	0.632	.436**	.464**	.631**				
FPMS	4.05	0.592	.337**	.508**	.544**	.556**			
NFPMS	3.98	0.694	.544**	.598**	.557**	.588**	.655**		

NFP	3.69	0.952	.589**	.534**	.772**	.584**	.524**	.539**	
FP	3.97	0.828	.423**	.479**	.663**	.598**	.527**	.427**	.738**

DCS = Diagnostic Controls Systems, ICS = Interactive Controls Systems, BLCS = Belief Controls Systems, BCS = Boundary Controls Systems, FPMS = Financial Performance Measures, NFPMS = Non-financial Performance Measures, NFP = Non-Financial Performance, FP = Financial Performance

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

In the next step, the correlation values of data have been provided. The study has applied Pearson correlation to examine the relationship between study variables including dependent, independent and mediating variables. In this regard, it can be observed that all the variables of study have significant correlation with each other at a significance level of 0.001. The correlation values ranging between 0.1 to 0.4 indicates lower correlation, from 0.41 to 0.6 indicates good correlation while values above 0.7 indicates strong correlation. In this regard, it can be observed that FPMS has weak but significant correlation with DCS as $r = 0.337$, $P < 0.001$. On the other hand, the correlation between ICS and DCS ($r = 0.795$, $P < 0.001$), between BCS and BLC ($r = 0.631$, P , 0.001), between BLC and NFP ($r = 0.772$, $P < 0.001$), BLCS and FP ($r = 0.663$, $P < 0.001$) is strong while the relationship between rest of the variables is moderate. The results have provided that there exists average to strong correlation between study variables.

All these results provide that the basic assumptions to perform analysis on data have been fulfilled. Moreover, the model fit of variables has also been tested and verified. The next section has been dedicated towards advanced analysis in order to test the hypotheses of study.

6.6 Hypotheses Testing

In order to test the hypotheses of study, there are mainly two types of tests which included linear regression analysis and mediation analysis. The analysis has been run using both SPSS and AMOS. The results of linear regression have been run on both analytical software which provided similar results. However, for mediation analysis, AMOS has been used which is considered best to run mediation analysis especially multiple mediation since multiple mediation analysis is not possible in SPSS. Thus, based upon such analysis, the hypotheses of study have been verified. In this regard, first of all, the linear regression analysis has been performed to test the impact of NFPMS on four different types of controls including: DCS, ICS, BLCS and BCS while in the next step, the linear regression analysis between FPMS and four control measures has been run. Moving forward, the linear regression analysis has been run between four control measures and FP as well as NFP separately. Finally, two types of mediation analysis i.e., simple mediation as well as multiple mediation analysis has been run to test the mediation impact of four control measures between NFPMS to NFP and between FPMS to FP. All this analysis has been discussed as under:

6.6.1 Linear Regression Analysis

The first hypotheses of study is to examine the impact of FPMS on MCS. For this purpose, the linear regression between FPMS and each controls including DCS, ICS, BLCS and BCS has been run separately which provided the following results.

Table 9: Linear Regression between FPMS and DCS

	Estimate	**SE**	**P**
FPMS	0.337	0.103	0.000

Dependent Variable: DCS

Table 9 presents results of linear regression between FPMS and DCS. The model of linear regression between these two variables provide that FPMS explains 11.4% variance in DCS

which is though, low but it is significant as ($R2 = 0.114$ $F(1,104) = 13.341$, $p < 0.01$). The results have further provided that $B = 0.337$ with $P = 0.000 < 0.001$ indicating significant positive impact of FPMS on DCS.

Figure 3: Linear Regression between FPMS and DCS

This result supports the hypothesis H1 (a) which says that FPMS have significant relationship with DCS.

Table 10: Linear Regression between FPMS and ICS

	Estimate	**SE**	**P**
FPMS	0.508	0.092	0.000

Dependent Variable: ICS

Table 10 provides the results of linear regression between ICS and FPMS. Since the value of R2 is 0.258 which indicates that the model explains 25.8% variance in FPMS as ($R2 = 0.258$, $F(1,104) = 36.102$, $p < 0.01$). The results have provided that FPMS has significant positive impact on ICS since $B = 0.508$ with $p < 0.001$.

Figure 4: Linear Regression between FPMS and ICS

These results provide support to accept the hypothesis H1 (b) which lays down that there exists significant relationship between FPMS and ICS.

Table 11: Linear Regression between FPMS and BLCS

	Estimate	SE	P
FPMS	0.544	0.111	0.000

Dependent Variable: BLCS

In order to test H1 (c) a linear regression has been run between BLCS and FPMS. The results have revealed that the model explains 29.6% of variance in BLCS as ($R2 = 0.296$, $F(1,104) = 43.827$, $p < 0.01$). The table has provided that the $B = 0.544$ with $p < 0.001$ which indicates significant positive impact of FPMS on BLCS.

Figure 5: Linear Regression between FPMS and BLCS

These results provide sufficient support to accept the H1 (c), thus, there exists significant relationship between FPMS and BLCS.

Table 12: Linear Regression between FPMS and BCS

	Estimate	SE	P
FPMS	0.556	0.087	0.000

Dependent Variable: BCS

Finally, the impact of FPMS on BCS has been examined using linear regression analysis technique. In this regard, this model explains 31% of the variance in BCS as ($R2 = 0.31$, $F(1,104) = 46.62$, $p < 0.01$) indicating fit of the model. Moving forward, the results of linear regression have provided $B = 0.556$ with $P < 0.001$, thus, there exists significant positive impact of FPMS on BCS.

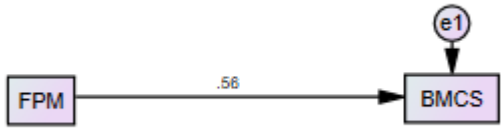

Figure 6: Linear Regression Between NFPMS and BCS

With this, the hypothesis H1 (d) has been accepted.

After examining for impact of financial performance measures on four types of MCS, the next step is to examine the influence of non-financial performance measures on MCS in terms of each individual control including DCS, ICS, BLCS and BCS.

Table 13: Linear Regression between NFPMS and DCS

	Estimate	**SE**	**P**
NFPMS	0.544	0.078	0.000

Dependent Variable: DCS

The results of linear regression between NFPMS and DCS have revealed that it explains 29.6% of the variance in dependent variable ($R2 = 0.296$, $F(1,104) = 43.705$, $p < 0.01$). NFPMS has significant positive impact on DCS as $B = 0.544$, $P < 0.01$. NFPMS are helpful to boost DCS. The NFPMS which mainly include product quality, employee satisfaction, customer satisfaction, new product development and other such measures lead to improve DCS.

Figure 7: Linear Regression between NFPMS and DCS

These results provide support to accept hypothesis H2 (a) of study which lays down there exists positive relationship between NFPMS and DCS.

Table 14: Linear Regression between NFPMS and ICS

	Estimate	SE	P
NFPMS	0.598	0.073	0.000

Dependent Variable: ICS

The results of linear regression between NFPMS and ICS have revealed that it explains 35.7% of the variance in dependent variable ($R2 = 0.357$, $F(1,104) = 57.851$, $p < 0.01$). NFPMS has significant positive impact on ICS as $B = 0.598$, $P < 0.01$. NFPMS are helpful to influence ICS. NFPMS play an important role on strategic controls since they are very flexible and employees can quickly adopt and explore new ideas. The match between ICS and NFPMS is considered more helpful to develop new ideas which ultimately leads to improve performance.

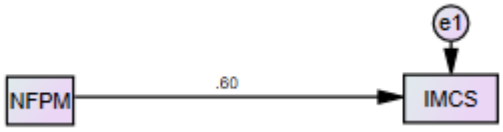

Figure 8: Linear Regression between NFPMS and ICS

These results establish that NFPMS has significant influence on ICS which lead to accept hypothesis H2 (b) which says that there exists significant relationship between NFPMS and ICS.

Table 15: Linear Regression between NFPMS and BLCS

	Estimate	SE	P
NFPMS	0.557	0.093	0.000

Dependent Variable: BLCS

Table 15 provides results of linear regression between NFPMS and BLCS. The results have revealed that the linear regression model explains 31% of the variance in dependent variable ($R2 = 0.31$, $F(1,104) = 46.79$, $p < 0.01$). This 31% variation is considered moderate which leads to influence the BLCS. The impact of NFPMS on BLCS is 0.557 at a level of significance of

0.001 since B = 0.557, p < 0.001. The beta coefficient provides a higher impact since it is near to 0.6. This result builds strong ground not only to prove the impact of NFPMS on BLCS but also it satisfies the initial condition of mediation analysis.

Figure 9: Linear Regression between NFPMS and BLCS

These results confirm significant influence of NFPMS on BLCS. In the light of these results, it is confirmed that H2 (c) is accepted.

Table 16: Linear Regression between NFPMS and BCS

	Estimate	**SE**	**P**
NFPMS	0.588	0.072	0.000

Dependent Variable: BCS

In order to test the hypotheses H2 (d), linear regression has been performed between NFPMS and BCS. The results of linear regression between BCS and NFPMS have been provided in above table which indicate 34.6% of the variance in BCS has been explained by NFPMS since (R2 = 0.346, F(1,104) = 54.95, p < 0.01). The results have provided that B = 0.588 with p < 0.001. These results confirm greater impact of NFPMS on BCS.

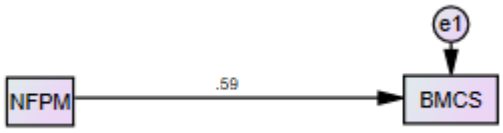

Figure 10: Linear Regression between NFPMS and BCS

It establishes strong positive significant impact of NFPMS on BCS. Thus, hypothesis H2 (d) has been accepted. Moreover, the foundation for mediation impact of BCS between NFPMS and NFP has been laid down.

All these results have revealed that both FPMS and NFPMS have the significant impact on four types of MCS which provide sufficient support for acceptance of H1 and H2.

The next section is dedicated to examine the impact of different control measures including ICS, DCS, BCS and BLCS on OP both FP and NFP. For this purpose, first of all, the impact of MCS on FP has been analyzed and afterwards it has been evaluated for NFP.

Table 17: Linear Regression between FP and DCS

	Estimate	**SE**	**P**
DCS	0.423	0.112	0.000

Dependent Variable: FP

Table 17 provides for impact of DCS on FP using linear regression analysis. In this regard, the results have provided that the model provides for 17.9% variation in dependent variable FP with ($R2 = 0.179$, $F(1,104) = 22.601$, $p < 0.01$). Moreover, the impact of DCS on FP is significant as $B = 0.423$ with $P < 0.001$. This model, though, significant and fulfills the conditions for model fit, yet the variation explained by model is low. However, the impact of DCS on FP is significant and comes in moderate level which explains that DCS leads to improve the FP of banks under study.

Figure 11: Linear Regression between DCS and FP

These results indicate that DCS positively influence the FP of banks. Thus, hypothesis H3 (a) has been accepted.

Table 18: Linear Regression between FP and ICS

	Estimate	SE	P
ICS	0.479	0.110	0.000

Dependent Variable: FP

Linear regression has been run between ICS and FP. This linear regression model has explained 23% variance in FP with a better model fit ($R2 = 0.23$, $F(1,104) = 31.045$, $p < 0.01$). The results have provided that there exists significant positive impact of ICS on FP as $B = 0.479$ with $p < 0.001$. These results confirm that ICS influences the FP of banks. The extent of impact is also high, providing sufficient support to confirm the relationship between ICS and FP.

Figure 12: Linear Regression between ICS and FP

These results lead to accept hypothesis H3 (b) of study.

Table 19: Linear Regression between FP and BLCS

	Estimate	SE	P
BLCS	0.663	0.076	0.000

Dependent Variable: FP

Table 19 contains results for linear regression run between BLCS and FP. This linear regression model explains 43.9% variance in FP with a good model fit since ($R2 = 0.439$, $F(1,104) = 81.54$, $p < 0.01$). The value of $B = 0.663$ at a p value < 0.001. These results show that BLCS has significant positive impact on FP of banks indicating that belief controls are important for enhancing financial performance of business. The magnitude of impact is quite high since it is almost closer to 0.7 which is quite high. This implies that BLCS is very important to enhance

the FP which is in line with literature that argues that beliefs have central role to play to foster performance either financial or non- financial (Kruis et al., 2016).

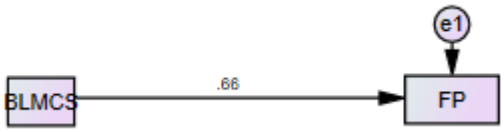

Figure 13: Linear Regression between BLCS and FP

These results are helpful to accept H3 (c) of study.

Table 20: Linear Regression between FP and BCS

	Estimate	SE	P
BCS	0.598	0.106	0.000

Dependent Variable: FP

The results of linear regression between BCS and FP have been summarized in table 20. For this model the BCS explains 35.8% variance in FP with the model providing a good fit ($R2 = 0.358$, $F(1,104) = 57.874$, $p < 0.01$). A further explanation shows that B estimate is 0.598 and $P < 0.001$. It indicates that there is positive significant impact of BCS on FP. Moreover, the magnitude of impact is also high since it is almost 0.6 which is high. The variation explained by model is also quite high i.e., 35.8%. Thus, the boundary controls, though, place restrictions on employees, however, working within strict boundaries lead to enhance performance with the help of results and targets achievements.

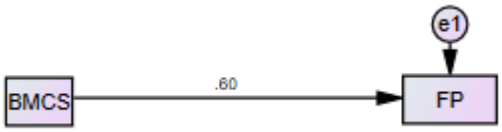

Figure 14: Linear Regression between BCS and FP

With this the hypothesis H3 (d) of study is accepted.

These results have indicated that the four types of management controls significantly influence the financial performance of banks under survey. These results provide support for acceptance of H3 of study. The next section calculates the impact of management controls including ICS, DCS, BLCS and BCS on non-financial performance of banks.

Table 21: Linear Regression between NFP and DCS

	Estimate	**SE**	**P**
DCS	0.589	0.115	0.000

Dependent Variable: NFP

Table 21 summarizes the results of linear regression run between DCS and NFP. The results have indicated that DCS is a good predictor of NFP since B = 0.589 at P < 0.001. Moreover, this linear regression model explains 34.6% variance in NFP with a good model fit ($R2 = 0.346$, $F(1,104) = 55.139$, $p < 0.01$). The impact is high with better explained variation. Thus, DCS is helping banks to enhance NFP of banks under study. the similar impact has been observed for FP, however, the degree of impact is higher for NFP as compared to FP which emphasizes that the DCS, though, is helpful to improve both financial and non- financial performance yet its impact on NFP is higher.

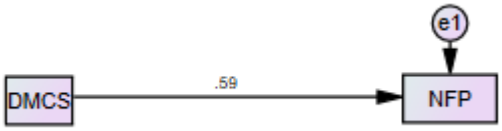

Figure 15: Linear Regression between DCS and NFP

These results indicate that DCS significantly influences NFP of banks. Thus, hypothesis H4 (a) of study is accepted.

Table 22: Linear Regression between NFP and ICS

	Estimate	SE	P
ICS	0.534	0.122	0.000

Dependent Variable: NFP

Table 22 measures the impact of 2nd type of MCS i.e., ICS on NFP. The results of linear regression provide that ICS significantly influences the NFP of banks since B = 0.534, P < 0.001. Moreover, the model provides a good fit explaining 28.5% variance in NFP (R2 = 0.285, F(1,104) = 41.393, p < 0.01). These results provided that ICS are helpful to improve NFP to a greater extent for the banks under study. A comparison for the impact of ICS on both financial and non- financial performance has provided that they have a bit higher impact on non-financial performance as against financial performance, recommending greater applicability for non- financial performance.

Figure 16: Linear Regression between ICS and NFP

These results are helpful to accept H4 (b) of study.

Table 23: Linear Regression between NFP and BLCS

	Estimate	SE	P
BLCS	0.772	0.074	0.000

Dependent Variable: NFP

The results in table 23 indicate that BCS strongly influence the NFP of banks as the linear regression have provided a beta value of 0.772 with P < 0.001. Moreover, the value of R2 is 0.596 indicating it explains 59.6% variance in NFP providing a good model fit (R2 = 0.596, F(1,104) = 153.679, p < 0.01). These results have provided that BLCS has quite high impact

for boosting the non- financial performance of banks Though, their impact is also high for FP as well, yet the impact is higher for non- financial performance, pointing to higher effectiveness of this control for boosting NFP performance of banks.

Figure 17: Linear Regression between BLCS and NFP

Thus, there exists positive relationship between BLCS and NFP leading to accept hypothesis H4 (c) of study.

Table 24: Linear Regression between NFP and BCS

	Estimate	SE	P
BCS	0.584	0.120	0.000

Dependent Variable: NFP

Table 24 provides results for linear regression between BCS and NFP. These results show that there is significant impact of BCS on NFP as B = 0.584, P < 0.001. The results also provide that this linear model explains 34.1% of the variance in NFP under a good model fit (R2 = 0.341, F(1,104) = 53.89, p < 0.01). The results have confirmed the strong impact of BCS on NFP. Again, a comparison of the impact of BCS on FP and NFP has shown that a minor difference where BCS has high impact on FP. This is because BCS are focused to achieve target results which is the focus of financial performance.

Figure 18: Linear Regression between BCS and NFP

Thus, BCS significantly influence NFP of banks. It leads to accept H4 (d) of study.

Thus, all four MCSs under survey have found to make a significant impact on NFP of banks. Moreover, the impact is also positive. The next section explains the direct linear impact of both types of performance measures i.e., financial and non-financial on respective performance i.e., financial and non-financial. Moreover, a combined impact of PMS has also been observed on financial and non-financial performance.

Table 25: Linear Regression between FPMS and FP

	Estimate	SE	P
FPMS	0.527	0.113	0.000

Dependent Variable: FP

Table 25 provides results for linear regression between FPMS and FP. The model provides 27.8% variance of dependent variable FP under a good model fit ($R2 = 0.278$, $F(1,104) = 40.027$, $p < 0.01$). In terms of linear impact, FPMS significantly impact FP of banks as $B = 0.527$, $p < 0.001$. The magnitude of impact is also high confirming the effectiveness of FPMS to improve the FP of banks under study.

Figure 19: Linear Regression between FPMS and FP

Thus, there is significant positive impact of FPMS on FP of banks. This result has led to acceptance of H5.

Table 26: Linear Regression between NFPMS and NFP

	Estimate	**SE**	**P**
NFPMS	0.539	0.113	0.000

Dependent Variable: NFP

First of all, the impact of NFPMS on NFP has been calculated using linear regression analysis which provided a good model fit with R2 of 0.291 indicating that the model explains 29.1% variance in NFP (R2 = 0.291, F(1,104) = 42.662, p < 0.01). The linear impact of NFPMS is 0.539 on NFP at P < 0.001. These results confirm the effectiveness of NFPMS to enhance NFP of banks. a closer look for comparison between the two types of control measures have shown that both the control measures i.e., FPMS and NFPMS have equal degree of impact to improve financial and non- financial performance respectively.

Figure 20: Linear Regression between NFPMS and NFP

Thus, NFPMS has significant positive impact on NFP which leads to acceptance of H5 (b).

Table 27: Linear Regression between PMS and OP

	Estimate	SE	P
PMS	0.585	0.129	0.000

Dependent Variable: OP

Table 27 summarizes the results of linear regression between PMS and OP. This model carries 34.2% variance of NFP (R2 = 0.342, F(1,104) = 53.98, p < 0.01). The impact of PMS on OP is strong with B = 0.585 at P < 0.001.

This is due to similar impact of both NFPMS and FPMS on NFP and FP respectively.

These results confirm significant positive impact of PMS on NFP of banks under survey. It leads to acceptance of H5.

6.6.2 Mediation Analysis

The above sections have discussed in detail the linear relationship between study variables. All of them observed to have significant positive relationship with each other. This part has been

dedicated to examine the mediation impact of four types of controls on financial and non-financial performance of banks under survey to confirm whether the controls act as mediators or not between performance measures and actual performance of business. The entire mediation analysis has been performed in AMOS.

For this purpose, the mediation has been run in two ways: i.e., using simple mediation analysis and using multiple mediation analysis. In this regard, simple mediation analysis has been performed to evaluate the status of each mediator i.e., ICS, DCS, BCS, BLCS separately in the path between NFPMS and NFP as well as FPMS and FP. On the other hand, the multiple mediation analysis has been performed taking all four mediators simultaneously in the study model.

6.6.2.1 Simple Mediation Analysis

First of all, the simple mediation analysis has been run between FPMS and FP and then between NFPMS and NFP for all four mediators separately. These results have been discussed as under:

Table 28: Simple Mediation Analysis Taking DCS as mediator between FPMS and FP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
FPMS	0.608	0.004	0.13	0.004	0.738	0.006
DCS	0.375	0.006				

Dependent Variable: FP

First of all, a mediation analysis has been performed taking DCS as a mediator between FPMS and FP.

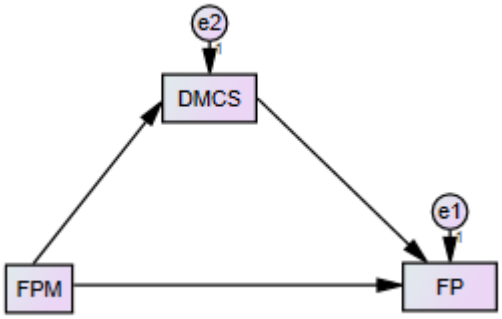

Figure 21: Simple Mediation Analysis Taking DCS as mediator between FPMS and FP

The results have provided that all the effects i.e., direct, indirect and total are significant at 0.01. it indicates that DCS acts as a significant mediator between FPMS and FP. However, the mediation is partial since both direct and indirect impacts are significant. Moreover, the direct impact of FPMS is stronger than indirect impact which points that DCS is a significant but weak mediator between FPMS and FP. This result is helpful and recommends application of DCS along with FPMS to enhance FP at banks.

Table 29: Simple Mediation Analysis Taking ICS as mediator between FPMS and FP

	Direct Effect	**Indirect effect**	**Total Effect**

	Estimate	Significance	Estimate	Significance	Estimate	Significance
FPMS	0.535	0.006	0.203	0.005	0.738	0.005
ICS	0.556	0.007				

Dependent Variable: FP

Table 29 contains results for mediation analysis taking ICS as a mediator between FPMS and FP of banks. The results have indicated that both the direct and indirect impacts of FPMS are significant at P = 0.01. Moreover, the direct impact of ICS on FP is also significant with B = 0.556, P = 0.007. These results highlight that ICS is a significant mediator between FPMS and FP. It indicates about partial mediation while the direct impact is stronger than indirect effect pointing to weak mediation results. These results are quite useful, suggesting application of ICS for enhancement of financial performance, when applied under FPMS.

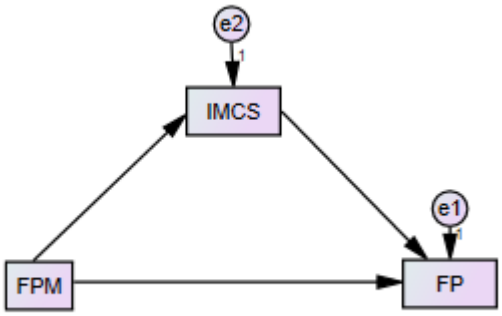

Figure 22: Simple Mediation Analysis Taking ICS as mediator between FPMS and FP

In the next step, the linear mediation analysis has been performed taking BLCS as mediator between FPMS and FP. This has been done both in SPSS and AMOS. The direct, indirect and total effects have been computed which provided the following results:

Table 30: Simple Mediation Analysis Taking BLCS as mediator between FPMS and FP

	Direct Effect		Indirect effect		Total Effect	
	Estimate	Significance	Estimate	Significance	Estimate	Significance

FPMS	0.331	0.016	0.407	0.003	0.738	0.005
BLCS	0.734	0.005				

Dependent Variable: FP

Table 30 contains results for a third mediator of MCS i.e., BLCS between FPMS and FP. The results provide that direct impact of FPMS on FP is significant at 0.05 while the indirect impact is significant at 0.01. The beta coefficient for direct effect is 0.734 while the indirect effects is 0.407. These results have confirmed the mediation impact of BLCS between FPMS and FP while the degree of mediation is also of moderate magnitude. Such moderate level of mediation is useful to boost the performance at banks.

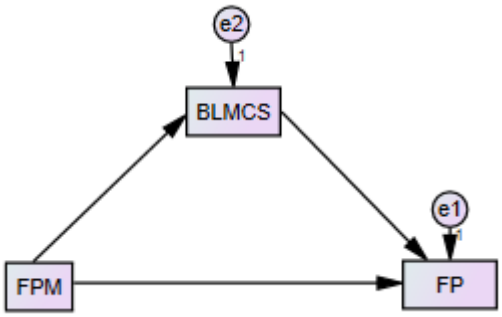

Figure 23: Simple Mediation Analysis Taking BLCS as mediator between FPMS and FP

These results also confirm for partial mediation. However, a different scenario has been observed where the indirect effect is quite strong which highlights strong mediation, though partial since both direct and indirect effects are significant where direct effect is B = 0.734, P < 0.05 and indirect effect is B = 0.407, P < 0.01.

Table 31: Simple Mediation Analysis Taking BCS as mediator between FPMS and FP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
FPMS	0.394	0.004	0.344	0.003	0.738	0.005
BCS	0.595	0.005				

Dependent Variable: FP

A mediation analysis has been run taking BCS as mediator between FPMS and FP. The results have indicated that both the direct and indirect effects are significant at p = 0.01. When measuring direct effect B = 0.595 with P < 0.01 while for indirect effect B = 0.344 and P < 0.01.

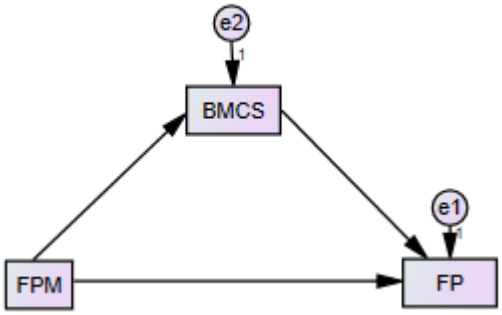

Figure 24: Simple Mediation Analysis Taking BCS as mediator between FPMS and FP

These results confirm significant mediation impact of BCS between FPMS and FP. However, the mediation is partial since both direct and indirect impacts are significant.

All these results have shown that all four MCSs have been proved as mediator between FPMS and FP. However, the mediation is partial. The next section has been dedicated to analyze the mediation impact of four types of controls between NFPMS and NFP.

Table 32: Simple Mediation Analysis Taking DCS as mediator between NFPMS and NFP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**P**	**Estimate**	**P**	**Estimate**	**P**
NFPMS	0.427	0.007	0.313	0.004	0.739	0.007
DCS	0.516	0.003				

Dependent Variable: NFP

Table 32 contains results of mediation analysis where DCS has been taken as mediator between NFPMS and NFP. The results provide that direct impact of NFPMS on NFP is 0.516 at P < 0.01. on the other hand, the indirect effect is 0.313 with P < 0.01.

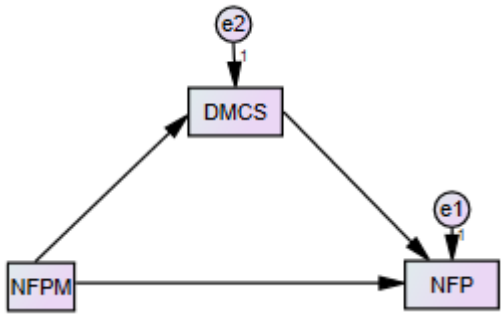

Figure 25: Simple Mediation Analysis Taking DCS as mediator between NFPMS and NFP

These results confirm partial mediation impact of NFPMS on NFP. The initial conditions of direct impact of independent variable and that of mediator is significant while the secondary condition i.e., the indirect impact of independent variable NFPMS is also significant, thus, partial mediation is proved.

Table 33: Simple Mediation Analysis Taking ICS as mediator between NFPMS and NFP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
NFPMS	0.470	0.006	0.269	0.006	0.739	0.007
ICS	0.558	0.004				

Dependent Variable: NFP

Table 33 combines direct, indirect and total effect of NFPMS on NFP taking ICS as mediator. In this regard, it has been observed that the direct impact of both NFPMS and that of mediator ICS is significant on NFP with B = 0.47 and 0.558 respectively at P = 0.01. On the other hand, the indirect impact is 0.269 and P < 0.01.

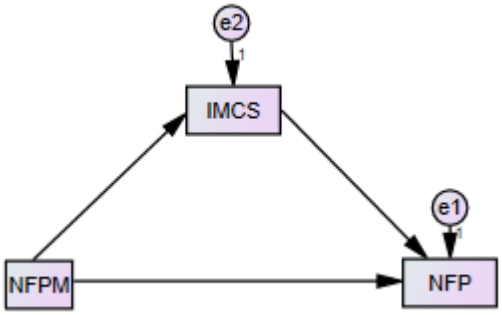

Figure 26: Simple Mediation Analysis Taking ICS as mediator between NFPMS and NFP

This proves the significant mediation impact of ICS on NFP. However, the indirect impact is lower than direct impact which indicates weak mediation.

Table 34: Simple Mediation Analysis Taking BLCS as mediator between NFPMS and NFP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
NFPMS	0.217	0.025	0.522	0.005	0.739	0.007
BLCS	0.64	0.011				

Dependent Variable: NFP

Another mediation analysis has been performed taking BLCS as mediator between NFPMS and NFP. The results summarized in table 34 provide that the direct impact of BLCS is significant with B = 0.217 and P = 0.025 < 0.05 while the indirect impact is also significant with B = 0.64 and P < 0.01 as indicated in table 34.

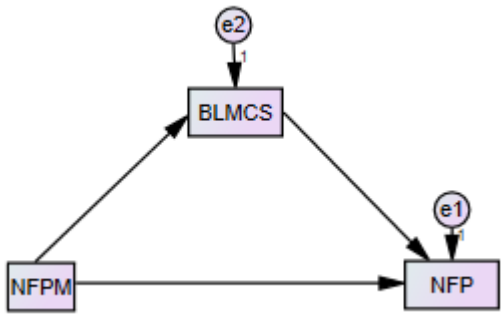

Figure 27: Simple Mediation Analysis Taking BLCS as mediator between NFPMS and NFP

This proves partial mediation with indirect effect is even stronger than direct effect.

It is interesting to see that BLCS acts as a strong mediator between NFPMS and NFP as well as FPMS and FP while rest of the controls are weak mediators.

Table 35: Simple Mediation Analysis Taking BLCS as mediator between NFPMS and NFP

	Direct Effect		**Indirect effect**		**Total Effect**	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
NFPMS	0.410	0.007	0.329	0.003	0.739	0.007
BCS	0.535	0.005				

Dependent Variable: NFP

Table 35 provides the mediation results of BLCS between NFPMS and NFP. It has been observed that NFPMS has a significant direct impact on NFP. It is because B = 0.535 at P = 0.01. On the other hand, the indirect effect is also significant with B = 0.329 and P < 0.01.

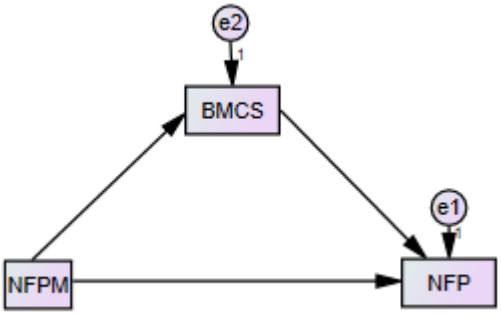

Figure 28: Simple Mediation Analysis Taking BCS as mediator between NFPMS and NFP

These results confirm the significant mediation impact of BCS on NFPMS and NFP.

These results confirm that the four management controls including DCS, ICS, BLCS and BCS act as mediators between NFPMS and NFP. However, they act as partial mediators where the BLCS is a strong mediator among all mediators. Similar results have been obtained for MCS to act as mediators between FPMS and FP. The next section provides combined results of mediation analysis where MCS act as mediator between PMS and OP.

Table 36: Simple Mediation Analysis Taking MCS as mediator between PMS and OP

	Direct Effect		Indirect effect		Total Effect	
	Estimate	**Significance**	**Estimate**	**Significance**	**Estimate**	**Significance**
PMS	0.132	0.005	0.711	0.005	0.843	0.007
MCS	0.684	0.004				

Dependent Variable: OP

Table 36 provides mediation analysis to examine whether MCS has been taken as a mediator between PMS and OP which is the prime objective of this study. In this regard, it has been examined that the direct effect of PMS on OP is 0.684 which is observed to be weaker while the indirect effect is 0.711 significant at a level of significance of 0.01.

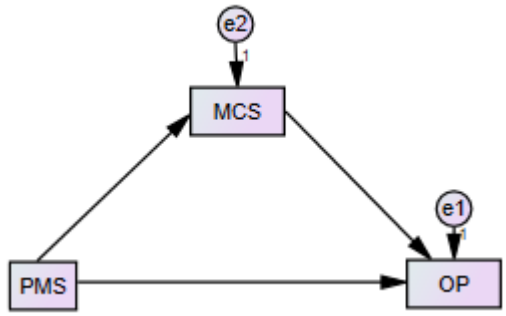

Figure 29: Simple Mediation Analysis Taking MCS as mediator between PMS and OP

These results confirm that MCS is a strong mediator between PMS and OP. In this way, all the hypotheses of study are accepted. These results also point out to collective impact of all the four levers of controls. It has led to stronger mediation impact of MCS between PMS and OP.

6.6.2.2 Multiple Mediation Analysis

The above section has provided results for simple mediation analysis to separately run mediation for each mediator and the results have confirmed that all the potential mediators i.e., DCS, ICS, BLCS and BCS have served to act as mediators between FPMS and FP as well as between NFPMS and NFP. This section has been dedicated to run a simultaneous model to calculate mediation impact of all the study mediators. For this purpose, a path model has been run in AMOS to evaluate how the mediators act in a simultaneous model when all the four controls are applied simultaneously in banks. In this regard, the following path model has been run in AMOS:

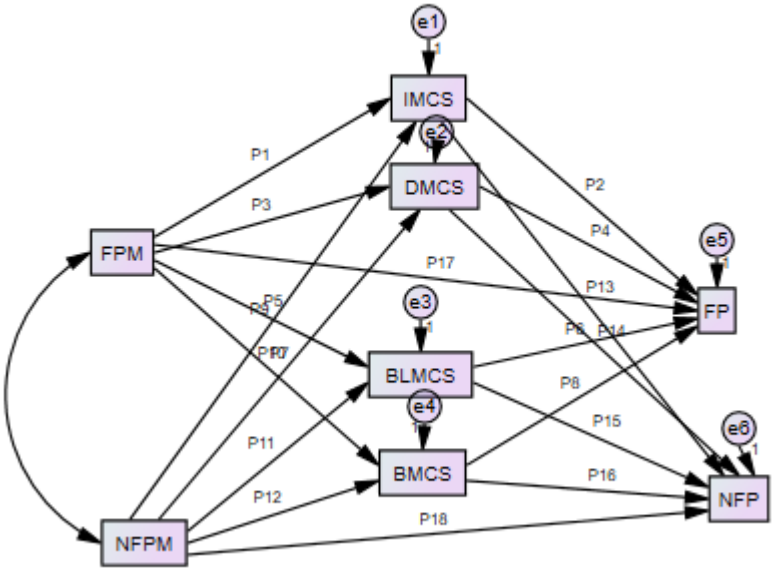

Figure 30: Path Model for Multiple Mediation Analysis

The results for specific indirect effects calculated in AMOS, using 'user defined estimands' have revealed the following:

Table 37: Specific Indirect Effects

Indirect Path	Estimates	Significance
FPMS->ICS->FP	0.013	0.576
FPMS->DCS->FP	-0.002	0.639
FPMS->BLCS->FP	0.172	0.007
FPMS->BCS->FP	0.096	0.019
NFPMS->ICS->NFP	-0.092	0.148
NFPMS->DCS->NFP	0.257	0.003
NFPMS->BLCS->NFP	0.286	0.001
NFPMS->BCS->NFP	0.053	0.120

Table 37 provides results to understand the specific indirect effects of all the mediators when four controls are used as mediators in the overall model simultaneously. In this regard, the impact of FPMS has been observed on FP using the four mediators of MCS while the influence of NFPMS has been observed on NFP using the same four mediators i.e., ICS, DCS, BCS and BLCS as shown in the figure above. The results of specific indirect effects summarized in table 37 have revealed that the indirect effect of ICS and DCS is not significant since p = 0.576 and 0.639 respectively. This indicates that both ICS and DCS do not act as mediators between FPMS and FP when four controls are implemented simultaneously in banks. However, BLCS and BCS have found to significantly mediated the path between FPMS and FP which confirms to act as mediators since B = 0.172 and 0.096 with p = 0.007 and 0.019 respectively.

On the other hand, on a path from NFPMS to NFP, ICS and BCS are found to be insignificant mediators since the p > 0.05 i.e., p = 0.148 and 0.120 respectively. However, the path between NFPMS and NFP has been mediated by DCS and BLCS as b = 0.257 and 0.286 with p = 0.003 and 0.001 respectively. These results have provided that ICS does not act as mediator whether

it is between NFPMS to NFP or between FPMS to FP while BCS has found to mediate the relationship between NFPMS and NFP as well as between FPMS and FP.

These results have provided some interesting findings. In this regard, when the analysis was conducted separately for each mediator i.e., for ICS, DCS, BCS, BLCS, the mediation has been proved significant which led to partial acceptance of H6 i.e., MCS mediate the relationship between PMS and OP. However, in a multiple mediation analysis run using AMOS, it has been observed that, not all controls systems mediated the relationship between PMS and OP which leads to partial acceptance of H6. In the light of these results, the status of hypotheses of study can be provided as under:

Table 38: Status of Hypotheses

S.No.	Hypotheses	Status
H1	FPMS have significant relationship with MCS;	Accepted
H1 (a)	FPMS have significant relationship with DCS;	Accepted
H1 (b)	FPMS have significant relationship with ICS;	Accepted
H1 (c)	FPMS have significant relationship with BCS;	Accepted
H1 (d)	FPMS have significant relationship with BLCS	Accepted
H2	NFPMS have significant relationship with MCS	Accepted
H2 (a)	NFPMS have significant relationship with DCS;	Accepted
H2 (b)	NFPMS have significant relationship with ICS;	Accepted
H2 (c)	NFPMS have significant relationship with BCS	Accepted
H2 (d)	NFPMS have significant relationship with BLCS	Accepted

H3	MCS has significant impact on FP of business.	Accepted
H3 (a)	DCS has significant impact on FP of business	Accepted
H3 (b)	ICS has significant impact on FP of business	Accepted
H3 (c)	BCS has significant impact on FP of business.	Accepted
H3 (d)	BLCS has significant impact on FP of business.	Accepted
H4	MCS has significant impact on NFP of business.	Accepted
H4 (a)	DCS has significant impact on NFP of business.	Accepted
H4 (b)	ICS has significant impact on NFP of business.	Accepted
H4 (c)	BCS has significant impact on NFP of business.	Accepted
H4 (d)	BLCS has significant impact on NFP of business.	Accepted
H5	PMS have significant impact on OP;	Accepted
H5 (a)	FPMS have significant impact on FP;	Accepted
H5 (b)	NFPMS have significant impact on NFP;	Accepted
H6	MCS mediate the relationship between PMS and OP.	Partially Accepted
H6 (a)	MCS mediate the relationship between FPMS and FP	Partially Accepted
H6 (b)	MCS mediate the relationship between NFPMS and NFP	Partially Accepted

6.7 Chapter Summary

This chapter has provided detailed analysis of collected data. In this regard, it has started by providing detail of demographics of study and by fulfilling the basic assumptions of normality,

collinearity and reliability of data. In the next step, confirmatory factor analysis has been run while tests have also been performed to rule out the possibility of common method bias in the data. The descriptive statistics as well as correlation between variables of study which all helped to prove the authenticity of data for further analysis. Thus, the hypotheses testing was made using linear regression analysis and mediation analysis both in SPSS and AMOS. The results of study have helped to accept all hypotheses of study either fully or partially.

CHAPTER SEVEN: DISCUSSION AND ANALYSIS

7.1 Introduction

The previous chapter has provided a detailed analysis of collected data. The overall analysis and interpretation have led to acceptance of hypotheses of study. Based upon the results and analysis, this chapter has provided a thoughtful discussion. For this purpose, the study has provided relationship between PMS and OP, MCS and OP, mediation impact of MCS between PMS and OP. In this way, it has highlighted the studies which provide support for these results.

7.2 Discussion

This study has been carried out to investigate the relationship between levers of controls and performance measurement system in banking sector of Pakistan. Using a sample size of 106 bank branches in the country, the study has collected data with the help of a questionnaire. The results and analysis carried out using regression and mediation analysis has shown that signification relationships exist between four levers of controls and PMS and their resultant impact on both financial and non-financial performance. Moreover, the partial mediation of MCS between PMS and OP has been proved.

7.2.1 Impact of PMS on OP

The impact of FPMS on FP and that of NFPMS on NFP is significantly positive with $b = 0.527$, $p < 0.01$ and $b = 0.539$, $p < 0.01$ respectively. These results indicate that the PMS positively influence OP both financially and non-financially. These results are supported by previous studies. In this regard, the earlier studies of Anthony and Govindarajan (2004) have provided that the FPMS are normally short term in nature and thereby result in short term financial performance of profitability, revenues and operating incomes. However, for longer time periods, the businesses formulate long run goals like enhanced market share, improvement in

customer services, enhanced brand reputation and others. Thus, short term FPMS become ineffective in this situation, so NFPMS are used for it.

These results are also in line with Aforo and Antwi, (2012) who have provided that PMS has significant impact on organizational financial as well as non- financial performance. The organizations with FPMS are able to perform well in terms of profitability, stock market returns and cash flows than those which have not implemented PMS. On the other hand, Bernthal et al. (2003) have also provided that the businesses with better PMS in place are 51% expected to outperform their competitors in terms of financial performance while they are 41% expected to better perform than competitors in terms of non – financial performance. The non – financial performance may include customer satisfaction, quality of products and services, higher employee retention and others. Haines and St-Onge (2012) have also supported that the organizations which have put in place PMS are able to deliver valued outcome. Martin, (2008) has also confirmed that the use of PMS provides a noticeable effect on financial and non – financial performance of business. The features of PMS like performance appraisal led to improvement in organizational performance and job commitment. Furthermore, Saeed and Shahbaz (2011) have conducted their study in Pakistani context and the results of their study have supported the findings of existing study in a way that PMS helps to raise employee motivation and commitment with the work, thereby enhances the OP in terms of profitability, better quality and lower employee turnover.

Businesses which implement PMS, financial or non-financial or both, are able to achieve the financial and non-financial performance targets indirectly through more innovations, employee engagement, enhancing employee skills and capabilities, market orientation, productivity and learning. However, this is not in line with Jusoh et al. (2008) who have provided that effective implementation of non-financial performance measures helps to enhance the performance

while financial measures are not effective in long run. The combination of PMS and MCS both help to achieve higher OP by positively influencing the employee behavior, increased communication, coordination, participation and thereby cost reduction.

7.2.2 Impact of levers of Controls on OP

The four levers of controls have put significant positive influence on OP both in financial and non- financial terms. In this regard, the impact on FP as influenced by DCS ($b = 0.423$, $p < 0.01$), ICS ($b = 0.479$, $p < 0.01$), BCS ($b = 0.589$, $p < 0.01$) and BLCS (0.663, $p < 0.01$) are all significant positive. On the other hand, the impact on NFP as provided by DCS (0.589, $p < 0.01$), ICS ($b = 0.534$, $p < 0.01$), BCS ($b = 0.584$, $p < 0.01$) and BLCS ($b = 0.772$, $p < 0.01$) are also all significant positive. These results indicate that the banks under study have been using the DCS to monitor and control their performances. Moreover, the results of descriptive statistics contained in table 8, also provide a mean value of 4.02 for DCS, 4.01 for ICS, 4.07 for BLCS and 4.25 for BCS, indicating the large scale implementation of DCS in studied banks.

The impact of control systems on OP has also been observed to be significant positive in previous researches, thereby, supporting the results of this study. In this regard, Lazzarotti et al. (2011) have found that MCS are good at enhancing OP subjectively in terms of team spirit as well as organizational efficiency. DCS improves OP by continuously observing the performance of business. The need is to select right type of controls in a right situation while the implementation of controls should also be effective. DCS help an organization to perform better is through their impact on organizational innovative process. It contributes positively to the internal environment of business. However, traditionally, it was believed that DCS limit the innovations in business since their prime focus is on achievement of set targets. This is because the managers usually apply coercive powers which restrict organizational potential for innovations (Grossi and Thomasson, 2015). Baird, (2017) has confirmed that MCS provide

base for achievement of FP while they also increase NFP. Organizations with DCS and BCS in place, lead to achieve the set targets while BLCS and ICS encourage innovativeness and creativity at business. The businesses should accurately implement the right type of controls considering their life cycle stage and their business objectives.

Heinicke et al., (2016) have also provided a systematic relationship between four levers of controls and OP. He asserted that DCS is helpful to monitor for OP and compare any differences between set goals against actual performance while ICS promote the organizational capabilities. Kruis et al., (2016) has however, provided that in a dynamic business environment with organic structure, a combination of DCS and ICS is more useful. On the other hand, in a hostile environment with greater task uncertainty, lesser use of DCS is emphasized. The four levers of control are important and they complement each other. The DCS and BCS are constraining in nature while BLCS and ICS are designed for growth and development. Bisbe and Otley, (2004) have also discussed that the organizations with higher levels of innovations, ICS are not effective rather they negatively influence the innovations of business while they are useful at companies with lower levels of innovations. Henri, (2006) has examined that the strategic capabilities of business are negatively influenced by DCS. Different strategic capabilities of business including innovation's ability, entrepreneurship and market orientation are negatively influenced by DCS and positively by ICS.

The application of these four control measures should be applied based upon the life cycle stage of organization as suggested by Miller and Friesen in 1984 which includes birth, growth, maturity and revival. It is because the organizations, when move from one stage in organizational life cycle to another stage, the requirements, structural configuration, organizational characteristics and priorities, problems, all are changed. The BCS are helpful at growth and revival stages rather than maturity and birth stage. BLCS, on the other hand, are

effective more at growth and revival stage while at birth and maturity stage they are not much effective. DCS are considered more appropriate at maturity stage than growth, birth and revival stage. Finally, the ICS are estimated to bring better results at revival and growth stage than maturity and birth stage.

By creating a real focus on one single agenda, ICS provide organizations with required level of focus to achieve certain set targets. This allows regular attention of management on single point, resulting in recurring theme. BCS, on the other hand, formulates what the business is not going to do, thereby restricting employees not to perform actions which are beyond the scope of business. BLCS provide employees with directions and give them purpose. They establish how to behave with each other and with customers. Companies do communicate their values but guiding these values in routine tasks is difficult which is made possible through BLCS (Mundy, 2010). They provide with strategic objectives to employees and in return they adjust their actions accordingly. In a flexible work culture, BLCS are implemented and are beneficial (McAdam et al, 2019). Thus, they need a clear understanding of organizational purpose and the required contributions from them in order to pursue the overall organizational purpose. This can only be done through communicating the core beliefs of business (Sobis and Okouma, 2017).

DCS, on the other hand, leads to conduct regular formal performance measure to review OP on regular basis. In this way, DCS and BCS are restricting in nature while BLCS and ICS guide the development as well as growth. DCS, when used in a wrong way, could be destructive and BLCS is used to mitigate the negative consequences of overusing DCS. BCS can also serve as more restrictive in nature which may hinder organizational growth.

The results of correlation in table 8 have provided that all the variables of study have been significantly correlated with each other with highest correlation between BLCS and NFP. This

is because the organizations with the help of belief system inspire their employees about the desired performance. By depicting the beliefs in mission and vision system of an organization, the organizations are able to provide employees a particular direction. When it is reflected in organizational objectives and the commitment of organization to fulfill those objectives is even further helpful to make employees perform the desired level of performance. Furthermore, it motivates the employees to put all their efforts for value creation and supporting their organization. However, the role of senior management is critical in this regard, they may create drafts and facilitate communication between members to raise awareness of employees about what the organization wants in a way which employees like and consider that the organization values their participation. Organizations which are able to prioritize the belief system among employees are better able to get the required performance. It is the basic system which provides the foundation for other levers of control to be inculcated in organizational culture. Organizations, even in the phase of higher uncertainty, are able to perform better if belief systems of its employees are strong. Employees, by considering the organizational mission and vision in their mind, are better able to perform well even in uncertain situation since they tend to adapt their behaviors as per requirements. Manohar and Pandit, (2014) have stressed in their study that beliefs and core values are ultimate guide to achieve better organizational performance especially in terms of non-financial performance. However, the quality and completeness of mission statement of businesses is important. In this regard, the mission statements should include a direction for employees and it should motivate employees to perform well. A strategic fit between what the employee's beliefs, strategic planning and structure of organization leads to enhance its performance (Lababidi et al., 2020). Manohar and Pandit (2014) have also provided that the culture of innovation at India's leading innovative companies is influenced by employees' beliefs about innovations while the organizational mission statement is the prime determinant for positive organizational innovation adoption.

Thus, the organizations should develop a strong belief system in the phase of uncertainties and strategic risks which leads to work through every environment. However, the other three levers of controls are equally important which reinforce the performance of belief control system. The organizations with positive BLCS helps to improve its performance in a positive manner.

These results of linear relationship are in line with Cardinal, et al., (2017) who have provided that with the help of BCS, the organizations are able to improve the financial performance of business due to their increased emphasize on reduction of waste through proper utilization of organizational resources. On the other hand, the BCS create an environment of creativity and encouragement which helps employees to innovate within boundaries. Such a culture leads to improve financial and non-financial performance of business. The organizations which are larger in sizes like banks in this study have been suggested to use more boundary controls since the increased organizational size leads to increased complexities, thereby requires more strict formal controls in the form of boundary controls to deal with the complexities. Though, they restrict the innovativeness of employees but beyond a certain boundary. This is why they may not help to improve non-financial performance of business. It is also provided that controls which are restrictive in nature and focus on achievement of goals and targets in short run, may provide short term financial gains but are not useful in long run. This is because, in such a way, organizations may become myopic and they are satisfied with short run financial performance and overlook long run development of intangible assets. BCS are also criticized for their short sightedness which discourage creativity beyond the limits. They put pressure on employees for the achievement of set targets which further carries the risk of data manipulation. The application of boundary controls at this stage results in limiting the search of opportunities (Mohamed, 2014). They tend to avoid risks and implement code of conduct as well as rules and regulations. As the organization grows, the organizational structure becomes complex

while decision making also becomes less centralized. Thus, analytical capabilities of managers are needed who are involved in decision making.

The organizational risks are controlled through management at each level through delegation of duties. In this way, the use of BCS at this stage is quite helpful to guide managers to use their wisdom and judgement for decision making and apply their innovative ideas while the managers will also know their limitations of decision making. Thus, a widespread implementation of BCS at revival stage is made (Pujiati et al., 2019).

7.2.3 Mediation Impact of four levers of controls between PMS and OP

The study has evaluated the impact of performance measures on four levers of controls. In this regard, the FPMS has been observed to have significant impact on DCS ($b = 0.337$, $p < 0.01$), ICS ($b = 0.508$, $p < 0.01$), BLCS ($b= 0.544$, $p < 0.010$ and finally on BCS ($b = 0.556$, p , 0.01). On the other hand, the impact of NFPMS on DCS ($p = 0.544$, $p < 0.01$), ICS ($b = 0.589$, $p < 0.01$), BCS (0.588, $P < 0.01$), BLCS ($b = 0.557$, $p < 0.01$). When used in linear models, the DCS proves to be a significant mediator between FPMS and FP. It is because, the DCS is considered to be quite a good measure to reduce the costs either by reducing the cost of raw material or in the form of reduction of expenses. However, todays' business environment is complex and is quite dynamic which may not provide the required results with the application of DCS. However, the results of study have provided that in a linear model, DCS has a significant impact on FP and NFP, while it has also proved a significant mediator between FPMS and FP as well as NFPMS and NFP. The results of complete model for simultaneous mediation of all the MCS have shown some interesting findings for which justification is available in literature. In this regard, the results have indicated that when run in a simultaneous model ICS and DCS have not proved as mediators between FPMS and FP, since their indirect effects are 0.013, $p = 0.576 > 0.05$ and -0.002, $p = 0.639 > 0.05$. This is in line with Henri,

(2006) and Nuhu et al., (2019) who have argued that whilst both ICS and DCS are important for performance improvement, yet the results may be different. It is because, the ICS helps to promote certain capabilities like innovativeness, organizational learning, entrepreneurship and market orientation. On the other hand, DCS restricts capabilities for newer development due to its controlling approach. Moreover, the purpose of DCS is to monitor only compliance which leads to put negative impact on creativity, thus, innovations become difficult. This control measure is helpful in a smooth situation while ICS is more useful in a changing business case scenario. The prime aim of ICS is to foster innovations by inspiring employees positively and promoting a culture of creativity in business. On one hand, DCS encourages well defined smooth rules and regulations while ICS always work on creativity and emergence of new strategies (Spekle and Kruis, 2014). Thus, the simultaneous application of both DCS and ICS may not provide the desired outcomes and the current research is a perfect case example for this point of view where both DCS and ICS have proved significant mediators as well as influencers of financial and non -financial performances, yet in a simultaneous mediation analysis, they have ceased to prove as good mediators which is in line with Koufteros et al., (2014).

The results of mediation have provided a key finding that BCS is a useful control in all situations under study i.e., it has been widely used in banks as indicated by descriptive statistics of study while the results of linear and multiple mediation have also supported its significant mediation on the relationship between FPMS and FP as well as NFPMS and NFP. This is in line with Tahir et al. (2018) who have documented that the innovations in Pakistani banking industry are limited to Automated Telling Machines, mobile banking and internet banking while these innovations do not put significant impact on enhancing efficiency and performance of banks rather the achievement of targets is helpful for performance improvement. This is similar to say that ICS which have primary focus on innovations, have insignificant impact on

OP under multiple mediation analysis. On the other hand, the BCS which are aimed at achievement of set targets, have been helpful for improvement of performance.

Cheng and Coyte, (2014) have provided that careful evaluation is needed while implementing MCS at workplace since establishing proper controls is one thing while their proper implementation is another thing which could provide the required results by providing a fit with the existing organizational conditions. The linear relationship of BCS with FP and NFP has been observed to be significant. Moreover, in a linear model, BCS has proved to be a significant mediator between NFPMS and NFP as well as FPMS and FP while in a simultaneous model of mediation, BCS mediates the relationship between FPMS and FP while it is an insignificant mediator between NFPMS and NFP.

The first condition for mediation impact has been proven since PMS has significant correlation and regression impact on all four levers of controls. Secondly, the significant correlation between PMS and OP both financial and non- financial also exists, thus, the direct impact of PMS on OP has also been proved. Finally, the indirect effect of all four levers of controls also exists between PMS and OP in linear models. However, in simultaneous model, not all control systems have proved to act as mediators. This analysis provides sufficient support for existence of mediation impact of DCS, ICS, BCS and BLCS in a linear relationship. However, the simultaneous implementation of all four measures may not provide the required results. As discussed earlier, the results in this study are in line with previous studies, however, it has been out of scope for this study to evaluate the life cycle stage of each bank under study. This opens up future growth opportunities for researchers to validate the impact of different levers of controls at different life cycle stages of banks.

These results have indicated that both FPMS and NFPMS have similar impact on levers of controls. These results are in line with Leitner and Wall, (2015) who have provided that PMS

and MCS should work together to obtain better results while effective performance need better controls in place. The congruence or fit between control measures and MCS plays a key role for improved OP (Leitner and Wall, 2019). Hoque and Chia, (2012) have also provided significant positive relationship between levers of controls and PMS. Businesses implementing four levers of controls should work with both financial and NFPMS. Frow et al. (2005) have also argued that multiple layers of controls correspond to two types of performance measures i.e., financial and non- financial. Su et al. (2015) have also provided similar findings where PMS have been observed to put significant positive impact on MCS. The authors have further argued that MCS provides a direction to employees to reach organizational goals. As an organization grows, it needs more controls to manage its resources and activities since if the employee's knowledge and skills are not used to their fullest, the result will be widespread frustration. Thus, MCS is mandatory with PMS for organizations to perform better.

The PMS alone cannot work efficiently and effectively for the improvement of organizational performance both financial and non-financial. It is because BLCS is linked with social performance, DCS works with operational performance, ICS with strategic performance and BCS with strategic and operational performance measures. PMS are found to be effective only when the employees are involved in decision making process. it is because when employees are engaged for decision making, they are motivated and show more engagement with their assigned tasks. Thus, the result is always enhanced performance both in financial and non – financial terms (Thursfield and Grayley, 2016). This employee participation is made under ICS. Saratun, (2016) has also supported this point of view and advocated that jointly set organizational objectives can provide employees with better directions to work and aligning with the business strategy while only PMS cannot produce the required results.

Abdullah et al. (2017) have provided that the PMS alone may not get the required results in terms of organizational performance, rather the effective implementation of organizational policies and plans rather the authentic control systems are needed by organizations in order to ensure the effective utilization of organizational resources. Akpoviroro, (2018) have also investigated that control systems in the organization prevent malfunctioning and thereby improves organizational performance both financially and non - financially.

These results are in congruence to previous studies. In this regard, the results of Audenaert et al. (2019) have provided that MCS is positively correlated with both PMS and OP. However, they have further provided that in hotel industry the DCS are not much effective as compared to other forms of controls in order to improve the business performance while ICS was found to have strong correlations with PMS and overall performance. This is because the use of ICS helps to create an environment of new ideas and creative strategies. It leads to bring innovations and ultimately performance is improved. However, the DCS occupy an important place since despite of new ideas and creative strategies, if resistance to change exists among employees, performance cannot be improved.

The BCS has been found to have significant relationship with PMS and OP. A good integration between PMS and BCS is a positive indicator of establishing boundaries for proper record keeping, cost controls and training of employees at bank. Moreover, they further confirm the implementation of a good PMS systems in place which provided platform to establish strong controls systems. These results contradict the previous study of Teeroovengadum et al., (2019) which has established insignificant relationship between BCS and PMS.

BLCS are related to organizational environment and culture. The results of this study have found significant positive correlation between BLCS and PMS while BLCS has also been found to contribute significantly towards organizational performance both financial and non-

financial. This may be because the banks integrate BLCS and PMS in a way that the employees believe on knowledge sharing and organizational performance improvement. Moreover, a balance between financial and non-financial performance is encouraged. In this way the organizational objective to compete well and perform better is maintained.

All this is also in line with the research of Tsamenyi et al. (2011) who have found that the MCS is positively related to both financial and non-financial performance of business. Tsamenyi et al. (2011) have taken MCS as moderator between organizational strategy and organizational performance and found MCS to act as a significant moderator between the study variables.

Sharma et al., (2016) have suggested that ICS is a good predictor of PMS, however, it brings good non-financial results when the employees as well as the management possess the required knowledge and skills. Smith and Bititci, (2017) have also provided that both PMS and ICS fail to bring results in absence of relevant skills and knowledge of employees as well as the top management. It is because, under ICS, the employees are directly engaged for decision making which requires employees to possess the required knowledge and skills to search and adapt new strategies.

These results, however suggest that good PMS are helpful for better BCS. A proper integration between PMS and BCS is helpful for business to control its costs including employee and other costs and increase revenues. The reduction in costs and a rise in revenues, therefore, leads to achieve higher financial performance which has been depicted in this study i.e., significant positive mediation of BCS between FPMS and FP.

The results of study have provided significant positive impact of FPMS on BLCS and on FP. BLCS has proved to be significant mediator between FPMS and FP. Moving further, there has been significant role of beliefs of people to perform well.

Kruis et al. (2016) have provided that BLCS motivate employees through providing a positive direction using mission statement of company. The positive inspiration of employees results in enhanced performance which is what this study has depicted. The organizations, therefore, are needed to integrate BLCS and PMS in order to enhance their willingness for sharing knowledge within organization if the employees are not willing to share their knowledge and they do not tend to change, the business cannot achieve better performance especially against competitors. The organizations, by changing the beliefs of employees, influence their decision making and attitude to work at workplace. This is perhaps the most important work strategy which can be used for improvements of performance both financial and non-financial (Janes and Samwel, 2018).

Lawler et al. (2012) have, however, contradicted with these findings and have suggested that PMS is effective only when the business goals are set jointly by management and employees and are driven by organizational strategy. Iwaarden et al., (2006) has supported this point of view and argued that DCS is the backbone of traditional control system. These controls are used to manage both financial and non- financial business performance.

Simonson, (1995) have also proposed that control systems result in "dynamic tension between opportunistic innovation and predictable goal achievement that is essential for positive growth". This is also in line with Widener's proposition that a strategic fit between levers of controls is necessary to attain maximum benefits. Pešalj et al. (2018) have discussed that the simultaneous use of BLCS and BCS may bring conflicting views since one of them motivates for creativity, flexibility and openness while the other is focused on working strictly as per norms and within the limits.

These results have suggested that the banks at Pakistan have been implementing both financial and NFPMS to some extent while the four levers of controls also act as mediators between

PMS and OP. Such results are attributed to rapid growth of banking sector of Pakistan. However, it can further be improved by improving the PMS and control mechanism at workplace. The efficiency of employees at banking sector of Pakistan is still under a question mark which is largely attributed to under- utilization of PMS put in place. Cardy and Leonard, (2014) have provided that banking business in Pakistan has paid insufficient attention on PMS and its reviews to improve the performance. Moreover, there is insufficient data about the banking employees to size the effectual impact which is a cause of serious concern not only for academicians but also for banking sector itself. The banks which have adopted to exercise PMS at their workplaces are facing the serious problems of traditional mindset of workers which is difficult to change. Thus, they are lagging behind toward fast altering the banking sector. However, it is partially to blame the top management which has been failed to fully materialize the benefits of implementing PMS. Moreover, the PMS designed by most of the banks are not linked with the required benefits which makes its implementation less effective. The PMS in banking sector of Pakistan is different as reported by Yaseen, (2015). Moreover, majority of the banks do not allow employees to participate in setting PMS criteria which causes demotivation among employees and is a serious hindrance to make the system effective and produce the desired results. If such measures are taken, the efficiency and performance of banking sector can further be improved.

7.3 Chapter Summary

The overall discussion has provided that PMS both financial and non – financial have a significant impact on financial and non-financial performance of business. Moreover, there is significant impact of PMS on four levers of controls including ICS, DCS, BCS and BLCS. Finally, the mediation impact of ICS, DCS, BCS and BLCS between PMS and OP has been proven in linear models but not completely in simultaneous model. The results of study have

been justified with previous studies. The next chapter has concluded the whole study while it also contains recommendations based upon results of study, limitations of study and future research prospects on the topic.

CHAPTER EIGHT: CONCLUSION, RECOMMENDATIONS AND FUTURE RESEARCH

8.1 Introduction

This is the last chapter of this study which summarizes all the findings of research which were stipulated from the objectives of research. In this regard, the chapter draws conclusion and lays down the important recommendations based upon results, discussion and conclusion of study. In the next step, the theoretical as well as managerial contributions of study have been provided while at the end, study limitations and areas of future research have been discussed.

8.2 Findings and Conclusion

In this research study, the concept of PMS and MCS was based on the need to avail the mechanisms and processes for the organization that enable the organizations to create the most favorable environment to achieve their aims and objectives, at the same time also ensure the efficient and effective utilization of resources. PMS is considered a strategic approach which plays an effective role in the accomplishment, execution, evaluation and working out constantly to improve the performance of organization.

Throughout the exposition and development of this research work, it has been researched that theories of PMS and MCS in organizations have gradually developed over a period of time. These theories explained how internal and external variables could affect the organization's performance. The development of society and its transformational change in society increase the make competition on national and international level. Therefore, in the present research we have to looked at the formal and mechanical control system.

The first chapter of research provides the introduction to the objectives of research, research questions, its significance, limitations, research methodology and research structure. The

second chapter includes the information about current research context in light of Pakistan. This chapter has in depth research about the developing economy of Pakistan, the banking sector of Pakistan, PMS and MCS in Pakistan. The third chapter has a literature review which provides the information about PMS (Financial and Non-Financial Measure), MCS, its type of organization control, relationship between PMS and MCS in banks and hypothesis. The fourth chapter is about theoretical framework which includes theories which are relevant for current research. Theoretical paradigm consists of agency theory, transaction cost theory, resource based theory, institutional theory and contingency theory. Chapter five is about methodology, which explains about how current research was done. The current research philosophy was mixed type of philosophy (positivist and interpretive) and has cross sectional research type, deductive research style, mix method research approach, descriptive research design, population (22 banks), sample (106 banks branches), sampling techniques (Stratified random sampling and convenient sampling technique), data collection instrument (questionnaire), data analysis techniques (descriptive and inferential statistic), validity and reliability (Cronbach's Alpha test and correlation test of internal consistency) and research ethics. The six chapter has results and analysis information about demographic variables, data assumptions, CFA, common method bias, and hypothesis testing through linear regression analysis and mediation analysis. The seventh chapter is discussion in the context of current research findings. Discussion explained about impact of PMS on OP, levers of control impact on OP and mediational impact of four levers between PMS and OP. the eight chapter explains research conclusion, its contributions, limitation and future research.

The broader aim of this study was to investigate the relationship between PMS (both financial and non- financial) and OP through mediating impact of MCS in banking sector of Pakistan. A sample size of 106 bank branches from 22 banks of Pakistan has been selected for the purpose of data collection using a structured questionnaire. The responses were obtained using both

email and self-administration procedures. The collected data has been analyzed in SPSS and AMOS. Different statistical techniques used for analysis of data included: descriptive statistics, frequency distribution, fulfilling assumptions for normality of data, confirmatory factor analysis, fit indices of model, Pearson's correlation analysis, linear regression, simple and multiple mediation analysis.

With the help of study results and wide literature studied on the variables of study, the research questions have been answered. In this regard, the first question of study was 'what are the different types of MCS working at banks in Pakistan?'. In order to answer this question, wide range of literature on MCS has been consulted, which provided different types of control measures including four levers of controls. The data collection has shown that the banks in Pakistan implement the four levers of controls including DCS, ICS, BCS and BLCS as depicted in table 8 of descriptive statistics and correlation analysis since the mean value against all these controls is greater than 4 suggesting strong implementation of all controls with highest application of BCS. It means that banks in Pakistan use BCS to inspire their employees to increase their performance. BCS provides effective direction to the employees under already developed morals. Banks in Pakistan practice BCS in which organization has internal control over limited areas, where employees can avail the opportunities to achieve organizational goals and objectives. BCS has established morals or codes of conduct for the employees to ensure their ethical behaviors. Banks of Pakistan clearly provide statements to the employees on what to do and what is expected from them and what is not. It helps the employees to understand the opportunities and ideas on what to pursue and what should not be focused. The morals or codes of conduct in BCS are very carefully designed so that employees can understand the clear guideline about how they can achieve the bank's goals and objectives. Codes of conduct are written statements provided by the organization to the employees. These codes of conduct help employees to maintain certain formal attitudes. The banks with BCS empower their employees

within boundaries and established rules and regulations. The essence of empowerment to employees enables them to perform whatever banks want. In this practice, banks provide clear instructions and codes of conduct to have control over system tasks and physical control over employees to perform certain tasks. Therefore, most of the Banks of Pakistan also practice BCS because this system helps to handle the financial risks, reduce the legal, improve business performance and attain high level of trust and loyalty. These results are in line with Pesalj et al., (2018); Grossi et al., (2017). However, this is not consistent with Su et al., (2015) who have argued regarding careful implementation of levers of controls as per lifecycle stage of organization.

The second question of the study 'what are the main PMS at banks in Pakistan?' has also been answered, which concluded that both financial and non-financial PMS have been working at Pakistani banks where the financial PMS have slightly higher application than non-financial PMS since the mean value for FPMS is 4.05 as against 3.98 for NFPMS. PMS is based on both financial and non-financial measures. These measures evaluate flexibility, customer satisfaction, finances, human resources and time. PMS focus more on the external environment of organization. The results of current study showed that FPMS is slightly higher than the NFPMS in Pakistani Banks. PMS measures the performance of whole organization rather than the individual employee. The Banks in Pakistan more practice FPMS because it measures the performance of banks through the financial information and external environment factors of organization. The external factors include the size of organization, technology, organizational structure and strategies, performance measurement methods, financial accounting practices and uncertainty in external factors. The Pakistani Banks practice more FPMS than NFPMS. FPMS practices enable the Banks in Pakistan to enhance their revenues and values of business in market. The performance of the banks is largely required to measure the financial results and

achievement of the targets. These results are consistent with Leitner and Wall, (2015); Hoque and Chia (2012); Otley, 2016; Leitner and Wall, (2019).

The third question of the study was 'what factors contribute to the effectiveness of PMS in Pakistan?'. For this purpose, the relationship of variables with each other and with financial as well as non-financial performance has been measured using Pearson's correlation as well as linear regression analysis. The results have provided a significant positive relationship between PMS and MCS while the impact of PMS on MCS and OP as well as of MCS on OP is significant positive. It determines the effectiveness of PMS and MCS since they both positively influence the OP. The results indicated that Banks in Pakistan have a positive relationship between PMS, MCS and OP. PMS has a significant association with all the levels of MCS. Performance measures enhance the success of the business in Pakistani Banks as well as MCS and OP positively influence in achieving the Bank's objectives and goals. Both FPMS and NFPMS are linked with the four levers of control management system, therefore, they directly affect the FP and NFP. Banks in Pakistan practice PMS because it assists the business in overcoming the problems and provides their solutions and also supports decision making. PMS practices are also positively linked with MCS and its four levers which play an effective role to enhance OP in Pakistani Bank. Thus, third research question approved that PMS effectively influence MCS as well as OP in the Banks of Pakistan. These results are also supported by researches of Kruis, et al., (2016); Spekle et al. (2017); Koufteros et al. (2014); Acquaah, (2013); Spekle and Kruis, 2014; Dossi and Patelli, (2010).

The final question of the study was 'how MCS affect PMS at banking sector of Pakistan?'. In order to answer this question, the role of MCS has been taken as a mediator between PMS and OP. The results of linear mediation have provided all four levers of control act as significant mediators between PMS and OP. It means that MCS positively predicts the OP. PMS

influences OP through the mediational link between PMS and OP. So, PMS and MSC have positive relationship. As PMS increase in an organization MSC also positively increase in banks of Pakistan, while PMS also effect OP through the mediational relationship of MSC. These findings are consistent with Cruz et al. (2011); Lau (2015); Bisbe and Malagueno, (2012); Griffith and Neely (2009).

On the other hand, in a simultaneous model of multiple mediation taking all four controls simultaneously, the results indicate that BCS and BLCS are partial mediators between FPMS and FP while DCS and BLCS have been proved as significant partial mediators between NFPMS and NFP. Mediational analysis revealed that BCS and BLCS partially mediated to make associations between FPMS and FP. In other words, FPMS influences FP through the two levers of MCS (BCS and BLCS). In Pakistan banks, BCS set limits and boundaries to take potential steps while BLCS corporates with the belief systems that have values and culture. Therefore, results indicated that FPMS can enhance FP by the implementation of BCS and BLCS. The results also revealed NFPMS influences NFP through significant mediation of DCS and BLCS. DCS is used to monitor the organizational outcomes and correct the deviations which influence the performance standards in organizations while, through BLCS organizations motivate and inspire employees to explore, create, seek skills and implement them to improve performance. Thus, both DCS and BLCS are two levers of MCS which partially mediates between NFPMS and NFP.

Results also showed that ICS has not proved as a mediator in any relationship except in the linear model. It means, ICS did not mediate because ICS is used by the executives to communicate the decision making in organization. ICS also used to identify the risks related to external factors which are named as environmental changes. It implies that BCS is the most effective control to strengthen the effectiveness of PMS to obtain better financial and non-

financial performance. The mediational model of the current study explained that FPMS influenced FP through BCS and BLCS, whereas NFPMS can affect NFP through DCS and BLCS, according to linear model of relationship. It means that Banks in Pakistan provides more clear codes of to ensure their ethical behaviors as well as banks have internal control system which set limits or boundaries to take potential steps for the effectiveness of PMS.

In this way, all the research questions have been answered which are aligned with previous researches that provide a significant positive influence of PMS and MCS on OP while the role of MCS is to strengthen the effect of PMS on OP.

8.3 Contributions

The data analysis and discussion thereon have provided certain practical and theoretical implications. These contributions are helpful for industry players as well as managers. Contributions of this research have been provided as under:

8.3.1 Theoretical Contribution

This study has hypothesized the relationship between PMS and OP with mediating impact of four levers of controls in banking industry of Pakistan. Pervious research showed PMS enhance business success (Hoque, 2014; Kruis et al, 2016) while financial and NFPMS are also connected with the four levers of MCS. Therefore, PMS assist business in problem resolution and support decision making (Hoque and Chia, 2012). Pervious researches explained that PMS and MCS positively impact OP in terms of performance improvement and employee engagement, however, the positive results are dependent on the way these systems are used and are interconnected with each other (Bititci et al., 2012; Melnyk et al., 2014). Later on, in the analysis and results of current research have provided significant positive impact of PMS on MCS and OP while MCS partially mediate the relationship between these two and BCS has

been found to be significant mediator in both linear and multiple mediation. This is significant contribution of study in the existing body of knowledge since it is the pioneer research conducted in Pakistani banking industry to examine the said relationship and it has opened horizons for future researches.

Secondly, the research has been an extension to existing body of knowledge which have considered PMS and MCS as similar concept (Adler and Chen, 2011; Aguinis and Burgi-Tian, 2021, Munir and Baird, 2016). However, this research has made a clear distinction between these two and have argued that MCS can be used to assist implementation of PMS while these two are different concepts, though, both help to boost to improve organizational performance (Epstein and Wisner, 2005; Ferreira, and Otley, 2009; Hoque and Chia, 2012; Hemri, 2016).

Thirdly, the study has combined both financial and non- financial performance aspects in one study which has rarely been made in literature of PMS and OP, especially in context of Pakistan. With the help of this relationship, the further studies can now be conducted to dig even deeper into this area.

8.3.2 Managerial Contribution

The study has provided important results that FPMS are helpful to enhance FP while NFPMS lead to enhance NFP of banks in Pakistan. The banking industry should follow the same in order to boost their OP. The second important contribution of study is that it has highlighted the importance of BCS in strengthening the relationship between PMS and OP for both financial and non- financial performance. This points out that the organizations should focus BCS in order to assist PMS for their performance improvements. Another important practical contribution of study is that it suggests the implementation of each lever of MCS as per the requirement in the banks depending upon the life cycle stage (Arjalies and Mundy, 2013;

Schaffer et al., 2014). It is because the simultaneous implementation of all controls may not be successful, especially the ICS is not a significant predictor for performance improvement in Pakistani banking industry. Moreover, BLCS is more helpful for improvement of FP while DCS is useful in non-financial perspective (Berry et al, 2009; Grossi and Thomasson, 2015).

The results provide that in order to enhance the performance at banks, the management should pay keen attention for effective implementation of both PMS and MCS while a perfect match between them should be established for enhanced performance.

The results of study can be generalized for other types of financial institutions and organizations which are aimed at improving their financial and non- financial performance (Tangen, 2005; Salterio, 2012; Bronzo et al., 2013). In line with the literature, the study also suggests the implementation of NFPMS for long term performance improvement. It suggests that policymakers should implement NFPMS even if they do not produce results in shorter time period. The focus on achievement of set targets along with performance measures, provides directions to employees to achieve those targets for overall performance improvements (Simon, 2000; Chenhall, 2007; Adler and Chen, 2011). Similar model can be implemented in other types of organizations to improve their performance.

The importance of lifecycle stage of organization is of paramount importance and to achieve the required results, the right type of control should be implemented as per lifecycle stage. Another important recommendation is that the decisions of business should be undertaken jointly by managers and employees, it will help to get employees take ownership of decisions and also to get directions of what they are required to do. Ultimately, this will help to enhance overall organizational performance.

8.4 Limitations

This study has been conducted to examine the four types of controls DCS, ICS, BCS and BLCS while the literature has highlighted various other types of controls which organizations implement for their performance improvements. However, the current study has been limited to examine only the four levers of controls while other controls measures are beyond the scope of this study.

Another limitation of current study is that it has collected data from 106 bank branches located in Pakistan which makes a comparatively smaller data set. Thus, smaller data set may not be much representative. However, the collection of data has been made from branch heads, hence, it makes the smaller data set justified; The collected data was taken only from Pakistan banks which can also interfere with the results of research.

This study has been conducted to evaluate the PMS and MCS to determine the OP as perceived by branch heads of respective bank branches from which data collection has been made. Thus, the overall response has been based upon subjective judgement of branch heads while it is also possible that being the heads of their respective branches, they have tried to portray better picture of PMS, MCS and OP. Thus, chances of personal biases of respondents exist which may provide biased results.

The research has been conducted in Pakistan and mainly the bank branches of large cities have been examined which also makes the results of study generalizable only for large cities. There may be differences in the application and results of PMS and MCS for bank branches in rural areas of the country. Thus, the results of study should be interpreted keeping in view these important limitations of rural urban difference.

The distribution of banks unit representation was also not even. Few banks have limited branches. To better ensure the banks unit representation, it is important to consider the equal number of branches of banks. The unequal distribution can increase the level of risks and uncertainty in research. This research did not separate between the commercial banks and Islamic banks, where the management systems may differently operate.

8.5 Future Research

In order to overcome the limitations of this research, certain areas can be suggested where future research can be conducted. In this way, the current research has opened new horizons for researchers to dig deeper into a relatively new era of PMS and MCS in Pakistan for performance improvement. Thus, the following areas can be suggested to conduct future research:

The current research is largely descriptive in nature which has analyzed the relationship between PMS and OP taking MCS as mediator. The discussion section has shown that banking sector in Pakistan still embraces certain problems in proper implementation of PMS as well as control mechanism however, understanding of such obstacles is beyond the scope of this research. therefore, future research can be conducted to evaluate the main problems which hinder the effective implementation of PMS and MCS in banking industry of Pakistan.

This study has been conducted to investigate the four levers of controls and their relationship with FP, NFP, FPMS and NFPMS. However, the literature has suggested various other types of controls including planning controls, cybernetic controls, reward controls, administration controls. Thus, future research can be conducted to investigate the relationship between these types of controls with OP and PMS while a cross comparison between different types of control

measures can also be conducted to investigate the effectiveness of a particular type of control in a certain specific context.

This research has conducted research using only primary sources of data collection to determine the relationship between PMS and MCS to evaluate OP. A more effective interpretation of these results can be made by aligning with actual financial and non- financial performance metrics i.e., using secondary data collection. Establishing such a relationship may help to accurately measure the degree of impact of PMS and MCS on OP.

The evaluation of PMS and MCS has been made based upon the responses of management of banks which may be subjective in nature. These responses as well as results can be cross verified by examining the perception of employees towards PMS and control practices of management and also their effectiveness towards customer satisfaction. Thus, future research can be conducted to investigate the effectiveness of measurement systems and control mechanisms on employee perception.

The current research data was collected from Pakistan banks, which may affect and interfere the results of research. Therefore, in future it is suggested to take the research data from international banks in order to make comparison related to PMS and MCS between national and international banks. MCS can also influenced by the culture, like Belief system which is closely related with culture. The comparison of the two cultures of banks makes the research more interesting in future research.

The current research did not separate out the management systems in different type of banks in Pakistan (commercial and Islamic) banks. Future research can separate out these banks to get more homogeneous results. Thus, future research may be done on the other fit of measurement to examine another it can affect the research results differently.

REFERENCES

Abba, M., Yahaya, L., & Suleiman, N. (2018). Explored and critique of contingency theory for management accounting research. *Journal of Accounting and Financial Management ISSN*, *4*(5), 2018. 40-50

Abbas, Q., Hunjra, A. I., Azam, R. I., Ijaz, M. S., & Zahid, M. (2014). Financial performance of banks in Pakistan after Merger and Acquisition. *Journal of Global Entrepreneurship Research*, *4*(1), 1-15. (1).

Abdullah, M. H. S. B., Hamid, A. M., & Yatim, P. (2017). The effect of enterprise risk management on firm value: Evidence from Malaysian technology firms. *Management Journal*, *49*, 3–11.

Acquaah, M. (2013). Management control systems, business strategy and performance: A comparative analysis of family and non-family businesses in a transition economy in sub-Saharan Africa. *Journal of Family Business Strategy*, *4*(2), 131–146. https://doi.org/10.1016/j.jfbs.2013.03.002

Adler, P. S., & Chen, C. X. (2011). Combining creativity and control: Understanding individual motivation in large-scale collaborative creativity. *Accounting, Organizations and Society*, *36*(2), 63–85.

Adler, R. W. (2011). Performance management and organizational strategy: How to design systems that meet the needs of confrontation strategy firms. *The British Accounting Review*, *43*(4), 251–263.

Aforo, A. A., & Antwi, K. A. (2012). Evaluation of the performance appraisal systems in KNUST and GIMPA libraries. *E3 Journal of Business Management and Economics.*, *3*(8), 301–306.

Aguinis, H. (2009). *Performance Management*. Pearson. An expanded view of performance management. *Performance management: Putting research into action*, 1-43.

Aguinis, H., & Burgi-Tian, J. (2021a). Measuring performance during crises and beyond: The Performance Promoter Score. *Business Horizons*, *64*(1), 149–160.

Aguinis, H., & Burgi-Tian, J. (2021b). *Talent management challenges during COVID-19 and beyond: Performance management to the rescue, Business Research Quarterly, 24(3), 233-240*.

Aguinis, H., Joo, H., & Gottfredson, R. K. (2011). Why we hate performance management—and why we should love it. *Business Horizons*, *54*(6), 503–507.

Ahmad, A., Malik, M. I., & Humayoun, A. A. (2010). Banking developments in Pakistan: A journey from conventional to Islamic banking. *European Journal of Social*, *Sciences,17(1)*, 12–17.

Ahmad, H. K., Mujaddad, H. G., & Nadeem, M. (2015). *An analysis of banks performance in Pakistan using two-step double bootstrap Dea approach*. *Pakistan Economic and Social Review, 53(2).*

Ahmad, K. (2013). The adoption of management accounting practices in Malaysian small and medium-sized enterprises. *Asian Social Science*, *10*(2). https://doi.org/10.5539/ass.v10n2p236

Ahmad, K., & Zabri, S. M. (2016). The application of non-financial performance measurement in Malaysian manufacturing firms. *Procedia Economics and Finance*, *35*, 476–484.

Ahmed, A. (2018). 100m Pakistanis without a bank account, says World Bank, (accessed: 24/7/2019). *Dawn News*. https://www.dawn.com/news/1403070

Ahrens, T., & Mollona, M. (2006). Organisational control as cultural practice: A shop floor ethnography of a Sheffield steel mill. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.901904

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In *Action Control* (pp. 11–39). Springer Berlin Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), The handbook of attitudes (pp. 173-221). Mahwah, NJ: Erlbaum.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior 1980 Prentice-Hall Englewood Cliffs.

Akpoviroro, K. S. (2018). Impact of external business environment on organizational performance. *IJARIIE-ISSN(O)-2395-4396*, *4*, 498–505.

Alexander, J., Brudney, J., & Yang, K. (2010). Introduction to the symposium: accountability and performance measurement: the evolving role of nonprofits in the hollow state". *Nonprofit and Voluntary Sector Quarterly*, *39*(4), 565–570.

Alkhafaji. A, Talab. H, Mahmood. H, Hussein. A. N. (2018). The Impact Of Management Control Systems (Mcs) On Organizations Performance A Literature Review. *Journal of Economics and Administrative Sciences*, *24*(105), 1–16.

Allauddin, Liu, H., & Ahmed, R. Q. (2020). The changing dynamics and new developments of China–Pakistan relations. *India Quarterly*, *76*(1), 73–88.

Allwood, C. M. (2012). The distinction between qualitative and quantitative research methods is problematic. *Quality & Quantity*, *46*(5), 1417–1429.

Alvesson, M., & Spicer, A. (2019). Neo-institutional theory and Organization Studies: A mid-life crisis? *Organization Studies*, *40*(2), 199–218.

Alzoubi., Y. N. (2014). The Extent of Using Financial and Non-Financial Measures in Evaluating Branches Performance of Commercial Banks in Jordan: A field Study

According to Internal Auditors Viewpoint. *Research Journal of Finance and Accounting*, *5*(6), 102–108.

Amberg, M. (2014). *Use of performance measurement methods in engineering organizations – an empirical study*.

American Psychological Association (APA). (2012). *Publication manual of the American Psychological Association (6th ed.). Washington, DC*.

Andersen, C. V., & Lueg, R. (2017). Management Control Systems, culture and upper echelons–A systematic literature review on their interactions. Corporate Ownership and Control, 14(2), 312-325.

Anderson, S. W., & Young, S. M. (1999). The impact of contextual and process factors on the evaluation of activity-based costing systems. *Accounting, organizations and society*, *24*(7), 525-559.

Anthony, R. N., & Govindarajan, V. (2004). *Management Control Systems*. McGraw-Hill.

Antonsen, Y. (2014). The downside of the Balanced Scorecard: A case study from Norway. *Scandinavian Journal of Management*, *30*(1), 40–50.

Anwer, S., Abbas, Q., & Ashfaq, M. (2017). *Introduction to the Economy of Pakistan*.

Appelbaum, M. &. A. S. (2013). *Stress free Performance Appraisal*. USA Career Press Publication, p. 9.

Aranda, C., & Arellano, J. (2010). Consensus and Link Structure in Strategic Performance Measurement Systems: A Field Study. *Journal of Management Accounting Research*, *22*, 271–299.

Arjaliès D-L, & Mundy, J. (2013). The use of management control systems to manage CSR strategy: A levers of control perspective. *Management Accounting Research*, *24*(4), 284–300.

Armesh, H., Salarzehi, H., & Kord, B. (2010). Management Control System. *Interdisciplinary Journal Of Contemporary Research In Business*, *2*(6), 193–206.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. British journal of social psychology, 40(4), 471-499.

Armstrong, M & Baron, A. (2004). *Managing performance: performance management in action,* CIPD, London

Arrow, K. J. (1964). Control in large organizations. *Management science*, *10*(3), 397-408.

Aryanezhad, M. B., Najafi, E., & Farkoosh, S. B. (2011). A BSC-DEA approach to measure the relative efficiency of service industry: A case study of banking sector. *International Journal of Industrial Engineering Computations*, *2*(2), 273–282.

Asdullah, M. A., & Yazdifar, H. (2016). Evaluation of factors influencing youth towards Islamic banking in Pakistan. *ICTACT Journal on Management Studies*, *2*(1).

Asdullah, M., & Yazdifar, H. (2020). Book Review: Effective Management Control; Theory and Practice by Eric G. Flamholtz. *Journal of Management and Research (JMR) Volume*, *7*(1).

Asghar, A. (2018). *Challenges in banking sector of Pakistan*. http://www.pakistaneconomist.com/2018/09/17/challenges-in-banking-sector-of-pakistan/,

Askarany, D., & Yazdifar, H. (2017). Management Accounting and the Shortcomings of Current Performance Measurement Systems. *International Journal of Accounting Research*, *5*(1), 1–3.

Aslam, H. D., & Sarwar, S. (2010). Improving Performance Management Practices in IT firms of Pakistan. *Journal of Management Research*, *2*(2). https://doi.org/10.5296/jmr.v2i2.342

Atkinson, A.A., Kaplan, R.S., & Young, M. (2004). Management accounting. Fourth Edition, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Audenaert, M., Decramer, A., George, B., Verschuere, B., & Van Waeyenberg, T. (2019). When employee performance management affects individual innovation in public organizations: the role of consistency and LMX. *The International Journal of Human Resource Management*, *30*(5), 815–834. https://doi.org/10.1080/09585192.2016.1239220

Baines, A., & Langfield-Smith, K. (2003). Antecedents to management accounting change: a structural equation approach. *Accounting, Organizations and Society*, *28*(7–8), 675–698. https://doi.org/10.1016/s0361-3682(02)00102-2

Baird, K. (2017). *The effectiveness of strategic performance measurement systems and performance: Evidence from Mexico* (M. J. Epstein & J. Y. Lee, Eds.; pp. 115–137). Emerald Group Publishing Limited.

Barney, J. B., Ketchen, D. J., Jr, & Wright, M. (2021). Resource-based theory and the value creation framework. *Journal of Management*, *47*(7), 1936–1955.

Barrows, E., & Neely, A. (2011). *Managing performance in turbulent times: Analytics and insight* (1st ed.). John Wiley & Sons. https://books.google.at/books?id=-xUSnCgLF9sC

Bedford, D. S. (2015). Management control systems across different modes of innovation: Implications for firm performance. *Management Accounting Research,* 28, 12–30. https://doi. org/10.1016/j.mar.2015.04.003

Bedford, D. S., & Malmi, T. (2015). Configurations of control: An exploratory analysis. *Management Accounting Research*, *27*, 2–26.

Bendickson, J., Muldoon, J., Liguori, E. W., & Davis, P. E. (2016). Agency theory: background and epistemology". *Journal of Management History*, *22*(4), 437–449.

Bendickson, Josh, Muldoon, J., Liguori, E., & Davis, P. E. (2016). Agency theory: the times, they are a-changin'. *Management Decision*, *54*(1), 174–193.

Bento, A., Bento, R., & White, L. F. (2014). Strategic Performance Management Systems: Impact on business results. *Journal of Computer Information Systems*, *54*(3), 25–33.

Bernthal, P., Rogers, R., & Smith, A. (2003). *Managing Performance: Building Accountability for Organisational Success*. Development Dimensions International.

Berry, A. J., Broadbent, J., & Otley, D. T. (2005). *Management control: Theories, issues and performance*. Palgrave Macmillan.

Berry, A. J., Coad, A. F., Harris, E. P., Otley, D. T., & Stringer, C. (2009). Emerging themes in management control: A review of recent literature. *The British Accounting Review*, *41*(1), 2–20.

Bhattacharjee S., Sengupta S.,(2011). A study of Performance Measurement System in a Corporate Firm, *VSRD-IJBMR 1*(8), 496-513

Bhutto., A. S., & Aziz., F. D. (2013). The Banking Sector of Pakistan: The Case of Its Growth and Impact on Revenue Generation 2007 to 2012. *IOSR Journal of Economics and Finance (IOSR-JEF*, *1*(5), 46–50.

Bianchi, C., Marinković, M., Cosenz, F., (2013) A Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness: Evidences from a Case Study, Paper presented at the XXXI International Conference of the System Dynamics Society, Cambridge (USA), July 21 – 25.

Bikker, J. (2010). Measuring Performance of Banks: An Assessment. *Journal of Applied Business and Economics*, *11*(4).

Bin-Nashwan, S. A., Abdullah, N. S., & Obaid, M. M. (2017). A review of literature in management control system (MCS) business strategy, and firm performance. *International Journal of Management Research and Reviews*, *7*(2), 99.

Bisbe, J., & Otley, D. (2004). A study of the emergence of management accounting systems ethos and its influence of perceived system access. *Accounting, Organization and Society, 28*, 523–548.

Bisbe, J. & Malagueno, R. (2012). Using strategic performance measurement systems for strategy formulation: Does it work in dynamic environments? *Management Accounting Research*, *23*(4), 296–311.

Bisbe, J. & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. *Accounting, Organizations and Society*, *29*(8), 709–737.

Bititci, U., Garengo, P., Dörfler, V., & Nudurupati, S. (2012). Performance measurement: Challenges for tomorrow: Performance measurement. *International Journal of Management Reviews*, *14*(3), 305–327.

Bobe. J. B, & Taylor., W. D. (2010). *Use of management control systems in university faculties: evidence of diagnostic versus interactive approaches by the upper echelons*. School of Accounting, Economics & Finance, Deakin University.

Boblin, S. L., Ireland, S., Kirkpatrick, H., & Robertson, K. (2013). Using Stake's qualitative case study approach to explore implementation of evidence-based practice. *Qualitative Health Research*, *23*(9), 1267–1275.

Boučková, M. (2015). Management accounting and agency theory. *Procedia Economics and Finance*, *25*, 5–13.

Basuony, M.A.K. (2014) The Balanced Scorecard in Large Firms and SMEs: A Critique of the Nature, Value and Application. Accounting and Finance Research, 3, 14-22. https://doi.org/10.5430/afr.v3n2p14

Braganza, A., Brooks, L., Nepelski, D., Ali, M., & Moro, R. (2017). Resource management in big data initiatives: Processes and dynamic capabilities. *Journal of Business Research*, *70*, 328–337.

Brewer, P. C., Davis, S., & Albright, T. (2005). Building A Successful Balanced Scorecard Program, Cost Management. *Sayı*, *1*, 28–37.

Bronzo, M., de Resende, P. T. V., de Oliveira, M. P. V., McCormack, K. P., de Sousa, P. R., & Ferreira, R. L. (2013). Improving performance aligning business analytics with process orientation. *International Journal of Information Management*, *33*(2), 300–307.

Brown., C. T., O'Kane, P., Mazumdar, B., & McCracken., G. M. (2019). Performance Management: A Scoping Review of the Literature and an Agenda for Future Research. *Human Resource Development Review*, *18*(1).

Bryman, A., & Bell, E. (2015). *Business research methods* (Fourth). Oxford University Press.

Business Standard. (2021). *Pakistan wants "good relations" with its neighbours: Envoy Hasan Khan*. Business-Standard.Com. https://www.business-standard.com/article/international/pakistan-wants-good-relations-with-its-neighbours-envoy-hasan-khan-121032300402_1.html

Cai, Y., & Mehari, Y. (2015). The use of institutional theory in higher education research. In *Theory and method in higher education research*. Emerald Group Publishing Limited.

Callan, D. E., Kent, R. D., Guenther, F. H., & Vorperian, H. K. (2000). An auditory-feedback-based neural network model of speech production that is robust to developmental changes in the size and shape of the articulatory system. *Journal of speech, language, and hearing research*, *43*(3), 721-736.

Cardy, Q., & R L. (2003). *Performance management: Concepts, skills, and exercises*. M. E. Sharpe, Inc.

Cardy, R., & Leonard, B. (2014). *Performance Management: Concepts, Skills and Exercises: Concepts, Skills and Exercises*. (2nd ed.). Routledge.

Cardinal, L. B., Kreutzer, M., & Miller, C. C. (2017). An aspirational view of organizational control research: Re-invigorating empirical work to better meet the challenges of 21st century organizations. *Academy of Management Annals*, *11*(2), 559-592.

Catasus, B., Ersson, S., Grojer, J., Wallentin, F. Y. (2007) What gets measured gets.... On indicating, mobilizing andacting. Accounting, Auditing & Accountability Journal, Volume 20, Issue 4, 505 -521.

(PDF) The importance of Management Control Systems. Available from: https://www.researchgate.net/publication/331080256_The_importance_of_Management_Control_Systems [accessed Oct 04 2022].

Chalos, P., & O'Connor, N. G. (2005). The Perceived Effect of Accounting Controls on U. S. -Chinese Joint Venture Transaction Costs and Performance". *Journal of International Accounting Research*, *4*(2), 53–73.

Chapman, C. S. (1997). Reflections on a contingent view of accounting. *Accounting, Organizations and Society*, *22*(2), 189–205.

Cheng, M., & Coyte, R. (2014). The effects of incentive subjectivity and strategy communication on knowledge-sharing and extra-role behaviours. *Management Accounting Research*, *25*(2), 119–130.

Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future, Accounting. *Organizations and Society*, *28*, 127–168.

Chenhall, R. H. (2007). Theorizing contingencies in management control systems research. In C. S. Chapman, A. G. Hopwood, & M. D. Shields (Eds.), *Handbook of management accounting research (*pp. 163-206). Oxford: Elsevier.

Chenhall, Robert H. (2006). Theorizing contingencies in management control systems research. In *Handbooks of Management Accounting Research* (pp. 163–205). Elsevier.

Chenhall, Robert H., & Moers, F. (2015). The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organizations and Society*, *47*, 1–13.

Chenhall, Robert H., Hall, M., & Smith, D. (2010). Social capital and management control systems: A study of a non-government organization. *Accounting, Organizations and Society*, *35*(8), 737–756.

Chiesa, V., Frattini, F., Lazzarotti, V., & Manzini, R. (2009). Performance measurement in R&D: exploring the interplay between measurement objectives, dimensions of performance and contextual factors. *R and D Management*, *39*(5), 487–519.

Chleicher, D. J., Baumann, H. M., Sullivan, D. W., Levy, P. E., Hargrove, D. C., & Barros-Rivera, B. A. (2018). Putting the system into Performance Management Systems: A review and agenda for performance management research. *Journal of Management*, *44*(6), 2209–2245.

Chow, C. W., & Stede, W. A. (2006). The use and usefulness of nonfinancial performance measures. *Management Accounting Quarterly*, *7*(3), 1–8.

Coase, R.H. 1937. The nature of the firm. *Economica* 4(16), 386–405.

Collier, P. M. (2005). Entrepreneurial control and the construction of a relevant accounting. *Management Accounting Research*, *16*(3), 321–339.

Cosenz, F., & Noto, L. (2015). Combining system dynamics modeling and management control systems to support strategic learning processes in SMEs: a dynamic performance management approach. *Journal of Management Control*, *246*, 225–248.

Coşkun, A. (2005). *Performance Measurement in Business, Balanced Scorecard, Istanbul*. Istanbul University, Institute Of Social Science, Accounting.

Courty, P. (2003). Dynamics of performance-measurement systems. *Oxford Review of Economic Policy*, *19*(2), 268–284.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Crucke, S., & Decramer, A. (2016). The development of a measurement instrument for the organizational performance of social enterprises. *Sustainability*, *8*(2), 161.

Cruz, I., Scapens, R. W., & Major, M. (2011). The localisation of a global management control system. *Accounting, Organizations and Society*, *36*(7), 412–427.

Cuypers, I. R. P., Hennart, J.-F., Silverman, B. S., & Ertug, G. (2021). Transaction cost theory: Past progress, current challenges, and suggestions for the future. *Academy of Management Annals*, *15*(1), 111–150.

Davila, A., & Foster, G. (2005). Management accounting systems adoption decisions: Evidence and performance implications from early-stage/Startup companies. *The Accounting Review*, *80*(4), 1039–1068.

Davila, E. P., Caban-Martinez, A. J., Muennig, P., Lee, D. J., Fleming, L. E., Ferraro, K. F., ... & Christ, S. L. (2009). Sensory impairment among older US workers. *American Journal of Public Health*, *99*(8), 1378-1385.

Dawn. (2017). 70 years on: Looking back at key economic events in Pakistan's history. *Dawn*. https://www.dawn.com/news/1351915

De Geuser, F., Mooraj, S., & Oyon, D. (2009). Does the balanced scorecard add value? Empirical evidence on its effect on performance. *The European Accounting Review*, *18*(1), 93–122.

Demartini, C. (2014a). Performance Management System. A Literature Review. In *Performance Management Systems* (pp. 55–88). Springer Berlin Heidelberg.

Demartini, C. (2014b). The incentive and rewarding mechanism. In *Performance Management Systems* (pp. 177–188). Springer Berlin Heidelberg.

DeNisi, A. S., & Murphy, K. R. (2017). Performance appraisal and performance management: 100 years of progress? *The Journal of Applied Psychology*, *102*(3), 421–433.

Deville, A., Ferrier, G. D., & Leleu, H. (2014). Measuring the performance of hierarchical organizations: An application to bank efficiency at the regional and branch levels. *Management Accounting Research*, *25*(1), 30–44.

Dillman, D. A. (2007). *Mail and Internet Surveys: The Tailored Design Method* (2nd ed.).

Doluwarawaththa Gamage, S. D., & Gooneratne, T. (2017). Management controls in an apparel group: an institutional theory perspective". *Journal of Applied Accounting Research*, *18*(2), 223–241.

Dossi, A., & Patelli, L. (2010). You learn from what you measure: Financial and non-financial performance measures in multinational companies. *Long Range Planning*, *43*(4), 498–526.

Drury, C. (2012). *Management and Cost Accounting* (8th ed.). Cengage Learning EMEA.

Duréndez Gómez-Guillamón, A., Ruíz-Palomo, D., García-Pérez-de-Lema, D., & Diéguez-Soto, J. (2016). Management control systems and performance in small and medium family firms. *European Journal of Family Business*, *6*(1). https://doi.org/10.24310/ejfbejfb.v6i1.5043

Duréndez, A., García, D., & Madrid, A. (2007). *Advantages of professionally managed family firms in Spain. Culturally-sensitive models of family business in Latin Europe: A compendium using the globe paradigm* (pp. 88–113).

Efferin, S., & Hopper, T. M. (2007). Management control, culture and ethnicity in a Chinese Indonesian company. *Chinese Indonesian Company. Accounting, Organizations and Society*, *32*, 223–262.

Eker, M. (2016). The effects of interactions between management control systems and strategy on firm performance: An empirical study. *Business and Economics Research Journal*, *7*(4), 123–123.

Elgharbawy, A., & Abdel-Kader, M. (2013). Enterprise governance and value-based management: a theoretical contingency framework. *Journal of management & governance*, *17*(1), 99-129.

Elsye Hatane, S., Gabrielle, L., & Febe Angelina, S. (2019). The levers of management control system in organizational life cycle. *KnE Social Sciences*, *3*(11), 188.

Engelmann C. H., & Roesch, R. C. (2001). *Managing individual performance: An approach to designing and effective Performance Management System*. World at Work.

Epstein, M. J. (2008). Making Sustainability Work: Best Practices in Managing and performance measurement systems. *International Journal of Operations and Production Management*, *31*, 1287–1310.

Epstein, M. J., & Wisner, P. S. (2005). *Managing and Controlling Environmental Phenomenon*. Business Administration and Information Technology of the University of Zurich.

Fareed, M., Isa, M. F. M., Ahmad, A., & Laeeq, H. (2016). Performance Management System (PMS) as a predictor of employee performance of private bank managers in (Pakistan). *The Social Sciences*, *11*.

https://www.semanticscholar.org/paper/f2bd22348bb0aa27a3da767a3979942b6189c602

Fazal-e-Haider, S. (2018, April 8). *Banking sector advancement in Pakistan*. Pakistaneconomist.Com. http://www.pakistaneconomist.com/2018/04/09/banking-sector-advancement-pakistan/,

Ferreira, A., & Otley, D. (2009). The design and use of Performance Management Systems: An extended framework for analysis. *Management Accounting Research*, *20*(4), 263–282.

Ferreira, A., & Otley, D. (2005). The design and use of management control systems: An extended framework for analysis. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.682984

Finkelstein, S., Hambrick, D. C. & Cannella, A. A. 2009. *Strategic Leadership: Theory and Research on Executives, Top Management Teams, and Boards*. New York: Oxford University Press

Firdaus, A., Suhaimi, R., Saban, G., & Hamali, J. (2011). Bank Service Quality (BSQ) Index: An indicator of service performance. *International Journal of Quality & Reliability Management*, *28*(5), 542–555.

Fishbein, M., & Ajzen, I. (1977). Belief, attitude, intention, and behavior: An introduction to theory and research. *Philosophy and Rhetoric*, *10*(2).

Foss, K., & Foss, N. J. (2008). Understanding opportunity discovery and sustainable advantage: the role of transaction costs and property rights. *Strategic Entrepreneurship Journal*, *2*(3), 191–207.

Franco-Santos, M., & Bourne, M. (2005). An examination of the literature relating to issues affecting how companies manage through measures. *Production, Planning and Control*, *16*(2), 114–124.

Franco-Santos, M., Lucianetti, L., & Bourne, M. (2012). Contemporary performance maintaining management control: multi-functional project teams, budgets, and the measurement systems: A review of their consequences and a framework for research. *Management Accounting Research*, *23*(2), 79–119.

Frigo, M. L., Pustorino, P. G. VeKrull Jr., G. W. (2000). The Balanced Scorecard for Community Banks: Translating Strategy Into Action. *Bank Accounting & Finance*, *3*, 17–23.

Fullerton, R. R., McWatters, C. S., & Fawson, C. (2003). An examination of the relationships between JIT and financial performance. *Journal of Operations management*, *21*(4), 383-404.

Frow, N., Marginson, D., & Ogden, S. (2005). Encouraging strategic behaviour while maintaining management control: Multi-functional project teams, budgets, and the negotiation of shared accountabilities in contemporary enterprises. *Management Accounting Research*, *16*(3), 269–292.

Garcia, D., & Gluesing, J. C. (2013). Qualitative research methods in international organizational change research. *Journal of Organizational Change Management*, *26*(2), 423–444.

Gond, J.-P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research*, *23*(3), 205–223.

Gosselin, M. (1997). The effect of strategy and organizational structure on the adoption and implementation of activity-based costing. *Accounting, organizations and society*, *22*(2), 105-122.

Graana. (2020). *List of rivers in Pakistan*. Graana.Com. https://blog.graana.com/rivers-in-pakistan/

Grabner, I., & Moers, F. (2013). Management control as a system or a package? Conceptual and empirical issues. *Accounting, Organizations and Society*, *38*(6–7), 407–419.

Grafton, J., Lillis, A. M., & Widener, S. K. (2010). The role of performance measurement and evaluation in building organizational capabilities and performance. *Accounting, Organizations and Society*, *35*(7), 689–706.

Granlund, M., & Lukka, K. (2017). Investigating highly established research paradigms: Reviving contextuality in contingency theory based management accounting research. *Critical Perspectives on Accounting*, *45*, 63–80.

Greenwood, R., Hinings, C. R., & Whetten, D. (2014). Rethinking institutions and organizations. *Journal of management studies*, *51*(7), 1206-1220.

Greguras, G. J., Robie, C., Schleicher, D. J., & Iii, M. G. (2003). A field study of the effects of rating purpose on the quality of multisource ratings. *Personnel Psychology*, *56*(1), 1–21.

Griffith, R., & Neely, A. (2009). Performance pay and managerial experience in multitask teams: evidence from within a firm. *Journal of Labor Economics*, *27*(1), 49-82.

Grossi, G., & Thomasson, A. (2015). Bridging the accountability gap in hybrid organizations: the case of Copenhagen Malmö Port. *International Review of Administrative Sciences*, *81*(3), 604–620.

Grossi, G., Reichard, C., Thomasson, A., & Vakkuri, J. (2017). Editorial. *Public Money & Management*, *37*(6), 379–386.

Growe, G., DeBruine, M., Lee, J. Y., &Tudón Maldonado, J. F. (2014). The Profitability and Performance Measurement of US Regional Banks Using the Predictive Focus of the Fundamental Analysis Research. *, Advances in Management Accounting*, *24*, 189–237.

Guenther, T. W. (2013). Conceptualisations of 'controlling' in German-speaking countries: analysis and comparison with Anglo-American management control frameworks. Journal of Management Control, 23(4), 269–290.

Gunarathne, N., & Lee, K.-H. (2021). Corporate cleaner production strategy development and environmental management accounting: A contingency theory perspective. *Journal of Cleaner Production*, *308*(127402), 127402.

Haines, V. Y., III, & St-Onge, S. (2012). Performance management effectiveness: practices or context? *The International Journal of Human Resource Management*, *23*(6), 1158–1175. https://doi.org/10.1080/09585192.2011.561230

Hair, J. F., Black, W. C., & Babin, B. J. (2010). *RE Anderson Multivariate data analysis: A global perspective*.

Hambrick D.C. (2018) Upper Echelons Theory. In: Augier M., Teece D.J. (eds) The Palgrave Encyclopedia of Strategic Management. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-137-00772-8_785

Hambrick, D. C. & Mason, P. A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. Academy of Management Review, 9(2), 193–206

Hammer, M. (2007). The process audit. *Harvard Business Review*, *85*(4), 111–119, 122–123, 142.

Hanif, M., Tariq, M., Tahir, A., & Momeneen, W. (2012). Comparative performance study of conventional and Islamic banking in Pakistan. *International Research Journal of Finance and Economics*, *83*, 62–72.

Heinicke, A., Guenther, T. W., & Widener, S. K. (2016). An examination of the relationship between the extent of a flexible culture and the levers of control system: The key role of beliefs control. *Management Accounting Research*, *33*, 25–41.

Heinsman, H., Hoogh, A. H. B. de, Koopman, P. L., & van Muijen, J. J. (2006). Competency management: Balancing between commitment and control. *Management-Revue*, *17*(3), 292–306.

Henri, J. (2006). Management control systems and strategy: A resource-based perspective, Accounting. *Organizations and Society*, *31*, 529–558.

Henri, J., & Journeault, M. (2010). Eco-control: The influence of management control systems on environmental and economic performance. *Accounting, Organizations and Society*, *35*(1), 63–80.

Herath, S. (2007). A framework for management control research. *Journal of Management Development*, *26*(9), 895–915.

Hermawan, A. A., Bachtiar, E., Wicaksono, P. T., & Sari, N. P. (2021). Levers of control and managerial performance: The importance of belief systems. *Gadjah Mada International Journal of Business*, *23*(3), 237.

Herremans, I. M., & Nazari, J. A. (2016). Sustainability reporting driving forces and management control systems. *Journal of Management Accounting Research*, *28*(2), 103–124.

Hewege, C. R. (2011). Acculturation and management control- Japanese Soul in Sri Lankan Physique. *Contemporary Management Research*, *7*, 3–20.

Hewege, Chandana Rathnasiri. (2012). A critique of the mainstream management control theory and the way forward. *SAGE Open*, *2*(4), 215824401247011.

Hiebl, M. R. (2014). Upper echelons theory in management accounting and control research. Journal of Management Control, 24(3), 223-240.

Hofstede, G. H. (1967). The Game of Budget Control. London: how to live with budgetary standards and yet be motivated by them''.

Hofstede, G. (1980). Culture and organizations. *International studies of management & organization*, *10*(4), 15-41

Hofstede, G. (1991). Empirical models of cultural differences.

Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Articles*, *2*.

Hopper, T., Tsamenyi, M., Uddin, S., & Wickramasinghe, D. (2008). Management accounting in less developed countries: what is known and needs knowing. *Accounting Auditing & Accountability*, *22*(3), 469–514. https://doi.org/10.1108/09513570910945697

Hoque, Z. (2004). A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance. *International Business Review (Oxford, England)*, *13*(4), 485–502.

Hoque, Z. (2005). Linking environmental uncertainty to non-financial performance measures and performance: a research note. *The British Accounting Review*, *37*(4), 471–481.

Hoque, Z. (2014). 20 years of studies on the balanced scorecard: Trends, accomplishments, gaps and opportunities for future research. *The British Accounting Review*, *46*(1), 33–59.

Hoque, Z., & Chia, M. (2012). Competitive forces and the levers of control framework in a manufacturing setting: A tale of a multinational subsidiary. *Qualitative Research in Accounting & Management*, *9*(2), 123–145.

Horngren, C. T., Stratton, W. O., & Sundem, G. L. (2005). *Introduction to management accounting, chap. 1-14: International edition* (13th ed.). Pearson.

Hu, A. H., Hsu, C.-W., Kuo, T.-C., & Wu, W.-C. (2009). Risk evaluation of green components to hazardous substance using FMEA and FAHP. *Expert Systems with Applications*, *36*(3), 7142–7147.

Hua Cheng, T., Shyh-Jer, C., & Shih-Chien, F. (2009). Employment modes, high-performance work practices, and organizational performance in the hospitality industry. *Cornell Hospitality Quarterly*, *50*(4), 413–431. https://doi.org/10.1177/1938965509348580

Hunjra I, A., Faisal, F., & Gulshion, F. (2017). The impact of cost leadership strategy and financial management control systems on organizational performance in Pakistan's services sector. *Lahore Journal of Business*, *6*(1), 1–19.

Husain, I. (2010). *The role of politics in Pakistan's economy*. Columbia.Edu. https://jia.sipa.columbia.edu/role-politics-pakistans-economy-0

Husain, I. (2011). Financial Sector Regulation in Pakistan: The Way Forward. *SBP Research Bulletin*, *1*(7), 31–44.

Index Mundi. (2021). *Pakistan International organization participation*. Indexmundi.Com. https://www.indexmundi.com/pakistan/international_organization_participation.htm

Iwaarden, J., van der Wiele, T., Williams, R., & Dale, B. (2006). A management control perspective of quality management: An example in the automotive sector. *International Journal of Quality & Reliability Management*

Islam, J., & Hu, H. (2012). A review of literature on contingency theory in managerial accounting. *African Journal of Business Management*, 6(15), 5159–5164. https://doi.org/10.5897/ ajbm11.2764

Israel, G.d. *(1992) Sampling The Evidence of Extension Program Impact. Program Evaluation and Organizational Development, IFAS, University of Florida; PEOD-5. -*

references - scientific research publishing. (n.d.). Scirp.Org. Retrieved August 21, 2021, from https://www.scirp.org/(S(oyulxb452alnt1aej1nfow45))/reference/ReferencesPapers.aspx?ReferenceID=1637875

Ittner, C. D., & Larcker, D. F. (1998). Measuring the impact of quality initiatives on firm financial performance. *Advances in the Management of Organisational Quality*, *1*, 1–37.

Ittner, Christopher D., & Larcker, D. F. (2003). Coming up short on nonfinancial performance measurement. *Harvard Business Review*, *81*(11), 88–95, 139.

Ittner, Christopher D., Larcker, D. F., & Randall, T. (2003). Performance implications of strategic performance measurement in financial services firms. *Accounting, Organizations and Society*, *28*(7–8), 715–741.

Ivana, D. (2013). The Effect Of Contingency Factors on Management Control Systems: A Study of Manufacturing Companies in Croatia. *Economic Research-Ekonomska Istraživanja*, *26*, 369–382. https://doi.org/10.1080/1331677X.2013.11517657

Jamil, C. Z. M., & Mohammed, R. (2013). The effect of management control system on performance measurement system at small medium hotel in Malaysia. *International Journal of Trade Economics and Finance*, 202–208.

Janke, R., Mahlendorf, M. D., & Weber, J. (2014). An exploratory study of the reciprocal relationship between interactive use of management control systems and perception of negative external crisis effects. *Management Accounting Research*, *25*(4), 251–270. https://doi.org/10.1016/j.mar.2014.01.001

Jermias, J., & Gani, L. (2005). Ownership structure, contingent-fit, and business-unit performance: A research model and empirical evidence. *The International Journal of Accounting*, 40(1), 65–85. https://doi.org/10.1016/j.intacc.2005.01.004

Jones, R. A., Jimmieson, N. L., & Griffiths, A. (2005). The impact of organizational culture and reshaping capabilities on change implementation success: The mediating role of readiness for change. Journal of management studies, 42(2), 361-386.

Jokipii, A. (2010). Determinants and consequences of internal control in firms: a contingency theory based analysis. *Journal of Management & Governance*, *14*(2), 115-144.

Junejo, M., Umrani, A., W., A., & A., R. (2010). *The Analysis of Performance Management System and its Impact on Higher Educational Institutes- A Case Study of Sukkur Division*.

Jusoh, R., Ibrahim, D. N., & Zainuddin, Y. (2008). The performance consequence of multiple performance measures usage: Evidence from the Malaysian manufacturers. *International Journal of Productivity and Performance Management*, *57*(2), 119–136.

Kaczynski, D., Salmona, M., & Smith, T. (2014). Qualitative research in finance. *Australian Journal of Management*, *39*(1), 127–135.

Kasumba, S. (2013). A new dimension to neo-institutional sociology: Some evidence from the adoption of new budgetary practices in local governments in Uganda. *African Journal of Economic and Management Studies*, *4*(1), 122–143. https://doi.org/10.1108/20400701311303195

Kalle, K., & Lind, J. (2010). The impact of the corporate balanced scorecard on corporate control—A research note. *Management Accounting Research*, *21*(4), 265–277.

Kallio, A., Kujansivu, P., & Parjanen, S. (2012). Locating the weak points of innovation capability before launching a development project. *Interdisciplinary Journal of Information Knowledge and Management*, *7*, 021–038.

Kallio, K.-M., & Kallio, T. J. (2014). Management-by-results and performance measurement in universities – implications for work motivation. *Studies in Higher Education*, *39*(4), 574–589.

Kantola, T. (2017). *Management control systems during early life cycle phases: A case study in the social and healthcare services sector*. Aalto University Master of Business.

Kaplan, Robert. S., & Norton, D. P. (2004). Plotting Success With 'Strategy Maps. *Optimize, Sayı*, *2*, 61–64.

Kaplan, Robert S., & Norton, D. P. (2008). Mastering the management system. *Harvard Business Review*, *86*(1), 62–77, 136.

Kennerley, M., & Bourne, M. (2003). Assessing and maximising the impact of measuring business performance. *Proceedings of the POMS/EurOMA Conference*, 493–502.

Kerr, J., Rouse, P., & de Villiers, C. (2015). Sustainability reporting integrated into management control systems. *Pacific Accounting Review*, *27*(2), 189–207.

Khan, M.K., Ishaq, M.I., Nawaz, M.R., & Hussain, N.M. (2013). Implications of Performance Management Systems in Pakistani Organizations.

Khan, M. A. (2010). Effects of Human Resource Management Practices on Organizational Performance – An Empirical Study of Oil and Gas Industry in Pakistan. *European Journal of Economics, Finance and Administrative Sciences*.

Khan, Z. (2021). Pakistan's economic growth rate projected at 3.94pc. *Dawn*. https://www.dawn.com/news/1624995

Khanna, S. (2002). *The crisis in the Pakistan economy*. Revolutionarydemocracy.Org. https://revolutionarydemocracy.org/rdv8n1/pakistan.htm

Kihn, L. A. (2007). Financial consequences in foreign subsidiary manager performance evaluations. *European Accounting Review*, *16*(3), 531-554

King, R., Clarkson, P. M., & Wallace, S. (2010). Budgeting practices and performance in small healthcare businesses. *Management Accounting Research*, *21*(1), 40–55.

Kipley, D. H., & Lewis, A. O. (2009). The scalability of H. igor ansoff's strategic management principles for small and medium sized firms. *Journal of Management Research*, *1*(1). https://doi.org/10.5296/jmr.v1i1.33

Kleine, C., & WEIßENBERGER, B. E. (2014). Leadership impact on organizational commitment: The mediating role of management control systems choice. Journal of Management Control, 24(3), 241-266.

Kober, R., Ng, J., & Paul, B. J. (2007). The interrelationship between management control mechanisms and strategy. *Management Accounting Research*, *18*(4), 425–452.

Kodeih, F., & Greenwood, R. (2014). Responding to Institutional Complexity: The Role of Identity. Organization Studies, 35(1), 7–39. https://doi.org/10.1177/0170840613495333

Koufteros, X., Verghese, A. J., & Lucianetti, L. (2014). The effect of performance measurement systems on firm performance: A cross-sectional and a longitudinal study. *Journal of Operations Management*, *32*(6), 313–336.

KPMG. (2019). *Banking results, 2019*. Assets.Kpmg. https://assets.kpmg

KPMG. (2021). *Banking results, 2021*.

Kraaijenbrink, J., Spender, J.-C., & Groen, A. J. (2010). The resource-based view: A review and assessment of its critiques. *Journal of Management*, *36*(1), 349–372.

Kruis, A.-M., Speklé, R. F., & Widener, S. K. (2016). The Levers of Control Framework: An exploratory analysis of balance. *Management Accounting Research*, *32*, 27–44.

Kürschner, S. (2013). *Empirical research on management control*.

Lababidi, C., H., Lababidi, R., Colak, M., & Dayan, M. (2020). Contingency effects of firm structure and environmental uncertainty on strategic planning process and firm

performance: Evidence from UAE enterprises. *Strategic Change*, *29*(2), 241–252. https://doi.org/10.1002/jsc.2325

Langevin, P., & Mendoza, C. (2013). How can management control system fairness reduce managers' unethical behaviours? *European Management Journal*, *31*(3), 209–222.

Lau, C. M. (2015). The effects of nonfinancial performance measures on role clarity, procedural fairness and managerial performance. *Pacific Accounting Review*, *27*(2), 142–165.

Lawler, E. E., III, Benson, G. S., & McDermott, M. (2012). What makes performance appraisals effective? *Compensation and Benefits Review*, *44*(4), 191–200. https://doi.org/10.1177/0886368712462331

Lazzarotti, V., Manzini, R., & Mari, L. (2011). A model for R&D performance measurement. *International Journal of Production Economics*, *134*(1), 212–223. https://doi.org/10.1016/j.ijpe.2011.06.018

Lecy, J. D., Schmitz, H. P., & Swedlund, H. (2012). Non-governmental and not-for-profit organizational effectiveness: a modern synthesis". *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *23*(2), 434–457.

Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: a study on technology-based ventures. *Strategic Management Journal*, *22*(6–7), 615–640.

Lee, J. A., Havighurst, L. C., & Rassel, G. (2004). Factors related to court references to performance appraisal fairness and validity. *Public Personnel Management*, *33*(1), 61–77.

Leitner, S., & Wall, F. (2015). Simulation-based research in management accounting and control: an illustrative overview. *Journal of Management Control*, *26*(2–3), 105–129.

Leitner, S., & Wall, F. (2019). Decision-facilitating information in hidden-action setups: An agent-based approach. In *arXiv [econ.GN]*. http://arxiv.org/abs/1908.07998

Lockett, A., Thompson, S., & Morgenstern, U. (2009). The development of the resource-based view of the firm: A critical appraisal. *International Journal of Management Reviews*, *11*(1), 9–28.

Lopez-Valeiras, E., Gonzalez-Sanchez, M. B., & Gomez-Conde, J. (2016). The effects of the interactive use of management control systems on process and organizational innovation. *Review of Managerial Science*, *10*(3), 487–510.

Lynch, R., & Baines, P. (2004). Strategy development in UK higher education: towards resource-based competitive advantages. *Journal of Higher Education Policy & Management*, *26*(2), 171–187.

Macpherson, M. (2001). Performance measurement in not-for-profit and public-sector organisations. *Measuring Business Excellence*, *5*(2), 13–17. https://doi.org/10.1108/13683040110397220

Mahama, H. (2006). Management control systems, cooperation and performance in strategic supply relationships: A survey in the mines. *Management Accounting Research*, *17*(3), 315–339.

Malmi, T. & Brown, D. A. (2008). Management control systems as a package – Opportunities, challenges and research directions. *Management Accounting Research*, *19*(4), 287–300.

Manohar, S., & Pandit, S. R. (2014). Core values and beliefs: A study of leading innovative organizations. *Journal of Business Ethics*, *125*(4), 667–680.

Martin, J. (2008). *Human Resource Management*. SAGE Publications.

Martyn, P., Sweeney, B., & Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons' Levers of Control framework. *Journal of Accounting & Organizational Change*, *12*(3), 281–324. https://doi.org/10.1108/jaoc-03-2015-0027

McAdam, R., Miller, K., & McSorley, C. (2019). Towards a contingency theory perspective of quality management in enabling strategic alignment. *International Journal of Production Economics*, *207*, 195–209.

McGrath, R. G. (2001). Exploratory learning, innovative capacity, and managerial oversight. *Academy of Management Journal*, *44*(1), 118–131.

McLaughlin, R. H., & Alfaro-Velcamp, T. (2015). The vulnerability of immigrants in research: Enhancing protocol development and ethics review. *Journal of Academic Ethics*, *13*(1), 27–43.

McNamara, C., & Mong, S. (2005). Performance measurement and management: Some insights from practice. *Australian Accounting Review*, *15*(35), 14–28.

Melnyk, S. A., Bititci, U., Platts, K., Tobias, J., & Andersen, B. (2014). Is performance measurement and management fit for the future? *Management Accounting Research*, *25*(2), 173–186.

Merchant, K. A., & Van Der Stede, W. A. (2017). *Management Control Systems* (4th ed.). Prentice Hall, Pearson Education Limited.

Merchant, K. A., & Van Der Stede, W. A. (2011). *Management control systems: Performance measurement, evaluation and incentives* (3rd ed.). Financial Times Prentice Hall.

Merchant, K. A. & Van Der Stede W.A. (2007*). Performance Measurement, Evaluation and Incentives*, Boston: Prentice-Hall.

Mettanen , P. (2005). Design and implementation of a performance measurement system for a research organization. *Production Planning & Control*, *16*(2), 178–188.

Meyer, R. E., & Höllerer, M. A. (2014). Does institutional theory need redirecting?. *Journal of management Studies*, *51*(7), 1221-1233.

Mitchell, R., & Meacheam, D. (2011). Knowledge worker control: understanding via principal and agency theory". *The Learning Organization*, *18*(2), 149–160.

Mitnick, B. M. (2015). Agency Theory. In *Wiley Encyclopedia of Management* (pp. 1–6). John Wiley & Sons, Ltd.

MOFA. (2021). *PAKISTAN-IRAN RELATIONS*. Gov.Pk. https://mofa.gov.pk/news-items/

Mohamed, R. (2014). The relationship between strategic performance measurement system and organisational capabilities: The role of beliefs and boundary control systems. *Asian Journal of Business and Accounting*, *7*(1), 107–142.

Moneva, J. M., Rivera-Lirio, J. M., & Muñoz-Torres, M. J. (2007). The corporate stakeholder commitment and social and financial performance. *Industrial Management + Data Systems*, *107*(1), 84–102.

Mouritsen, J. (2005). Beyond accounting change: design and mobilisation of management control systems. *Journal of Accounting & Organizational Change*, *1*(1), 97–113.

Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society*, *35*(5), 499–523.

Munir, R., & Baird, K. (2016). Influence of institutional pressures on performance measurement systems. *Journal of Accounting & Organizational Change*, *12*(2), 106–128.

Musa, A., & Kurfi, A. (2015). *The Impact of Online Banking on the Performance of Nigerian Banking Sector*.

Namazi M., & Abhari, H. (2010). An Investigation of the Balanced- Scorecard's Applications for Performance Measurement of the Firms Accepted in the Tehran Securities Exchange Market. *Journal of Applied Sciences Research*, 955–943.

Namazi, M. (2013). Role of the agency theory in implementing management's control. *Journal of Accounting and Taxation*, *5*(3), 38-47.

Namazi, Mohammad. (2013). Role of the agency theory in implementing managements control. *Journal of Accounting and Taxation*, *5*(2), 38–47.

National Democratic Foundation. (n.d.). *The executive Government*. Retrieved October 5, 2021, from https://www.democraticfoundation.com.pk/govt-structure-of-pakistan

Neely, A., Bourne M., & Kennerley, M. (2003). Dysfunctional performance through dysfunctional measures. *Cost Management*, *17*(5), 41–48.

Neely, Andy, Gregory, M., & Platts, K. (2005). Performance Measurement Systems Design: A Literature Review and Research Agenda. *International Journal of Operations & Production Management*, *25*(12), 1228–1263.

Newbert, S. L. (2008). Value, rareness, competitive advantage, and performance: a conceptual-level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, *29*(7), 745–768.

Nudurupati, S. S., Bititci, U. S., Kumar, V., & Chan, F. T. S. (2011). State of the art literature review on performance measurement. *Computers & Industrial Engineering*, *60*(2), 279–290.

Nuhu, N. A., Baird, K., & Appuhami, R. (2019). The impact of management control systems on organisational change and performance in the public sector. *Journal of Accounting & Organizational Change*, *15*(3), 473–495.

Nura, A. A. (2014). *Human resource management practices and employee performance management in Nigerian higher educational institutions*. Universiti Utara Malaysia.

O'Reilly, C., Caldwell, D., Chatman, J., & Doerr, B. (2014). The promise and problems of organizational culture: CEO personality, culture, and firm performance. *Group & Organization Management*, *39*, 595–625.

Østergren, K., & Stensaker, I. (2011). Management control without budgets: A field study of 'beyond budgeting' in practice. *The European Accounting Review*, *20*(1), 149–181.

Otley, D. (2008). Did Kaplan and Norton get it right? Accounting. *Auditing, and Accountability Journal*, *21*(2), 229–239.

Otley, D. (1980). The contingency theory of management accounting: Achievement and prognosis. *Accounting, Organizations and Society*, *5*(4), 413–428.

Otley, D. & Soin, K. (Eds.). (2014). *Management Control and Uncertainty*. Palgrave Macmillan UK.

Otley, D. (2016). The contingency theory of management accounting and control: 1980–2014. *Management Accounting Research*, *31*, 45–62.

Oyewo, B. M., & Babatolu., A. T. (2014). Performance Measurement in the United Kingdom Banking Industry. *European Journal of Business and Management*, *6*(19), 70–80.

Pakistan Economic Survey, (2018), Pakistan Economic Survey 2018-2019. (n.d.). Retrieved August 21, 2021, from http://finance.gov.pk/survey/chapters_19/Economic_Survey_2018_19.pdf,

Parporato, M. (2011). Management control systems' literature development: theoretical approaches and critiques within the functionalist paradigm. *Rev Universo Contábil*, *7*(2), 146–173.

Pavlov, A., & Bourne, M. (2011). Explaining the effects of performance measurement on performance: An organizational routines perspective. *International Journal of Operations & Production Management, 31*, 101-122.

Pešalj, B., Pavlov, A. and Micheli, P. (2018), "The use of management control and performance measurement systems in SMEs: A levers of control perspective", *International Journal of Operations & Production Management,* 38,11, 2169-2191

Pešalj, B., Pavlov, A., & Micheli, P. (2018). The use of management control and performance measurement systems in SMEs: A levers of control perspective. *International Journal of Operations & Production Management*, *38*(11), 2169–2191. https://doi.org/10.1108/ijopm-09-2016-0565

Poulis, K., Poulis, E., & Plakoyiannaki, E. (2013). The role of context in case study selection: An international business perspective. *International Business Review (Oxford, England)*, *22*(1), 304–314.

Pujiati, D., Misdiyono, M., & Sri Margianti, E. (2019). Meta analysis: Management control system, strategy, company performance. *APTIKOM Journal on Computer Science and Information Technologies*, *4*(3), 96–104.

Rabiu, M. (2009). Knowledge management in Nigeria oil and gas industry: Theoretical frameworks, practical challenges and opportunities. *Petroleum Technology Development Journal*, *1*, 1–10.

Raduan, C. R., Jegak, U., Haslinda, A., & Alimin, I. I. (2009). Management, strategic management theories and the linkage with organizational competitive advantage from the resource-based view. *European Journal of Social Sciences*, *11*(3), 402–417.

Rai, K. (2011). Knowledge management and organisational culture: A theoretical integrative framework. *Journal of Knowledge Management*, *15*(2), 779–801.

Raimo, N., Vitolla, F., Marrone, A., & Rubino, M. (2021). Do audit committee attributes influence integrated reporting quality? An agency theory viewpoint. *Business Strategy and the Environment*, *30*(1), 522–534.

Reheul, A. M., & Jorissen, A. (2014). Do management control systems in SMEs reflect CEO demographics?. Journal of Small Business and Enterprise Development.

Rehman, A. (2017). *Impacts of Privatization on banking sector of Pakistan*. https://www.researchgate.net/publication/326827267_Impacts_of_Privatization_on_banking_sector_of_Pakistan

Rehman, H. U., & Ahmed, S. (2008). An empirical analysis of the determinants of bank selection in Pakistan a customer view. *Pakistan Economic and Social Review*, *46*(2), 147–160.

Rehman, S. u., Mohamed, R., & Ayoup, H. (2018). Cybernetic Controls, and Rewards and Compensation Controls Influence on Organizational Performance. Mediating Role of Organizational Capabilities in Pakistan. *International Journal of Academic Management Science Research (IJAMSR*, *2*(8), 1–10.

Rezania, D., Baker, R. & Burga, R. (2016), "Project control: an exploratory study of levers of control in the context of managing projects", *Journal of Accounting & Organizational Change*, (12) 4, 614-635

Rhodes, A. (2016). The relation between earnings-based measures in firm debt contracts and CEO pay sensitivity to earnings. *Journal of Accounting and Economics*, *61*(1), 1–22.

Rindfleisch, A. (2019). Transaction cost theory: past, present and future. *AMS Review*, 1007 13162-019-00151-.

Rindfleisch, Aric. (2020). Transaction cost theory: past, present and future. *AMS Review*, *10*(1–2), 85–97.

Rizwan, M. (2015). Impact of privatization on banking sector: a case study of MCB and ABL. *IOSR Journal of Business and Management*, *17*(1), 95–100.

Robertson, M., & Swan, J. (2003). Control-what control? Culture and ambiguity within a knowledge intensive firm. *Journal of Management Studies*, *40*(4), 861–858.

Rudd, J. M., Greenley, G. E., Beatson, A. T., & Lings, I. N. (2008). Strategic planning and performance: Extending the debate. *Journal of Business Research*, *61*(2), 99–108.

Runde, D. F. (2018). *An economic crisis in Pakistan again: What's different this time?* Csis.Org. https://www.csis.org/analysis/economic-crisis-pakistan-again-whats-different-time

Saeed, M.K., & Shahbaz, N. (2011). Employees' Perceptions about the Effectiveness of Performance Appraisals: The Case of Pakistan.

Salterio, S. (2012). Balancing the scorecard through academic accounting research: opportunity lost? *Journal of Accounting & Organizational Change*, *8*(4), 458–474.

Samagaio, A., Crespo, N. F., & Rodrigues, R. (2018). Management control systems in high-tech start-ups: An empirical investigation. *Journal of Business Research*, *89*, 351-360

Samwel, J. O. (2018). An assessment of the impact of performance management on employee and organization performance - evidence from selected private organizations in Tanzania. *International Journal of Human Resource Studies*, *8*(3), 199. https://doi.org/10.5296/ijhrs.v8i3.13415

Sandelin, M. (2008). Operation of management control practices as a package—A case study on control system variety in a growth firm context. *Management Accounting Research*, *19*(4), 324–343.

Saratun, M. (2016). Performance management to enhance employee engagement for corporate sustainability. *Asia-Pacific Journal of Business Administration*, *8*(1), 84–102. https://doi.org/10.1108/apjba-07-2015-0064

Sather, B. A. (2004). *Managerial control of faculty by physical education department chairpersons*. Texas Women's University.

Schaffer U., Mahlendorf M. D., Rehring J. (2014). Does the interactive use of headquarter performance measurement systems in foreign subsidiaries endanger the potential to profit from local relationships? *Austr. Account. Rev.* 24 21–38. 10.1111/auar.12019

Schmidt, C. G., & Wagner, S. M. (2019). Blockchain and supply chain relations: A transaction cost theory perspective. *Journal of Purchasing and Supply Management*, *25*(4), 100552.

Seal, W. (2012). Some proposals for impactful management control research. *Qualitative Research in Accounting & Management*, *9*(3), 228–244.

Secundo, G., & Elia, G. (2014). A performance measurement system for academic entrepreneurship: a case study. *Measuring Business Excellence*, *18*(3), 23–37.

Senftlechner, D., & Hiebl, M. R. (2015). Management accounting and management control in family businesses: Past accomplishments and future opportunities. *Journal of Accounting & Organizational Change*.

Shafiq, H. (2014). *Performance evaluation of banking sector in Pakistan*. Psu.Edu. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.684.5695&rep=rep1&type=pdf

Shah, A. (2009). *Global Financial Crisis*. Globalissues.Org. http://www.globalissues.org/article/768/

Shar . H. A, Shan, A., M, & Jamali, A. (2011). Performance evaluation of pre- and post-nationalization of the banking sector in Pakistan: An application of CAMEL model. *African Journal of Business Management*, *5*(3), 747–761.

Sharma, N. P., Sharma, T., & Agarwal, M. N. (2016). Measuring employee perception of Performance Management System effectiveness: Conceptualization and scale development. *Employee Relations*, *38*(2), 224–247. https://doi.org/10.1108/er-01-2015-0006

Shogren, K. A., Wehmeyer, M. L., & Palmer, S. B. (2017). Causal Agency Theory. In *Development of Self-Determination Through the Life-Course* (pp. 55–67). Springer Netherlands.

Shurafa, R., & Mohamed., B. R. (2016). Management control system, organizational learning, and firm's performance: An empirical study from developing economy. *International Journal of Advanced and Applied Sciences*, *3*(10), 79–88.

Silvola, H. (2008). Design of MACS in growth and revival stages of the organizational life cycle. *Qualitative Research in Accounting & Management*, *5*(1), 27–47.

Simons, R. (1995). *Levers of control: How managers use innovative control systems to drive strategic renewal.* Boston: Harvard Business Press

Simons, R. (2000*). Performance Measurement & Control Systems for Implementing Strategy,* New Jersey: Prentice-Hall, Inc

Simons, R. (2000a). *Performance measurement & control systems for implementing strategy*. Prentice Hall.

Simons, R. (2000b). *Performance measurement and control systems for implementing strategy*. Prentice Hall.

Sine, W. D., Mitsuhashi, H., & Kirsch, D. A. (2006). Revisiting burns and stalker: Formal structure and new venture performance in emerging economic sectors. *Academy of Management Journal*, *49*(1), 121–132.

Siska, L. (2015). The concept of management control system and its relation to performance measurement. *Procedia Economics and Finance*, *25*, 141–147.

Smith, M., & Bititci, U. S. (2017). Interplay between performance measurement and management, employee engagement and performance. *International Journal of Operations & Production Management*, *37*(9), 1207–1228. https://doi.org/10.1108/ijopm-06-2015-0313

Sobis, I., & Okouma, O. G. V. (2017). Performance management: How the Swedish administration of transportation for the Disabled succeeded. A case study of Transportation Service for the Disabled, the Municipality of Gothenburg. *NISPAcee Journal of Public Administration and Policy*, *10*(1), 141–175.

Sohail, E. (2013). *The economic challenges facing Pakistan's new Prime Minister - center for international private enterprise*. Cipe.Org. https://www.cipe.org/blog/2013/06/14/the-economic-challenges-facing-pakistans-new-president/

Soin, K., & Collier, P. (2013). Risk and risk management in management accounting and control. *Management Accounting Research*, *24*(2), 82–87.

Speckbacher, G., Bischof, J., & Pfeiffer, T. (2003). A descriptive analysis on the implementation of Balanced Scorecards in German-speaking countries. *Management Accounting Research*, *14*(4), 361–388.

Speklé, R. F. (2001). Explaining management control structure variety: a transaction cost economics perspective. *Accounting, Organizations and Society*, *26*(4–5), 419–441.

Speklé, R., & Kruis, A.-M. (2014). Management control research: A review of current developments. In *Management Control and Uncertainty* (pp. 30–46). Palgrave Macmillan UK.

Spekle., F. R., & Verbeeten. H.M. F. (2014). The use of performance measurement systems in the public sector: Effects on performance. *Management Accounting Research*, *25*, 131–146.

Speklé, R. F., van Elten, H. J., & Widener, S. K. (2017). Creativity and control: A paradox—evidence from the Levers of control framework. *Behavioral Research in Accounting*, *29*(2), 73–96. https://doi.org/10.2308/bria-51759

Strauss, E. R., Nevries, P., & Weber, J. (2013). The development of MCS packages – balancing constituents' demands. *Journal of Accounting & Organizational Change*, *9*(2), 155–187.

Strauß, E., & Zecher, C. (2012). Management control systems: a review. *Journal of Management Control*, *23*(4), 233–268.

Su, S. (2015). Management Control System Effectiveness. . *Pacific Accounting Review*, *27*.

Su, Sophia, Baird, K., & Schoch, H. (2015). The moderating effect of organisational life cycle stages on the association between the interactive and diagnostic approaches to using controls with organisational performance. *Management Accounting Research*, *26*, 40–53.

Sutton, N. C., & Brown, D. A. (2016). The illusion of no control: management control systems facilitating autonomous motivation in university research. *Accounting and Finance*, *56*(2), 577–604.

TAAP. (2020). *MOUNTAINS, VALLEYS & GLACIERS*. https://www.taap.org.pk/index.php/about-pakistan/mountains-valleys-glaciers

Tahir, S. H., Shah, S., Arif, F., Ahmad, G., Aziz, Q., & Ullah, M. R. (2018). Does financial innovation improve performance? An analysis of process innovation used in Pakistan. *Journal of Innovation Economics*, *n° 27*(3), 195–214. https://doi.org/10.3917/jie.027.0195

Tam, S., & Gray, D. E. (2016). Organisational learning and the organisational life cycle: The differential aspects of an integrated relationship in SMEs. *European Journal of Training and Development*, *40*(1), 2–20.

Tangen, S. (2005). Demystifying productivity and performance. *International Journal of Productivity and Performance Management*, *54*(1), 34–46.

Teeroovengadum, V., Nunkoo, R., & Dulloo, H. (2019). Influence of organizational factors on the effectiveness of Performance Management Systems in the public sector. *European Business Review*, *31*(3), 447–466.

Tessier, S., & Otley, D. (2012). A conceptual development of Simons' Levers of Control framework. *Management Accounting Research*, *23*(3), 171–185.

Thakur, M. (2019). *Banks in Pakistan*. Wallstreetmojo.Com. https://www.wallstreetmojo.com/banks-in-pakistan/

The Common Wealth. (2020). *Pakistan history*. Thecommonwealth.Org. https://thecommonwealth.org/our-member-countries/pakistan/history,

The Economist. (2020). *Political structure*. Eiu.Com. https://country.eiu.com/article.aspx?articleid=110084194&Country=Pakistan&topic=Summary&subtopic=Political+structure

The Global Economy. (2020). *Pakistan: Share of industry*. https://www.theglobaleconomy.com/Pakistan/share_of_industry/

The International Banker. (2017, May 11). *The outlook of the banking industry in Pakistan*. https://internationalbanker.com/banking/outlook-banking-industry-pakistan/,

The World Bank. (2017). *Pakistan to Record Highest Growth Rate in Nine Years: WB Report,*. https://www.worldbank.org/en/news/press-release/2017/05/19/pakistan-to-record-highest-growth-rate-in-nine-years-wb-report

The World Bank. (2019). *The World Bank in Pakistan,*. https://www.worldbank.org/en/country/pakistan/overview

The World Bank. (2021). *Pakistan's Economy Shows Signs of a Nascent Recovery*. https://www.worldbank.org/en/news/press-release/2021/04/05/pakistan-s-economy-shows-signs-of-a-nascent-recovery

Threlkeld, E. (2021). *Afghanistan-Pakistan ties and future stability in Afghanistan*. Usip.Org. https://www.usip.org/publications/2021/08/afghanistan-pakistan-ties-and-future-stability-afghanistan

Thursfield, D., & Grayley, K. (2016). Exploring performance management in four UK trade unions. *Employee Relations*, *38*(5), 789–804. https://doi.org/10.1108/er-08-2015-0167

Ting, I. W. K., Azizan, N. A. B., & Kweh, Q. L. (2015). Upper echelon theory revisited: The relationship between CEO personal characteristics and financial leverage decision. *Procedia, Social and Behavioral Sciences*, *195*, 686–694.

TRADING ECONOMICS. (2019). *Pakistan - Domestic credit provided by banking sector (% of GDP)* [Data set]. https://tradingeconomics.com/pakistan/domestic-credit-provided-by-banking-sector-percent-of-gdp-wb-data.html

Tsamenyi, M., Sahadev, S., & Qiao, Z. S. (2011). The relationship between business strategy, management control systems and performance: Evidence from China, advances in accounting. *Incorporating Advances İn International Accounting*, *27*, 193–203.

Tsamenyi, Mathew, Sahadev, S., & Qiao, Z. S. (2011). The relationship between business strategy, management control systems and performance: Evidence from China. *Advances in Accounting*, *27*(1), 193–203. https://doi.org/10.1016/j.adiac.2011.05.001

Tsang, E. W. K. (2014). Generalizing from research findings: The merits of case studies: Generalizing from research findings. *International Journal of Management Reviews*, *16*(4), 369–383.

Tubagus, I., Lili, S., Wiyantoro, M., & Munawar, M. (2012). Strategy, ınteractive control system and national culture: A case study of batik ındustry in Indonesia. *Procedia-Social And Behavioral Sciences*, *12, 65*, 33–38.

Tukiainen, S., & Granqvist, N. (2016). Temporary Organizing and Institutional Change. Organization Studies, 37(12), 1819–1840. https://doi.org/10.1177/0170840616662683

Tung, A., Baird, K., & Schoch, H. P. (2011). Factors influencing the effectiveness of negotiation of shared accountabilities in contemporary enterprises. *Management Accounting Research*, *16*, 269–292.

Tuomela, T. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system, *Management Accounting Research,* 16, I3, 293-320.

Turner, D. (2016, March 10). *Sampling considerations in qualitative research*. Quirkos.Com; Quirkos Blog. https://www.quirkos.com/blog/post/qualitative-sampling-issues/

Van der Meer-Kooistra, J., & Vosselman, E. (2012). Research paradigms, theoretical pluralism and the practical relevance of management accounting knowledge. *Qualitative Research in Accounting & Management*, *9*(3), 245–264.

Van der Stede, & Lin, T. W. (2006). Strategy, choice of performance measures, and performance. *Behavioral Research in Accounting*, *18*(1), 185–205.

Vieira, R., O'dwyer, B., & Schneider, R. (2017). *Aligning Strategy and Performance Management Systems: The Case of the Wind-Farm Industry. Forthcoming in Organization and Environment*.

Vimrová, H. (2017). Management control systems through the lens of the agency theory. In *New Trends in Finance and Accounting* (pp. 523–536). Springer International Publishing.

Vosselman, E. G. J. (2002). Towards horizontal archetypes of management control: a transaction cost economics perspective. *Management Accounting Research*, *13*(1), 131–148.

Vukšić, V. B., Bach, M. P., & Popovič, A. (2013). Supporting performance management with business process management and business intelligence: A case analysis of integration and orchestration. *International Journal of Information Management*, *33*(4), 613–619.

Wadongo, B., & Abdel-Kader, M. (2011). Performance management in non-profit organisations". *Review of Management Accounting Research*, 450–478.

Wadongo, Billy, & Abdel-Kader, M. (2014). Contingency theory, performance management and organisational effectiveness in the third sector: A theoretical framework. *International Journal of Productivity and Performance Management*, *63*(6), 680–703.

Waldersee, R., Griffiths, A., & Lai, J. (2003). Predicting organizational change success: Matching organization type, change type and capabilities. *Journal of Applied Management and Entrepreneurship*, *8*(1), 66–81.

Wang, G., Holmes Jr, R. M., Oh, I. S., & Zhu, W. (2016). Do CEOs matter to firm strategic actions and firm performance? A meta-analytic investigation based on upper echelons theory. Personnel Psychology, 69(4), 775-862.

Wanjala, M. Y., Iravo, M. A., Odhiambo, R., & Shalle, N. I. (2017). Influence of monitoring tools on project performance in Kenyan State Corporations. *European Scientific Journal*, *13*(19), 354.

Weatherly, L. A. (2004). Performance management: Getting it right from the start. *SHRM Research Quarterly*, *2*, 1–10.

Widener, S. K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society*, *32*(7–8), 757–788.

Wijethilake, C. (2017). Proactive sustainability strategy and corporate sustainability performance: The mediating effect of sustainability control systems. *Journal of Environmental Management*, *196*, 569–582.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative science quarterly*, 269-296

Williamson, O., & Ghani, T. (2012). Transaction cost economics and its uses in marketing. *Journal of the Academy of Marketing Science*, *40*(1), 74–85.

Wilson center. (2017). *The Pakistan-China-Russia relationship: An emerging coalition?* Wilsoncenter.Org. https://www.wilsoncenter.org/event/the-pakistan-china-russia-relationship-emerging-coalition

Wu, I.-L., & Chang, C.-H. (2012). Using the balanced scorecard in assessing the performance of e-SCM diffusion: A multi-stage perspective. *Decision Support Systems*, *52*(2), 474–485.

Yamane, taro. (1967). *Statistics: An introductory analysis, 2nd edition, New York: Harper and row*. (n.d.). Sciepub.Com. Retrieved August 21, 2021, from http://www.sciepub.com/reference/180098

Yaseen, A. (2015). Performance management practices and its impact on Banks' performance in Pakistan. *International Journal of Human Resource Studies*, *5*(4), 110. https://doi.org/10.5296/ijhrs.v5i4.8821

Yaseen, A., & Afghan, S. (2016). Performance management practices: A case study of Bank Al-Habib Pakistan. *International Journal of Human Resource Studies*, *6*(2), 196.

Yazdifar, H. (2004), "Insight into the dynamics of management accounting systems implementation in group (dependent) organizations: an institutional perspective", PhD thesis (unpublished), Manchester Business School

Yazdifar, H. (2005). The future of profession. Financial Management, 6-27

Yazdifar, H. (2011) Management Control Systems, transfer pricing and multinational considerations [Case study only]. In: Horngren, C.T., Datar, S.M. and Rajan, M. (eds.) *Cost Accounting: A Managerial Emphasis. 8th edition.* Prentice Hall. ISBN 9780132109178

Yamane, taro. (1967). *Statistics: An introductory analysis, 2nd edition, New York: Harper and row*. (n.d.). Sciepub.Com. Retrieved August 21, 2021, from http://www.sciepub.com/reference/180098

Yhome, K. (2019, March 2). *India-Pakistan tension: Is there a role for SAARC?* Observational Research Foundation. https://www.orfonline.org/expert-speak/india-pakistan-tension-is-there-role-for-saarc-48690/

Yigitbasioglu, O. M., & Velcu, O. (2012). A review of dashboards in performance management: Implications for design and research. *International Journal of Accounting Information Systems*, *13*(1), 41–59.

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). Sage.

Yu, S.-H., & Chen, M.-Y. (2013). Performance impacts of interorganizational cooperation: a transaction cost perspective. *Service Industries Journal*, *33*(13–14), 1223–1241.

Zafar, S., & Aziz, F. (2013). The Banking Sector of Pakistan: The Case of Its Growth and Impact on Revenue Generation 2007 to 2012. *IOSR Journal of Economics and Finance (IOSR-JEF)*, *1*(5), 46–50.

Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. Non–family firms: A resource–based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, *28*(4), 363–381.

Zamecnik, R., & Rajnoha, R. (2015). Strategic business performance management on the base of controlling and managerial information support. *Procedia Economics and Finance*, *26*, 769–776.

Ziring, L., & Burki, S. J. (2021). Pakistan. In *Encyclopedia Britannica*. https://www.britannica.com/place/Pakistan

Zuriekat, M., Salameh, R., & Alrawashdeh, S. (2011). Participation in Performance Measurement Systems and Level of Satisfaction. *International Journal of Business and Social Science*, *2*(8), 159–169.

Appendix:

Questionnaire

Part 1: Demographic information:

Name (optional): _____

Bank Name and Branch: _____

Age: _____ Years

Gender:

Male	Female

Education:

Last Academic Degree: _____

Subject of the last qualification: _____

Professional qualification (if any): _____

Work Experience:

Work experience in current the Company: _____ Years

Total Work Experience: _____ Years

Your Position in Organization: (Title)

Organizational size:

Number of staff: _____

Turnover: _____

Number of clients: _____

Email Address (Optional): _____

☐ Please tick this box if you want to receive summary/results of this research

Part 2:

Here, the meaning of the main terms in this questionnaire is explained:

- *"Management Control Systems (MCS) is a business tool to monitor and control how well the organization is performing against its objectives"*
- *"Performance Measurement (PM) is the process of ensuring that a set of activities and outputs meets an organization's goals in an effective and efficient manner"*

Variables	S.No	Questions	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Interactive MCS	1	With the help of MCS, I often debate and question my team on their working					
	2	I use MCS as a means to initiate a dialogue process with managers at my organization					
	3	Whatever information is extracted through MCS occupies an important place in agenda items at meetings.					
	4	Because of MCS, much of discussion takes place among managers serving at different levels in organization.					

	5	With MCS new opportunities can be designed in a better way.					
	6	The important information generated using MCS is discussed in organizational meetings					
		Any Further Comments: _____ _____ ____					
Diagnostic MCS	1	I always ask my administrative staff to monitor the performance and strategies of my staff.					
	2	I only use that MCS information which is reported using proper channels, formal in nature.					
	3	I get myself involved in MCS processes where there is gap between set standards and actual performance.					

	4	The primary aim of implementing MCS in my organization is to monitor the performance on regular basis.					
	5	I emphasize more on accuracy than timeliness of MCS information.					
		Any Further Comments: _____ _____ ____					
Beliefs MCS	1	The mission statement of my company truly depicts organizational value					
	2	The top management of my company are true indication of values					
	3	The employees of company are completely aware of organizational values					
	4	The employees of my company are inspired by its Mission statement					

		Any Further Comments: _____ _____ ____					
Boundary MCS	1	My organization has properly defined through writing the required behaviors of employees.					
	2	Employees are instructed by the company about off-limits behavior					
	3	The risks which should be avoided are properly communicated by management					
	4	Employees of my organization are aware of code of conduct					
		Any Further Comments: _____ _____ ____					

Financial Measures	1	The financial performance of my branch is measured through total income generated by branch.					
	2	The bank uses net income as a measure to evaluate the financial performance of branches.					
	3	The Bank uses net return on assets in order to evaluate the performance of branches					
	4	The Bank uses working cash flow in order to assess the performance of branches					
	5	The Bank uses value of customer deposits in order to assess the performance of branches.					
	6	The Bank uses the value of granted loans in order to assess the performance of branches					
	7	The Bank uses the size of the commissions in order to assess the performance of branches					
		Any Further Comments:					

		_____ _____ ____					
Non-Financial Measures	1	The Bank uses the number of clients in order to assess the performance of branches					
	2	The number of training courses undertaken by management is used to evaluate the non-financial performance of the branch					
	3	The management uses the measure of the contribution of the branch to support social activities in the assessment of non-financial performance of the branch					
	4	Measure of quality of service provided by Bank are used in the evaluation of nonfinancial performance of the branch					
	5	Bank uses the quick customers service measure provided in the					

		evaluation of nonfinancial performance of the branch					
	6	Bank uses the number of branch clients measure to assess the non-financial performance of the branch					
	7	Bank uses a measure of the number of customer complaints against the branch in the evaluation of non-financial performance of the branch					
		Any Further Comments: _____ _____ ____					

Part 3 :

			very greater extent	**greater extent**	**moderate extent**	**some extent**	**a small extent**
Non-Financial Performance	1	The employees of business are satisfied with it.					
	2	The employees of organization share same vision of the organization					
	3	Employees of business are committed to achieve the goals of organization					
	4	The communication within the organization effectively works					
	5	The organization is supportive for innovative business culture					
		Any Further Comments: _____ _____					
Financial Performance	1	There has been consistent increase in organizational profits in last five years.					

	2	There have been higher returns on investments in organization					
	3	There has been consistent rise in customer base of organization over the past five years;					
	4	The bank has been consistently introducing new products over the last five years.					
		Any Further Comments:					

Ethical Approval

University of Salford MANCHESTER

Research, Innovation and Academic Engagement Ethical Approval Panel

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26th March 2021

Muhammad Asdullah

Dear Muhammad,

RE: ETHICS APPLICATION Ref. 1430: An evaluation of Management Controls Systems using framework of Performance Measurement Systems: A case study of Commercial Banking in Pakistan.

Based on the information that you provided, I am pleased to inform you that your application Ref. 1430 has been granted ethical clearance.

If there are any changes to the project and/or its methodology, then please inform the Panel as soon as possible by contacting Ethics@salford.ac.uk.

Yours sincerely,

S. Sharifi

Dr Sudi Sharifi
Deputy Chair of the Staff and Postgraduate Research Ethics Panel
Salford Business School