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An Analysis of the Factors Affecting the Adherence to

Corporate Governance Standards of the Philippines' GOCCs

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ABSTRACT

State-Owned Enterprises (SOEs) play an important role in every country, as they provide critical services, and contribute directly to economic growth and poverty reduction. In the Philippines, Government-Owned or Controlled Corporations (GOCCs), play a unique role as significant tools to growth and economic development. SOEs are institutions that presuppose a mix of “public” and “enterprise” dimensions as they perform business functions but at the same time are entrusted with socio-economic development goals; hence, they face “distinct governance challenges.”

Worldwide, SOEs are marred by weak corporate governance and this is true for GOCCs in the Philippines. GOCCs face issues of poor governance such as weak board governance, lack of transparency and accountability, and incoherent disclosure practices. Weak corporate governance is evidenced by the low scores in the corporate governance scorecard (CGS). Based on the annual results of CGS assessment, majority of the GOCCs continue to score low with no significant improvement in the last five years.

The research analyzes the factors that hindered the adherence of GOCCs to the internationally agreed standards and best practices of SOE corporate governance. Using a qualitative research design, in-depth and focused group interviews as well as survey were conducted with the GOCCs and corporate governance analysts. Analysis and findings show the major factors that hinder GOCCs from adhering to the standards are the insufficiencies on the part of the regulator such as lack of alignment and harmony with other regulatory bodies, inconsistency in assessment, and inapplicability of policy standards.

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CHAPTER 1. INTRODUCTION

1.1 Background of Study

State-Owned Enterprises (SOEs) play an important role in the economy of every country. SOEs are prominent in sectors of the economy that provide critical services for business and consumers, and that contribute directly to economic growth and poverty reduction. They provide a wide range of services such as power, water, oil, gas, telecommunications, banking and transport that are vital to the commerce and livelihood of communities. In many countries, SOEs in strategic industries are increasingly viewed as tools for accelerated development and global expansion. Moreover, they create opportunities for investments and in turn enhance income earning opportunities, thereby, fostering more inclusive growth (World Bank Group, 2014).

In the Philippines, Government-Owned or Controlled Corporations (GOCCs), as state-owned enterprises play a unique role as significant tools to inclusive growth and economic development. For developing countries like the Philippines, SOEs were originally established for specific purposes, such as to provide goods or services that would not otherwise be available, or to provide them at lower costs than the private sector (Kennedy & Jones, 2003). The Philippine government widely use GOCCs for economic and social development. GOCCs were created to provide infrastructure, public utilities, and consumer price stabilization services. The several purposes that the government assigns to the GOCCs signify the importance and even the pioneering role that the GOCC sector play in the growth and progress of developing economies.

The Philippines has over ninety (90) GOCCs across different sectors: financial, agriculture, industrial and area development, trading and promotional, educational, social, cultural, scientific, civic and research. Governance of the public corporate sector is critical to ensure the positive contribution to a country's overall economic efficiency and competitiveness (Bantug, 2013). Benefits of corporate governance can boost the efficiency of SOEs and, in turn, that of the economy as a whole (World Bank Group, 2014). Understanding governance challenges and addressing them is essential in boosting economy-wide productivity and growth (Asian Development Bank, 2020).

The Organisation for Economic Co-operation and Development (OECD) recognizes that SOEs face “distinct governance challenges” such as undue political interference and dilution of accountability-challenges that private corporations do not necessarily encounter (Senate Economic Planning Office, 2006). SOEs are institutions that presuppose a mix of

“public” and “enterprise” dimensions which seek to place within the same organization the character of a business organization and that of a national policy (Fernandes & Sicherl, 1981). They are bastardized organs of the State which unfortunately can neither optimize self-interest nor fully serve the public interest (Sherwood, n.d.) because they perform business functions but at the same time are entrusted with certain socially-relevant goals (Tabbada & Baylon, 1991).

1.2 Problem Statement

Several SOEs worldwide are marred by weak corporate governance and this is true for public corporations or GOCCs in the Philippines. For the past years, GOCCs were seen to have issues of poor governance such as weak board governance, lack of transparency and accountability, and incoherent disclosure practices.

In 2015, more than half or 88% of the 85 GOCCs fell below average in the first assessment of their adherence to corporate governance standards conducted by the Governance Commission for GOCCs (GCG) that gauged their practices and policies in 1) Stakeholder Relationships, 2) Disclosure and Transparency and 3) Board Responsibilities. Based on the annual results of the CGS assessment, GOCCs continue to score low with now significant improvement in the last five years. In 2019, 75% of the GOCCs still scored below 80.00% where majority of the GOCCs scored between 40.01%-50.00%

Included in the lowest scorers were transport GOCCs, namely, Manila International Airport Authority (40%), Mactan-Cebu International Airport Authority (42%), Philippine National Railways (41%), Cebu Port Authority (39.5%), Light Rail Transit Authority (38%) and Civil Aviation Authority of the Philippines (16.63%). Utility GOCCs such as Power Sector Assets and Liabilities Management Corporation (38.5%), Metropolitan Waterworks and Sewerage System (38.5%) and Local Water Utilities Administration (34%) also fell below average. State media firms, Philippine Television Network Inc. (25%) and International Broadcast Corporation (0%) scored low as well. Also falling behind were the United Coconut Planters Bank (42.33%) and state-run financial institution Philippine Health Insurance Corporation with (36%). At the bottom of the list were Nayong Filipino Foundation Inc. and PEA Tollway Corporation which both scored (-2%) (Magtulis, 2016).

In the results of the CGS assessment, most GOCCs scored low in the area of Stakeholder Relationships as they lack policies and activities on employees' health and safety, employees' training and development, customer welfare, environment and community interaction. GOCCs likewise scored low in the area of Disclosure and Transparency,

particularly in the publication and timely release of their annual report and audited financial statements. While in the area of Board Responsibilities, GOCCs scored low in board protocols, functional board audit committees, and adequate internal and risk controls.

For the past 5 years since the assessment has started, GOCCs continue to score low and several GOCCs have not improved their score at all. While there are a few GOCCs that are able to adhere to the corporate governance standards, many GOCCs continue to struggle in adopting corporate governance policies, practices and initiatives.

1.3 Research Objective and Questions

The research to analyze the factors that facilitated and hindered the adherence of GOCCs to the internationally agreed standards and best practices of SOE corporate governance.

The study seeks to answer the question: What factors hindered the adherence of GOCCs to corporate governance standards?

1.4 Methodology

The research is an explanatory study that will use a qualitative research design to describe the factors affecting the adherence of GOCCs to corporate governance standards. It will explain the problem in detail by describing the factors of why GOCCs have difficulty in adhering to the corporate governance standards.

Data collection methods are in-depth interview, focused group interview and survey. A non-probability sampling method, purposive sampling will be used. For the study, the participants in the focus group interview and survey are the corporate secretaries, compliance officers and corporate planning officers of the GOCCs, as they are the main individuals involved in working on the corporate governance scorecard of their GOCCs. While the participants in the in-depth interview are subject matter experts, the ICD corporate governance analysts. A thematic analysis is conducted in analyzing the data collected.

1.5 Conclusion

Factors that hindered the adherence of GOCCs to corporate governance standards fall under 5 categories, In Relation to the Regulator, Organizational Structure, Leadership, Knowing and Understanding, and Resources. The following are the identified factors: In terms of In Relation to the Regulator, there are 4 factors namely, a) the inapplicability of some standards in the corporate governance scorecard (CGS) to GOCCs, b) the inconsistent assessment of GCG on the compliance of the GOCCs, c) the lack of alignment and harmony with other policies of other regulatory bodies, and d) inadequate administrative support to GOCCs. In terms of

Organizational Structure, no functional Compliance Unit and competent key personnel; in terms of Leadership, the lack of appreciation and understanding of some board members; in terms of Knowledge and Understanding, the lack of training, considering the task is undertaken by several units in the organization, the coordination is difficult when other units are unfamiliar with the standards; and in terms of Resources, the limited budget to hire personnel, procure systems/tools, and training for corporate governance initiatives.

1.6 Organization of Study

The research is composed of 6 chapters. The first chapter is an overview of the study which includes a brief background, the problem statement, research objectives and question, the methodology and a short conclusion. The second chapter is the introduction which provides a context and more detailed background of SOEs and GOCCs in the Philippines, the concept of SOE corporate governance, the OECD guidelines, the CGS and the governance issues and challenges faced by GOCs. The third chapter presents a review of related literature. The fourth chapter details the research framework, research design and methodology, and details of data collection and analysis. The fifth chapter presents the data results and discusses the analysis and findings. The sixth chapter provides the conclusion of the research and recommendations.

CHAPTER 2: BACKGROUND

2.1 Introduction

This chapter provides a more detailed background and context of SOEs and the GOCCs in the Philippines. It discusses the concept of corporate governance and further explains corporate governance in SOEs. It proceeds to discussing the OECD guidelines for SOE corporate governance and further describes the Corporate Governance Scorecard (CGS) for GOCCs in the Philippines, as benchmarked against the OECD guidelines. Finally, it presents the data on CGS assessment for 2015-2019 and discusses the weak corporate governance in GOCCs.

2.2 State-owned Enterprises (SOEs)

Globally, SOEs account for 20% of investment, 5% of employment, and up to 40% of domestic output in countries around the world (World Bank Group, 2014). The SOE sector is broadly defined across every country. SOEs are named differently in every country – government corporations, government business enterprises, government-linked companies, parastatals, public enterprises, public sector units or enterprises and so on.

Definitions vary across countries due to the wide range of legal forms of SOEs and depending on several factors such as the level of government that owns the enterprise, the way in which enterprise was founded, the position in the public administration hierarchy, the purpose of the SOE, or the status of SOE if it is in the process of being privatized (PwC, 2015, p.8). Regarding the variations of SOEs in terms of government ownership, the state may: wholly own SOEs, have a majority ownership, or is a minority shareholder in other SOEs. The OECD defines SOEs as “enterprises where the state has significant control through full, majority, or significant minority ownership” (OECD, 2005, p.6). Likewise, the International Finance Corporation (IFC) defined SOE as “a legal entity that is majority owned or controlled by a national or local government whether directly or indirectly” (International Finance Corporation, 2015, p.3). SOEs include, but is not limited to, “any entity recognized by the borrower’s national law as an enterprise in which the state or government exercises direct or indirect (whole or partial) ownership or control” (Asian Development Bank, 2018, p.3). With this definition, SOEs are owned by the central or federal government as well as by regional and local governments. For example, in China, the central government is responsible for 17,000 SOEs, the number of SOEs under local governments exceed 150,000 (Mako & Zhang, 2004). China’s central State-Owned Assets Supervision and Administration Commission (SASAC) oversees about 165 large SOEs, with about 19,000 business units. At the end of 2003, local

SASACs (e.g., at the city or provincial level) oversaw another 127,000 nonfinancial SOEs. In Singapore, SOEs are owned by Temasek, the national holding company, which in turn is 100% owned by the Ministry of Finance (temasek.com.sg). In Indonesia, the Ministry of State-Owned Enterprises exercises the states ownership rights in SOEs (Babcock, 2002). State-ownership in emerging market economies remain in lower-income countries; in Africa, SOEs produce around 15% of GDP, in Asia 8%, and in Latin America 6% (The World Bank & David, 2006). While in Central and Eastern Europe, the state sector remains significant, accounting for 20 to 40% of output (Chong & Lopez-de-Silanes, 2003).

Another difference in SOEs is whether an SOE is listed or not listed on the stock exchange. In several countries, the state has retained significant ownership in the largest listed SOEs, while in transition economies the state may have many minority shareholders in not listed SOEs (The World Bank & David, 2006). In Singapore, there are 12 government-linked companies listed on the Singapore Stock Exchange which represent about 20% of market capitalization and produce 12% of GDP (temasek.com.sg). In China, almost all listed companies on the Shanghai and Shenzhen Stock Exchanges are directly or indirectly state-owned, while in the Hongkong Stock Exchange, SOEs make up 35% of market capitalization (Mako & Zhang, 2004).

Other differences in SOEs are in terms of government shareholdings through vehicles such as government pension funds, asset management funds or restructuring, or whether state-enabled that have been granted exclusive rights by the state as opposed to state-owned (PwC, 2015, p.8).

SOEs deliver services in key economic sectors, including infrastructure and public services such as utilities, energy, transportation, finance and exploration of natural resources. In many countries, enterprises in large-scale manufacturing and services remain in state hands (World Bank Group, 2014, p.5). While in some developed and emerging market economies, SOEs are global players as some countries establish new SOEs to develop strategic industries and compete in an increasingly globalized economy (OECD, Policy Brief on Corporate Governance of State-owned Enterprises in Asia, 2010). State-owned sectors in high-income countries, in major emerging market economies, and in many low- and middle-income countries have continued, and even expanded (World Bank Group, 2014).

Governments deliver basic goods and services to the public or engage in the business of public utilities, financing services and other profit-oriented undertakings through SOEs. SOEs are government-owned or controlled that generate revenues from delivering goods and services on a commercial basis and most are required to pursue a specific policy goal or service

objective. Public enterprises were initially established to address market failure and capital shortfalls, boost economic development, provide public services, and/or ensure the control of government over the overall direction of the economy by infusing capital and technology into strategic areas or in areas that lack private sector capacity or interest (Chang, 2007). SOEs reflect and are intertwined with the institutions, political history and ideology, commercial landscape, and technological trajectory of a country. For transition economies where the government has a dominant role such as in China, the SOE sector's symbiotic relationship with the government shows why the sector has remained usually large. Outside of transition economies, many countries have a large SOE sector due to the following reasons: distrust of markets and capitalism (in India), nationalization of assets owned by companies under the former colonial power (in Indonesia), or concerns that indigenous capitalists are unable to undertake large-scale investments (in Singapore). While in some cases, regional (subnational) development objectives also provided the impetus for SOE projects (in China and Indonesia) (Asian Development Bank, 2020). In many advanced economies especially in continental Europe, the state generally owned not only major utilities (power, telecommunications, transport) but also banks, airlines, and industrial conglomerates (World Bank Group, 2018). Further, in developing countries, state ownership is the vehicle through which the state plays an active role in economic development. For instance, in several emerging markets, governments have helped build physical infrastructure and bring about stability in times of crisis and across supply chains, thereby promoting social welfare. In addition, development banks, sovereign wealth funds, public holding companies, and other vehicles of government capital have helped achieved developmental objectives.

In Korea, SOEs became the means through which the government implemented its economic policies wherein the Republic of Korea became an industrialized economy in a short time. With the state intervening in the market to establish large corporations with economies of scale (Cho, 2002). The government owned or operated either directly or indirectly, corporations other than those established for a special purpose during industrialization. The SOEs have played a critical role in the economic growth where these were put in charge of investment and production to control the flow of capital in domestic market. The intervention of the state had effects on the finance, taxes, labor policies, price control, trade and customs (Yoon, 1986). In addition, SOEs operated most financial industries, serving as key windows for financing economic development.

In Indonesia, an SOE is a business enterprise that is fully owned or majority-owned and controlled by the government through the Ministry of Finance (Wicaksono, 2008, p.146). The

constitution mandates the role of the state in key sectors and in natural resources. The SOEs have long been major providers of infrastructure and public services (Breuer, Guajardo, & Kinda, 2018). The government formed SOEs as part of an import substitution strategy for fertilizer, steel, and basic chemicals, and to pioneer development off toll road and telecommunication. In addition, SOEs were used to move beyond hard budget constraint and to protect or further indigenous interests. Overall, the purpose and objectives for creating SOEs were to contribute to the development of the national economy, pursue profit, provide the public with high-quality goods and/or services, pioneer business activities which are not undertaken by the private sector and cooperatives, and to assist entrepreneurs of economically weak cooperative and community groups (Kim, 2018).

Similarly, in China, the government used SOEs to promote economic development and to achieve goals to develop high-end manufacturing industries. SOEs were a significant source of employment, particularly industries where they provide new sources of energy, telecommunication and information technology, automation, transport equipment, space technology, construction materials, and infrastructure development (Zhang, 2019). SOEs have played a significant role in the economic development of China since the 1980s. The unprecedented and rapid economic growth has altered the structure of its output and employment, turning China into a global economic powerhouse (Hsieh & Song, 2015).

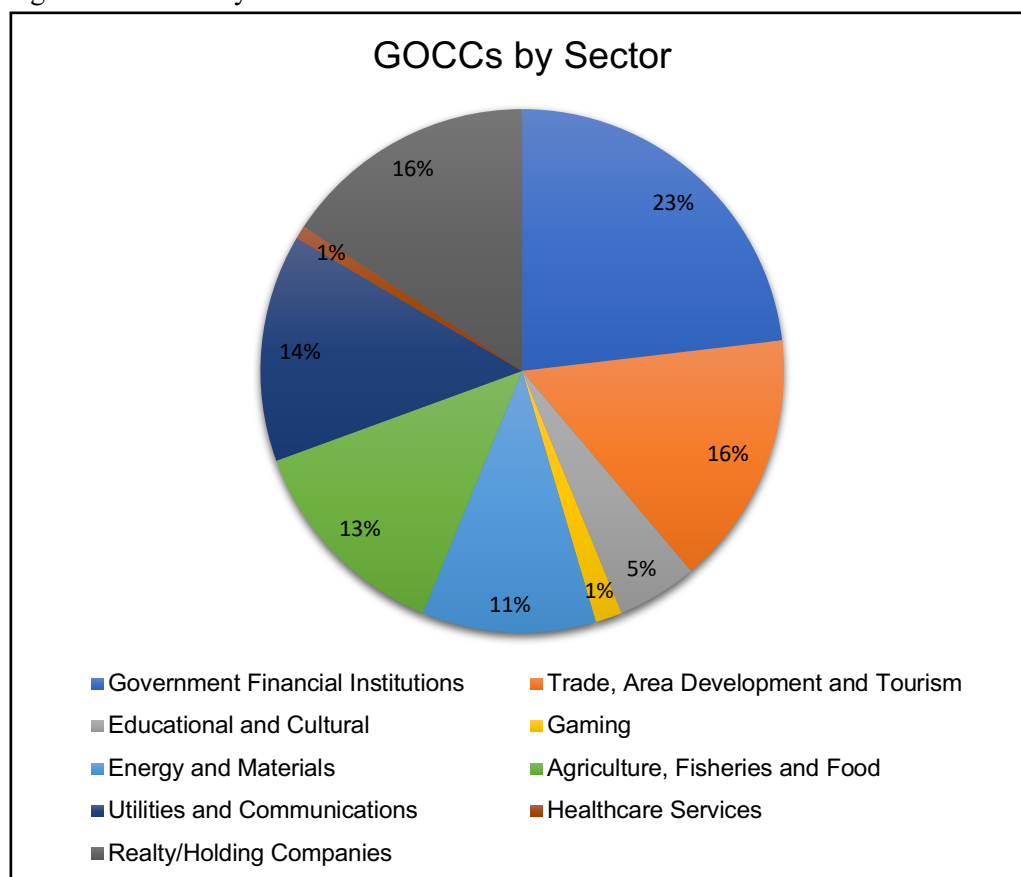
The government of Vietnam has consistently viewed SOEs as the primary focus of production. Under the planned economy instituted after reunification in 1975, SOEs proliferated across the country with more than 12,000 SOEs in existence by 1986 (Ministry of Finance, 2018). The role of SOEs has changed over time; from local and national companies acting as the foundation for industrial and economic development, to being the means for necessary foreign currency supporting Vietnam's regional and international expansion; and, in some cases, being global players with multiple international investments. Having access to foreign investment, international market, and the international development community, Vietnam transitioned from a primarily agricultural economy to a more dynamic and productive manufacturing and service economy (World Bank, 2012).

2.3 Definition and Rationale of Government-owned or Controlled Corporations (GOCCs) in the Philippines

SOEs in the Philippines are called Government-owned or Controlled Corporations (GOCCs). As defined in the Presidential Decree (P.D.) No. 2029 (s. 1986), a GOCC is "a stock or non-stock corporation, whether performing governmental or proprietary functions, directly

chartered by special law or, if organized under the general corporation law, is owned or controlled by the government directly or indirectly through a parent corporation or subsidiary corporation, the extent of at least a majority of its outstanding capital stock or of its outstanding voting capital stock.” The government widely used GOCCs for economic and social development.

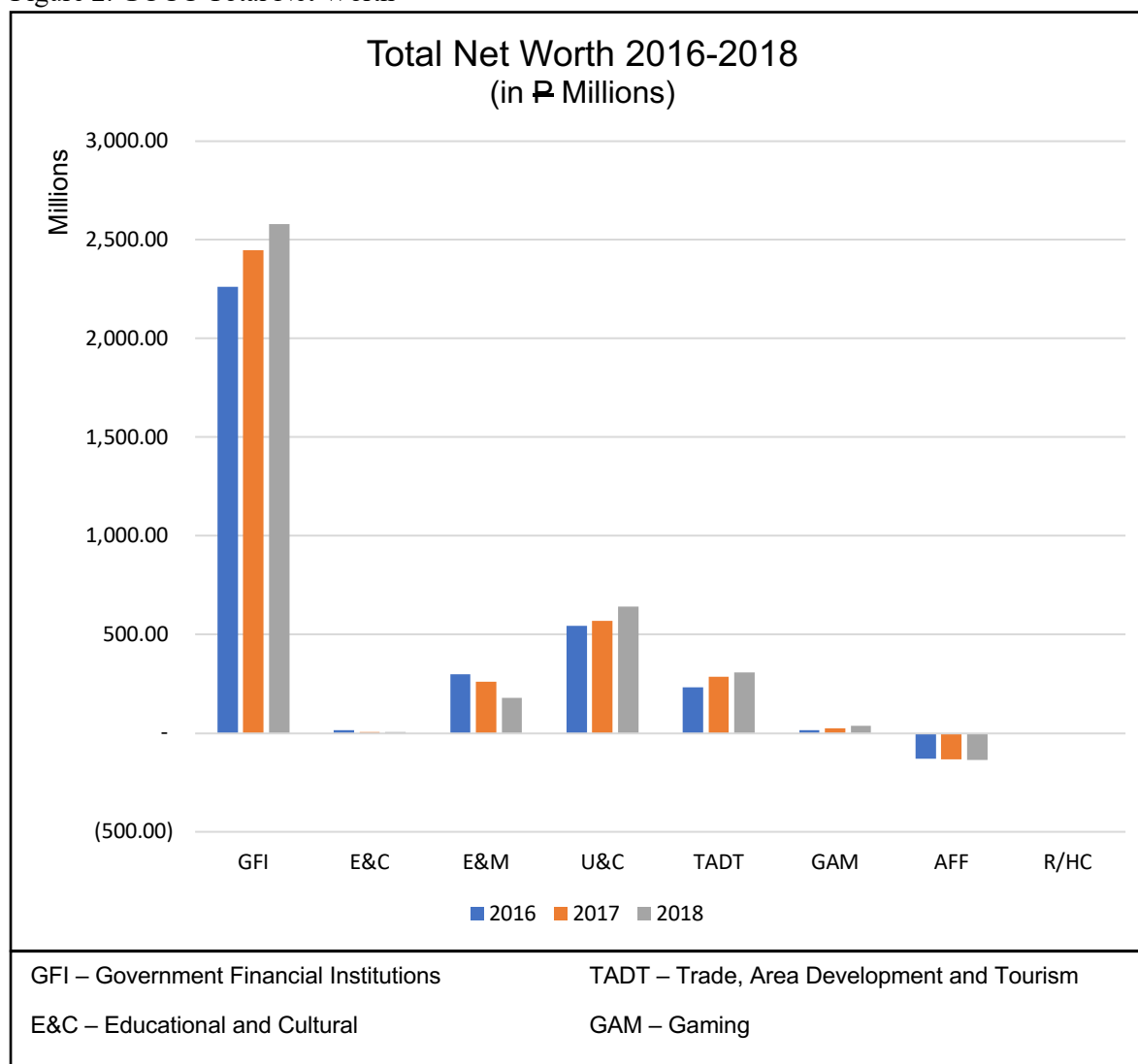
Figure 1. GOCCs by Sector



Source: <https://icrs.gcg.gov.ph/gocc-classification/>

Currently, the Philippines has over 120 GOCCs (See Appendix A) across different sectors: government financial institutions, trade, area development & tourism, educational & cultural, gaming, energy & materials, agriculture, fisheries & food, utilities & commutations, healthcare services, and realty/holding companies. The largest sector are the government financial institutions with 28 GOCCs, followed by trade, area development & tourism with 19 GOCCs, realty/holding companies with 19 GOCCs, utilities & communications with 17 GOCCs, agriculture, fisheries & food with 16 GOCCs, and energy & materials with 13 GOCCs. On the other hand, there is 1 GOCC in the health services sector, 2 GOCCs in the gaming sector, and 6 GOCCs in the educational & cultural sector.

Figure 2. GOCC Total Net Worth



Source: <https://icrs.gcg.gov.ph/financial-overview/>

The size of the GOCC is shown through a financial overview. The total assets of the GOCCs registered an amount of ₱135.04 billion in 2017. In the report by the Governance Commission, the gaming sector registered the highest increase in terms of the absolute amount at 62% while the GOCCs in the government financial institutions sector registered a ₱451.34 billion increase. Meanwhile, the GOCCs under the agriculture, fisheries and food sector registered an 89% decrease, equivalent to ₱309.26 billion (Governance Commission for GOCCs, 2018). The government financial institutions sector accounts for 67% of the total assets of the GOCC sector. On the other hand, liabilities totaled to ₱ 4.29 trillion in 2018, similar with that of 2017. As shown in Figure 2, the total net worth of the entire GOCC sector increased by ₱134.28 billion or 3.84% from 2017. It is the gaming sector that registered the largest growth at 77%

equivalent to ₱17.75 billion. The net worth of GOCCs in the government financial sector constitutes 71% of the total net worth of the GOCC sector.

In the pre-war period, the role of the GOCCs were limited to a few sectors, namely, financing, public utilities and agricultural development. During the American colonial period, GOCCs created were engaged in public transportation, the Manila Railroad Company (MRC) and financing, the Philippine National Bank (PNB). There were profitable returns from the GOCCs with the exception of the MRC, which suffered losses in the tradition of railway companies (Hartendorp, 1953). On the other hand, the PNB played an important role in the mobilization of capital for agricultural activities, particularly sugar. Agriculture dominated the economic activity, hence, more GOCCs were created specifically for agriculture and training, such as the National Rice and Corn Corporation in 1936, the National Abaca and Other Fibers Corporation in 1938, the National Coconut Corporation in 1940, and the National Trading Corporation in 1940. However, a single financial institution was found insufficient as PNB was mainly catering to the sugar industry. The Agricultural and Industrial Bank which was later absorbed by the Rehabilitation Finance Corporation (RFC), now the Development Bank of the Philippines (DBP), was thus created in 1938 (Hartendorp, 1953). The period after the World War II was described as the reconstruction period. The growth of the GOCC sector spurred during the post-World War II years as the government took an active role in the rehabilitation of the economy. There were about 30 GOCCs created from 1945 to 1950 (Briones, 1985). The impact and participation of the GOCC sector in the economy increased due to the significant increase in their actual number, size and resources, but their role did not change significantly. When the government reorganized in 1950, a reorganization committee was created specifically for GOCCs. The committee recommended reduction of the GOCCs from 30 to 13, with several GOCCs having duplication of purpose and activities. However, with the evident advantages of the corporation structure of carrying out governmental functions, the GOCC sector continued to expand (Abelardo, 1967).

In 1965, when former President Ferdinand Marcos assumed office, there were only 37 GOCCs that existed (Manasan, 1995). The growth of GOCCs rapidly increased due to the government's desire to play a strategic role in accelerating the country's economic development. The number of GOCCs tripled, reaching 120 in 1975 and increased even more to 303 in 1984. During this period, the policy was to establish GOCCs for economic development, enhancement and protection of the national interest, and institutional response to specific problems, the corporate vehicle was used for other reasons, most notably to transfer public wealth to a few private individuals (Briones, 1985). GOCCs were formed in response to

long-established strategic needs such as 1) rehabilitation and restructuring after the war, 2) those requiring large scale indivisible investments, 3) a basic industry that provides high forward linkages, 4) to keep the industry free from foreign control due to its impact in the economy, and 5) the private sector is unwilling or unable to put up the capital to establish the industry (Alvencia, 1991) (Tabbada & Baylon, 1991).

Moreover, in Article XII (National Economy and Patrimony) Section 18 of the 1987 Philippine Constitution, it provides that: “The State may, in the interest of national welfare or defense, establish and operate vital industries and, upon payment of just compensation, transfer to public ownership utilities and other private enterprises to be operated by the Government.” It provides that the “government-owned or controlled corporations may be created or established by special charters in the interest of the common good and subject to the test of economic viability” (Senate Economic Planning Office, 2006). GOCCs were created as solutions to market imperfections. Accordingly, the conditions where GOCCs are expected to operate are in cases where private sector is unwilling to provide goods and services vital to society, when there is a need to create a bias in favor of disadvantaged sector of society in a free market operation, to spur the development of strategic activities with wide-ranging economic impact, and natural monopolies which government wants to control and to protect the consumers (Briones, 1985).

Table 1. Comparison of Definitions of SOEs among other countries and the Philippines

Factor as basis of definition	Types/Form	Country Example	Philippines
government ownership	<ul style="list-style-type: none"> ▪ wholly owned ▪ majority ownership ▪ government is a minatory shareholder 	<p>China: SOEs are owned by the central government- State-owned Assets and Administration Commission (SASAC) and local governments</p> <p>Singapore: SOEs are owned by Temasek, the national holding company, which is 100% owned by the Ministry of Finance</p> <p>Indonesia: SOEs fully owned or majority-owned and controlled by the government</p> <p>Korea: government-owned or operated either directly or indirectly corporations</p>	GOCCs are directly chartered by special law or organized under the general corporation law, owned or controlled by the government directly or indirectly through its oversight body- Governance Commission for GOCCs

Role/Purpose of SOE	<ul style="list-style-type: none"> ▪ Economic development ▪ Market failure 	Korea: implementation of economic policies Indonesia: development of national economy, provide infrastructure & public services, pioneer business activities which are not undertaken by the private sector China: promote economic development and develop high-end manufacturing industries Vietnam: foundation for industrial and economic development	economic and social development, solutions to market imperfections where private sector is unwilling to provide
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Table 1 highlights the differences and similarities in the definition of SOE of some countries and of the Philippines. Definitions of SOEs vary mainly due to the level of government ownership. For most countries in Asia such as China, Indonesia and Korea, the government is a majority owner or wholly own the corporations. Likewise, the government in these countries operate corporations directly and indirectly. Similarly, in the Philippines, GOCCs are wholly owned by the government and are directly or indirectly controlled. A slight difference in the definition across countries is, for some countries like Singapore, there is a national holding company, Temasek that is wholly owned by the Ministry of Finance. On the other hand, other countries do not have a holding company, but have a central oversight body, such as State-owned Assets and Administration Commission (SASAC) in China and the Governance Commission for GOCCs (GCG) in the Philippines. Overall, the rationale for the creation of SOEs in countries is for economic development and delivery of social services and goods. The difference across countries is the key sectors and industries that country built on for its economic growth. For instance, China and Indonesia focused on infrastructure and telecommunications industries, while Vietnam and Philippines primarily built on their agriculture sectors. A prominent similarity on the role of SOEs across countries is the state's intervention to address market imperfections, wherein certain goods and services vital to society are not provided by the private sector, hence, SOEs are created.

Table 2. Summary of Definitions of SOE

No	Author	Definition
1	OECD	enterprises where the state has significant control through full, majority, or significant minority ownership

2	ADB	SOEs include, but is not limited to, “any entity recognized by the borrower’s national law as an enterprise in which the state or government exercises direct or indirect (whole or partial) ownership or control
3	IFC	a legal entity that is majority owned or controlled by a national or local government whether directly or indirectly
4	Philippine Decree No. 2029 (s. 1986)	a stock or non-stock corporation, whether performing governmental or proprietary functions, directly chartered by special law or, if organized under the general corporation law, is owned or controlled by the government directly or indirectly through a parent corporation or subsidiary corporation, the extent of at least a majority of its outstanding capital stock or of its outstanding voting capital stock.

Moreover, Table 2 shows a summary of the definitions of SOEs. The definition of a GOCC in the Philippines is similar to the definitions of SOE by international organizations. All definitions include state ownership and control.

2.4 Legal and Regulatory Framework

The legal basis of the creation of GOCCs in the Philippines is set forth in the 1973 Constitution:

The state may, in the interest of national welfare or defense, establish and operate industries and means of transportation and communication, and, upon payment of just compensation, transfer to public ownership utilities and other private enterprises to be operated by the government (Constitution of the Republic of the Philippines, 1973, Article XIV, Section 6).

The creation of an SOE is established by law, and the SOE’s competence and power are further circumscribed by it. A legal and political framework for SOE management determines the nature of the relationship that exists between various public authorities and the conditions that will enable the SOEs to achieve their goals with efficiency (Marcou, 1995). The government administers the financial, regulatory and coordination frameworks to facilitate efficient management of SOEs. It is the role of the government to establish effective and appropriate legal and regulatory frameworks to lay down the legal structures for SOEs’ operations, indicate obligations, protect the rights of stakeholders, as well as create standards and procedures for effective internal and external audit, transparent and accurate accounting, and public financial disclosure (OECD, 2004). The legal and regulatory framework guiding SOEs vary from nation to nation, according to the prevailing socio-economic circumstances and evolution of their respective political process (United Nations, 2008).

Ownership function refers to an “an entity that exercises the power, responsibility, or steering ability to appoint board of directors, set and monitor objectives, and vote company share on behalf of the government” (OECD, 2021, p.13). There is no two state ownership models of SOEs that are exactly the same, and no one country generally applies one single ownership model without exceptions to certain organizational structures or legal requirements. Part of the duties and responsibilities of the state as owner is to use its ownership policy to clarify the reasons why it should own any given enterprise and assess the rationale for continued state ownership. The overall objectives for state ownership are to support economic and strategic interests, to ensure continued national ownership of enterprises, to provide specific public goods and services, and to perform business operations in a “natural” monopoly situation (OECD, 2021).

The framework of GOCCs in the Philippines is characterized by a formal system of centralized and coordination ownership. The supervision and control is through a coordinating agency/department. The government sets forth explicit state ownership policy defining the general objectives of state ownership. State ownership policies are set out in specific legislation. Specialized government units perform the role of coordinating agencies “operating in an advisory capacity to other shareholding ministries on technical and operational issues” (OECD, 2021, p. 15). The most important mandate of these coordinating agencies is to monitor SOE performance.

In 1984, the Government Corporate Monitoring and Coordinating Committee (GCMCC) was created as the oversight body for monitoring and evaluation of GOCCs. It was then reconstituted in 1986. One of the its main functions were to balance the accountability and adequate operational flexibility of GOCCs (Villamejor-Mendoza, 2007). It was also tasked to establish an effective performance monitoring and coordination system. The aim was not to curtail the operational flexibility of GOCCs but to encourage them to perform their mandate and without undue interference from the national government. Further, the Commission on Audit (COA) was tasked to carry out performance and financial audit of all GOCCs and their subsidiaries. While the task of monitoring and supervision of the financial performance of all GOCCs is given to the Department of Finance.

The coordinating agency model is further explained by the ministry concept, where the SOE performing similar functions are attached to ministries (now called departments) are placed under the supervision and control of a minister (now called a cabinet secretary). Examples of GOCCs attached to the ministry/department are the National Power Corporation and National Electrification Administration are attached to the Department of Energy, the

National Food Authority and National Irrigation Administration are attached to the Department of Agriculture, and the Philippine National Railways and Light Rail Transit Authority are attached to the Department of Transportation. In this structure, the cabinet secretaries of the departments to which the GOCCs are attached are deemed *ex officio* chairpersons of the GOCCs' Board of Directors. As GOCCs are attached to a department, the department is responsible for ensuring that the policies and programs, budget and operations, as well as production, financial and corporate targets of the attached GOCCs are consistent with the sectoral policies and programs. The departments with attached GOCCs enforces oversight through examination, review and concurrence of operating and capital budgets and ensure compliance of GOCCs with performance targets.

The GCMCC as an oversight body was dissolved and its functions were transferred to the Department of Finance (DOF) in 1987 and then to the Office of the President-Presidential Management Staff in 1993 and back to DOF before 2011 (Bantug, 2013). The Congress of the Philippines passed the Republic Act 10149, otherwise known as GOCC Governance Act of 2011, an act “to promote financial viability and fiscal discipline in GOCCs and to strengthen the role of the state in its governance and management to make them more responsive to the needs of public interest and for other purposes” (Congress of the Philippines, 2011, p.1). The GOCC Governance Act of 2011 contains the following salient features: “1) exercise by the national government of certain rights consistent with its right as the owner of GOCCs, 2) creation of a centralized advisory, monitoring and oversight body called the Governance Commission for GOCCs (GCG), 3) require GOCCs strict disclosure of their financial performance and audit mechanisms by the Commission on Audit, 4) provision of one year terms of members of Board of Directors of all GOCCs, 5) require appointment to board membership by the President of the Philippines from candidates shortlisted by the GCG, 6) provision of standards and limitations on the compensation, allowances, per diems, and incentives of the Board of Directors fixed by the GCG, and 7) express provision of fiduciary duty of Board of Directors and officers towards GOCCs” (Bantug, 2013, p.23).

Moreover, the Governance Commission for GOCCs (GCG) is mandated “to oversee the selection and nomination of the members of the GOCCs' Board of Directors, institutionalize transparency, accountability, financial viability and responsiveness in corporate performance by monitoring and evaluating the GOCCs' performance, rationalize the GOCC sector through streamlining, reorganization, merger as well as recommending to the President of the Philippines the privatization or abolition of a GOCC, and establish compensation standards” (Governance Commission for GOCCs, 2011). In addition, the GCG is tasked to adopt an

ownership and operations manual as well as the government corporate standards governing the GOCCs, establish the performance evaluation systems, coordinate and monitor the operations of GOCCs, review the functions of each GOCC and determine whether there is conflict between their regulatory and commercial functions, and provide technical advice and assistance to the government agencies to which the GOCCs are attached in setting performance objectives and targets of the GOCCs (Governance Commission for GOCCs, 2011).

The GCG carries out its functions in coordination with other government agencies such as the Office of the Omubudsman on the qualifications of Board Directors, the Commission on Audit on GOCCs' financial audit, the National Economic and Development Authority on the alignment of development programs and plans of the GOCCs, the Department of Budget and Management on the budget matters of GOCCs, and the Civil Service Commission on matters concerning the employees and officers of the GOCCs.

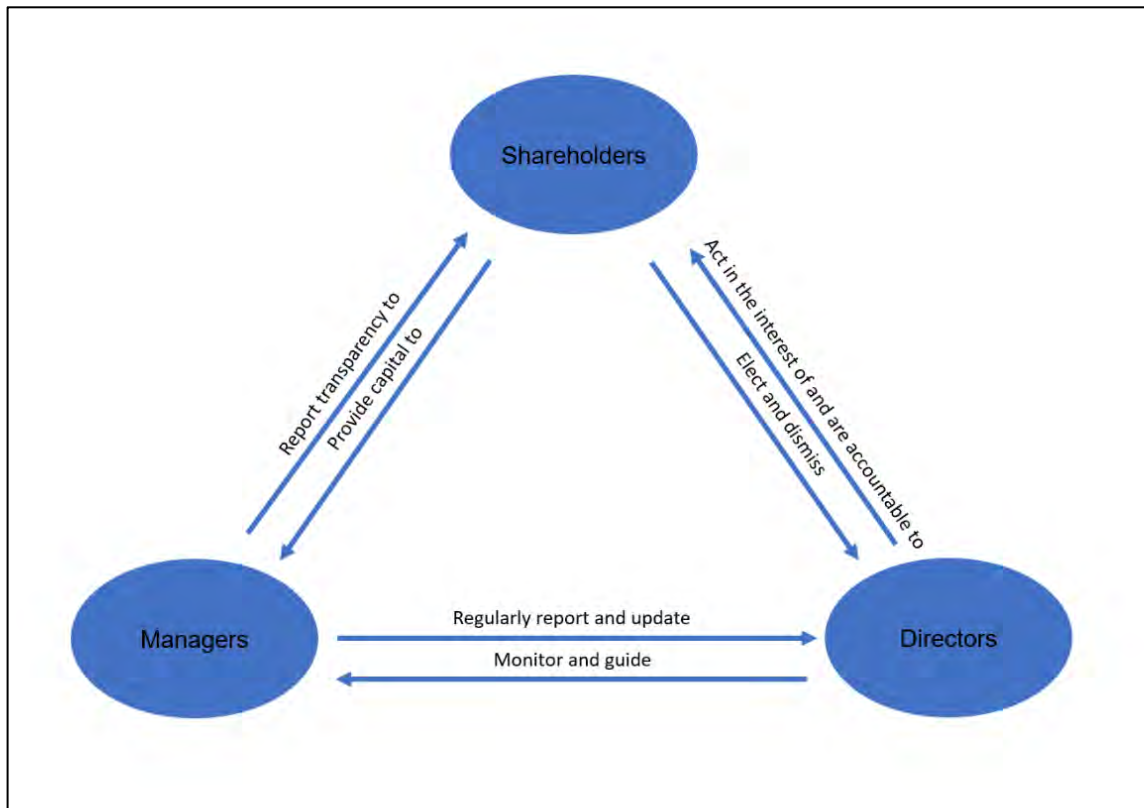
2.5 Corporate Governance

The OECD defines corporate governance as "the system by which business corporations are directed and controlled" (OECD, 1999, p.8). The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance. The term includes private and public institutions that refers to laws, regulations and business practices which governs the relationship between the corporate managers and the stakeholders.

Corporate governance is the broad term which describes the processes, customs, policies, laws and institutions that directs the organizations and corporations in the way they act, administer and control their operations (Khan, 2011). Corporate governance is the allocation of ownership, capital structure, managerial incentive schemes, takeovers, board of directors, pressure from institutional investors, product market competition, labor market competition, organizational structure, etc., which can all be thought of as institutions that affect the process through which quasi-rents are distributed (Berle & Means, 1932, p. 4). It does not only deal with managing the relationship among the stakeholders, namely, the board of directors and the shareholders, but also with the accountability of the individuals to achieve the goal of the organization.

Furthermore, it identifies the distribution of rights and responsibilities among the company's stakeholders, this includes shareholders, board directors, and managers (World Bank Group, 2014).

Figure 3. Key Stakeholders in Corporate Governance



Source: International Finance Corporation (IFC), World Bank Group, 2008.

Figure 3 shows the key stakeholders in corporate governance and the respective responsibilities of each to one another. The shareholders elect and dismiss the board of directors, and provide the capital to the management. The managers or members of the management report transparency to the shareholders and regularly report to and update the board of directors. The board of directors act in the interest of and are accountable to the shareholders, and monitor and guide the managers of the company.

Corporate governance ensures that companies put a balance between the interests of shareholders with stakeholders at all levels of organization. In the private sector, to have good corporate governance is an essential standard for establishing the striking investment environment as it is needed by competitive companies to gain strong position in efficient financial markets. In addition, good corporate governance is fundamental to the economies with extensive business background and it likewise facilitates the success for entrepreneurship (Khan, 2011).

A key element of corporate governance is to be able to put balance between the ownership and control and also among the interests of stakeholders of the firm. Ownership and control in private corporations is different from SOEs, since for SOEs, it is in the state's hand or in the government. There are a number of key differences between state and private ownerships in terms of objectives, financing, liquidation, management, and compensation (Yavas, 2017). For instance, the main objective of private ownership is to maximize profits for the capitalists who own the corporation. On the other hand, the ultimate goal for SOEs is to balance the interests of the stakeholders; for instance, having to consider protecting jobs and preventing social unrests.

2.6 Corporate Governance in SOEs

Corporate governance in SOEs is distinguished due to the significant management constructs and diversity of organizational objectives. For instance, the goals set for state-owned companies are different from those for commercial companies, wherein commercial companies are mainly focused on generating profit for their shareholders, whereas, SOEs fulfill economic goals and other specific objectives. Corporate governance of SOEs is an area in which “corporate” and “public governance” intersects as SOEs are business organizations within the public sector. Corporate governance is the set of institutional mechanisms and arrangements for steering and overseeing SOEs toward achieving their purpose, that is, public value creation (Zahra'a, 2021). It refers to the proper structure, mechanisms, values, and procedures through which an SOE is managed and controlled to fulfil its mandate effectively. Governance of the public corporate sector is critical to ensure the positive contribution to a country's overall economic efficiency and competitiveness (Bantug, 2013).

Corporate governance consists of the procedures and processes according to which an organization is directed and controlled. It provides the structure for defining, implementing, and monitoring an SOE's goals and objectives and for ensuring accountability to appropriate stakeholders (World Bank Group, 2018). It is a mechanism for monitoring the actions, policies and decisions of corporations. It involves the alignment of interest among the stakeholders. It also includes the network of formal and informal relationships involving the corporate sector and the consequences of these relationships on society in general (Kiranmai & Mishra, 2019).

Ownership and control in SOEs is different from private corporations, hence, corporate governance is distinct. SOEs are owned by the state on behalf of the general public. As the owner of SOEs, the state establishes the policies, procedures, and organizational structures that guide the SOE operations in order to achieve social development and economic objectives. The

government controls SOEs either by the state being the ultimate beneficiary owner of the majority of voting shares or otherwise exercising an equivalent degree of control. Corporate governance ensures that SOEs are effectively controlled through established institutions of governance such as shareholding policies, regulations, and shareholding entities (Zahra'a, 2021). Apart from serving as owner, the state also serves as the regulator and coordinator. As regulator, the state lays down the legal and regulatory framework to facilitate an effective and appropriate environment for economic activities. As a coordinator, the state mediates among other government agencies and related organizations that affect or interact with SOE activity and provide appropriate measures for transparent economic activities (Keened & Jones, 2003).

In SOE corporate governance, the functional, structural, and institutional considerations of a public enterprise is necessary in order to lay down the appropriate mechanisms for management and administrative efficiency. Corporate governance in SOEs includes structures and procedures that ensure the enterprise operates efficiently, effectively, accountably, and responsively in the public interest and contributes to the national development (United Nations, 2008).

2.7 OECD Guidelines on Corporate Governance of SOEs

The OECD published guidelines on how to improve corporate governance of SOEs. Established in 2005, the OECD Guidelines on Corporate Governance of SOEs have become the internationally agreed standards in the area of SOE corporate governance policies and practices and have been used as the benchmark in the formulation of reforms in both member and non-member economies. The guidelines provide a framework for assessing and improving the governance practices of SOEs. These are recommendations on how to ensure that SOEs operate efficiently, transparently and in an accountable manner. It provides advice to governments on how to ensure SOEs are as accountable to the general public as listed companies should be to shareholders. It is a set of standards that help governments on how to exercise the state ownership function and avoid risks of both passive ownership and excessive state intervention (OECD, 2015). In addition, the guidelines provide recommendations on the governance of individual SOEs as well as state ownership practices, and regulatory and legal environment in which SOEs operate.

The guidelines cover six main areas: the rationales for state ownership, the role of the state as owner, equitable treatment of shareholders, relations with stakeholders, disclosure and transparency, and the responsibilities of SOE boards.

2.8 Corporate Governance Scorecard

In the early 1990s, countries have adopted codes of corporate governance to boost development of capital markets, help companies perform better, and make these companies better members of the society (International Finance Corporation, 2004). As many countries drafted codes, the understanding of governance and its impact on companies, markets and societies grew significantly across regions all over the world. However, the mere existence of corporate governance codes did not directly translate into better governance practices. The challenge to make governance practices a reality needed tools to encourage best practices and change corporate behavior. The use of scorecard was found to be an answer to address this challenge. The experience of the private sector investors of using scorecards in assessing compliance with national codes led regulators and stock exchanges to use scorecards in establishing governance reforms. Scorecards were not only used by companies for mere compliance and observance of codes but to measure corporate governance which helped them know where they stand and more importantly were used in decision making, for better strategy, as well as in risk management and control.

A scorecard is “a quantitative tool to measure the level of observance of a code and/or a standard of corporate governance” (International Finance Corporation, 2004, p. 3). Scorecards compare governance practices to a benchmark, where the benchmark is a national or international code of corporate governance and/or a standard. Scorecards are tools to assess corporate governance as it generates information on the quality of governance practices. For instance, they depict whether companies disregard or follow code recommendations. Likewise, scorecards are used to compare practices between companies and even between countries. Scorecards provide concrete and useful information as these are able to quantify governance practices, indicating when and where companies fall short. They assess the governance practices of a company and illustrate progress over time.

The German Financial Analysis and Asset Management Association (DVFA) was one of the first to develop scorecards. The purpose of the DVFA scorecard was to provide financial analysts and investors a practical tool to evaluate the governance of listed German companies (DVFA, 2000). The scorecard served as a tool to measure the level of compliance of listed companies with the German Corporate Governance Code (The Deutscher Corporate Governance Kodex). In Asia, the ASEAN (Association of Southeast Asian Nations) regional scorecard was developed and implemented by the ASEAN Capital Markets Forum (ACMF) based on the OECD Principles and other international standards of corporate governance. Six countries, namely Thailand, the Philippines, Malaysia, Singapore, Indonesia and Vietnam were

involved in the development of the ASEAN scorecard. The objective was to raise corporate governance standards and practices of ASEAN companies (ASEAN Capital Markets Forum, 2012). The scorecard initiative also intended to establish common measures in the implementation of corporate governance by publicly listed companies among the six member countries.

With the purpose of measuring the observance of a code of corporate governance, an appropriate benchmark is necessary when developing a scorecard. In most countries, a code of corporate governance serves as a benchmark. In the national level, codes are commonly aimed at listed companies, however, there are a few codes of corporate governance that have been established for banks, family firms and SOEs. When there is no local code of governance, scorecards being developed use an international code of corporate governance as the benchmark. An example of an international benchmark for listed companies is the OECD Principles of Corporate Governance. A number of countries, namely, Azerbaijan, Kazakhstan, the Philippines, Trinidad and Tobago and Vietnam draw on the OECD Principles in developing their scorecards. The Guidelines on the Governance of State-owned Enterprises was published by the OECD which serves as a benchmark for SOEs. On the other hand, the European Confederation of Directors' Associations (ecoDa) produced the ecoDa Guidance which served as a regional guidance for unlisted companies such as small and family enterprises (ecoDa, 2010).

There is a wide range of users of scorecards with each having different goals. Users of scorecards include companies, regulators, government institutions, stock exchanges, member organizations (institutes of directors, chambers of commerce, or business associations), and development finance institutions (DFIs). Companies use scorecard to concretely address day-to-day issues they encounter in their governance. Regulators and regulatory government institutions use scorecards to know implications and effectiveness of the regulatory framework and oversight. In addition, regulators intend to refine regulations and codes as well as develop techniques to enhance companies' compliance. For stock exchanges, it is to measure code compliance, encourage companies to adhere to standards and improve governance as ultimately, their goal is to show investors their high-quality venue for share trading. Chambers of commerce, industry associations and institutes of directors have a mandate to provide value-adding services to their members, hence, the information on governance practices that can be gathered from the scorecards are useful for their members. For DFIs, the purpose of the scorecard is to encourage market-level change in corporate governance practices and transfer knowledge to local counterparts (International Finance Corporation, 2004).

2.9 Corporate Governance Scorecard (CGS) for GOCCs

In 2006, the Corporate Governance Scorecard for GOCCs was initially developed by the Institute of Corporate Directors (ICD) in collaboration with the Department of Finance (DOF) and the Office of the President of the Philippines. The ICD was sought as the subject matter expert to take the lead in the creation of the Corporate Governance Scorecard (CGS) for GOCCs as they were the ones who co-developed the ASEAN Corporate Governance Scorecard for publicly-listed companies. The DOF and Office of the President are the oversight government bodies supervising and regulating the GOCCs. The goal was to raise awareness on corporate governance issues among GOCCs, to identify areas for improvement, and to raise the standards of GOCC corporate governance practices in the Philippines. In creating the CGS for GOCCs, the 2005 OECD Guidelines on Corporate Governance for State-Owned Enterprises as well as the standards and recommended best practices in the ASEAN Corporate Governance Scorecard for publicly-listed companies were used as benchmark.

About 30 GOCC were assessed on their corporate governance practices using the scorecard wherein, the benchmarking initially fell under two sections: Board Responsibilities and Disclosure & Transparency. The benchmarking relied on self-rating by GOCCs, which compared their practices with the scorecard. ICD Assessors conducted a validation of the self-ratings, using documents submitted by the GOCCs to substantiate them. The results were then tabulated and analyzed (Moreno, 2006). GOCCs scored significantly lower than their private sector counterparts in the two areas rated. The gaps in corporate governance practices revealed by the benchmarking exercise helped identify weak areas as opportunities for improvement in the GOCCs. Likewise, the benchmarking was widely considered a useful tool for encouraging GOCCs to evaluate and improve their governance practices.

Furthermore, with the creation of the Governance Commission for GOCCs (GCG) as the centralized oversight and regulatory body of GOCCs in 2011, is tasked to adopt an ownership and operations manual as well as a corporate governance code governing the GOCCs. In adherence to the highest standards of corporate governance, the GCG reformulated the CGS for the GOCCs in 2015. The CGS is a quantitatively-driven evaluation tool derived from existing and globally accepted standards and practices. With the similar purpose and objectives, the CGS is an instrument to assess the corporate governance initiatives and practices of GOCCs using a methodology benchmarked against the OECD Principles of Corporate Governance for SOEs and ASEAN Corporate Governance Scorecard for publicly-listed companies.

Table 3. Corporate Governance Scorecard

	Sections	Number of Items	Weight
I	Stakeholder Relationships	14	15%
II	Disclosure & Transparency	11	35%
III	Responsibilities of the Board	37	50%
	Bonus	2	
	Penalty	2	
	TOTAL	66	100%

The reformulated CGS (See Appendix B) assesses each GOCC's governance practices on the following areas: i) Stakeholder Relationships, ii) Disclosure and Transparency, and iii) Responsibilities of the Board. Table 1 shows the parts of the CGS for GOCCs. Stakeholder Relationship consists of 14 items with a weight of 15%, Disclosure & Transparency consists of 11 items with a weight of 35%, and the Responsibilities of the Board consists of 37 items with a weight of 50%. There are 2 items each for Bonus and Penalty. In total, the scorecard consists of sixty-six (66) items across the three mentioned areas, with a total weight of 100.00%. The Stakeholder Relationships refers to policies and activities to respect, defend, and promote the rights of stakeholders are laid out, articulated and undertaken by the GOCC. Stakeholders include the customers/clients, employees, environment and community of the GOCC. Disclosure & Transparency looks into the accurate and timely disclosure of important documents and information by the GOCC to its stakeholders and the public. Responsibilities of the Board refers to the fulfillment of the GOCC's Board of Directors of its key functions in terms of strategy, policy, monitoring and accountability. The section assesses whether the Board of Directors adhere to standards and practices on board committees and board reporting, board meeting protocols, functional internal control and risk management systems, board performance evaluation and codes of business conduct/ethics.

The CGS assessment is conducted by the ICD assessors, where initial assessment is further validated by the Governance Commission. The results of the assessment are released to the GOCCs through a conduct of an exit conference session. The CGS assessment is done annually, covering 85 GOCCs of different sector industries, such as government financial institutions, agriculture, educational & cultural, energy & materials, gaming, trade & area development, tourism, utilities, and healthcare services.

2.10 Issues and Challenges

Results of the CGS assessment show a low average score of GOCCs and no significant improvement for the past 5 years. Figure 4 shows the CGS average score of GOCCs: 50.79% in 2015, 53.39% in 2016, 52.06% in 2017, 52.45% in 2018 and 55.92% in 2019.

Figure 4. Average CGS Results of GOCCs

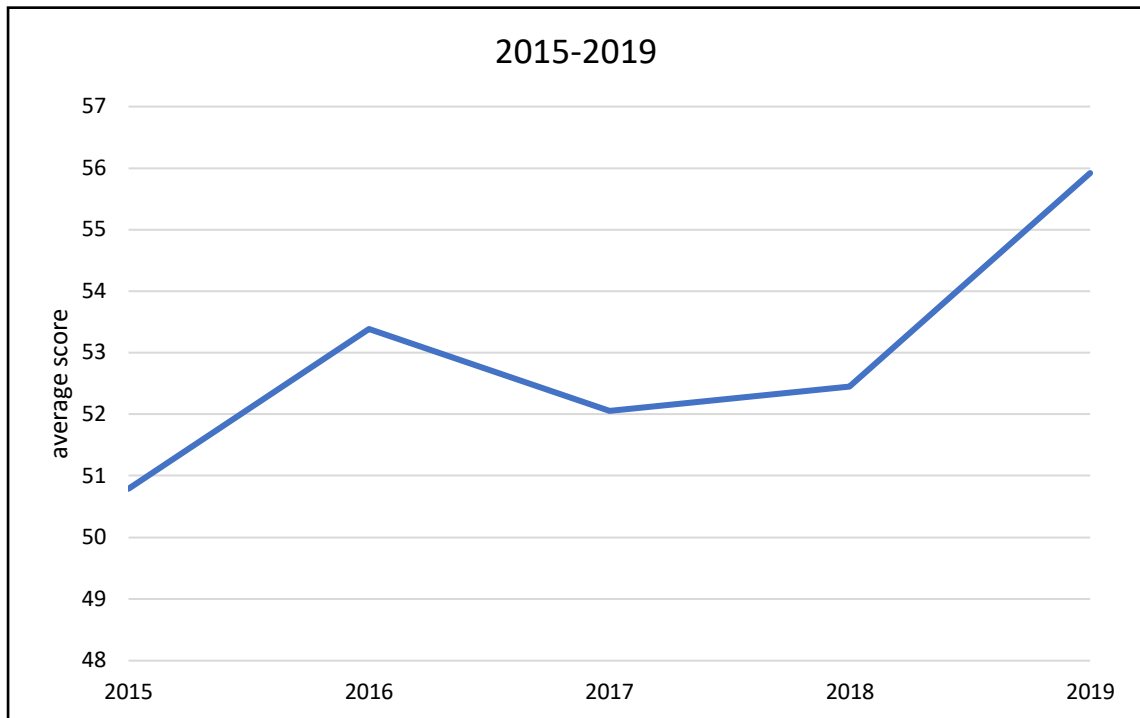
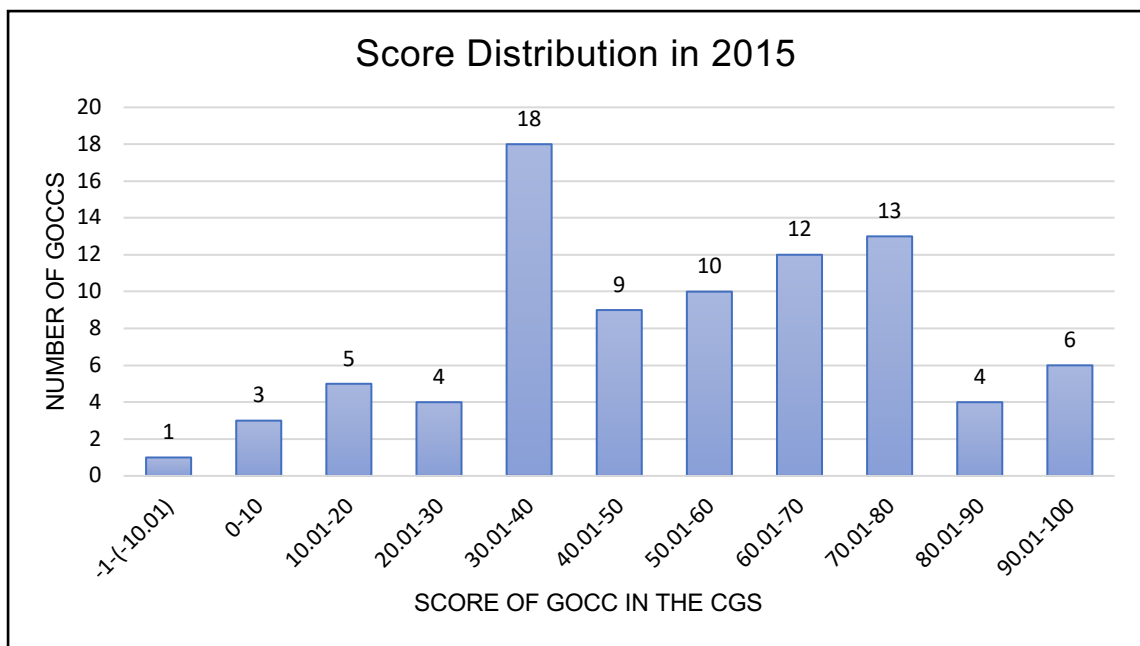
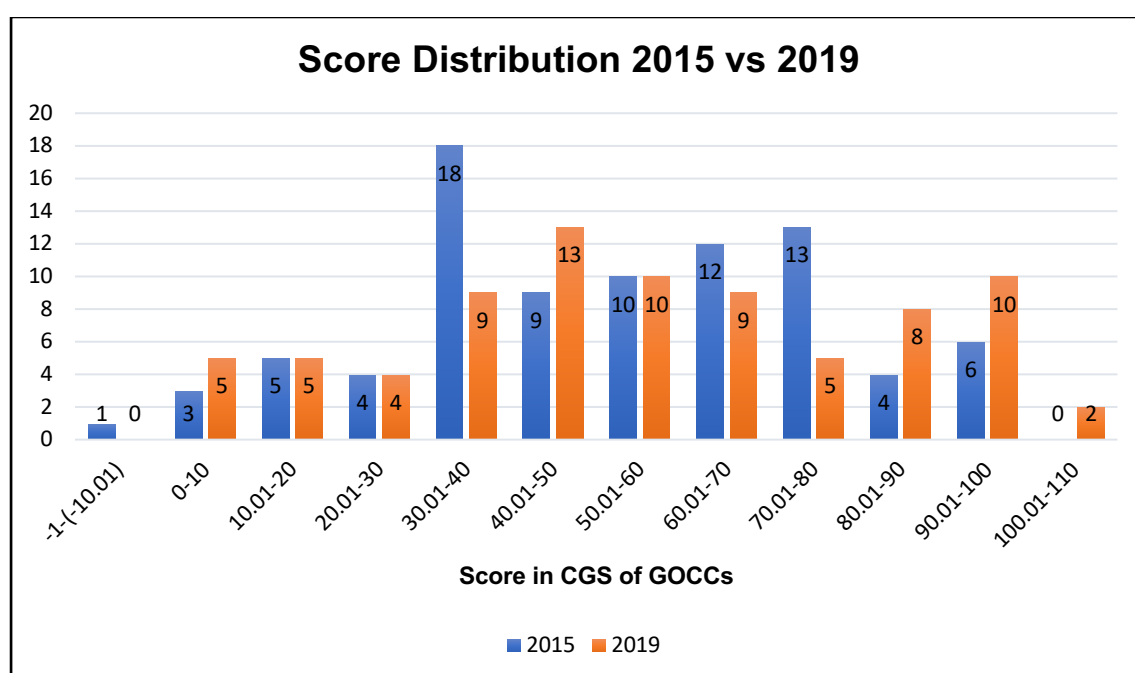


Figure 5. Score Distribution of GOCCs in 2015



Majority of the GOCCs scored between 30%- 80% only. Figure 5 shows the score distribution of GOCCs in the 2015. While there are 3 GOCCs that scored between 0-10%, there are 6 GOCCs that scored above 90%. Out of the 85 GOCCs assessed, 18 GOCCs scored 30.01-40%. There are about 39 GOCCs that scored above 50%, specifically, 10 GOCCs scored 50.01-60%, 12 GOCCs scored between 60.01-70%, 13 GOCCs scored 70.01-80% and 4 GOCCs scored 80.01-90%.

Figure 6. Score Distribution of GOCCs in 2015 vs. 2019



In 2019, more GOCCs improved their score where there is an increase in the number of GOCCs that scored above 50%, with 2 GOCCs scoring 100%. However, the majority of the GOCCs still scored between 40.01-50% as shown in Figure 6.

In terms of the 3 sections of the CGS (Stakeholder Relationships, Disclosure & Transparency, Responsibilities of the Board), the levels of compliance of GOCCs significantly vary. In Figure 7, the compliance of GOCCs to the Stakeholder Relationship section of the CGS is shown. Although majority of the GOCCs are able to adhere to the policy standards, there are still a number of GOCCs who fail to fulfill the recommended activities needed to substantiate and operationalize these policies.

Figure 7. GOCCs' Adherence to the Stakeholder Relationship Section of the CGS 2019

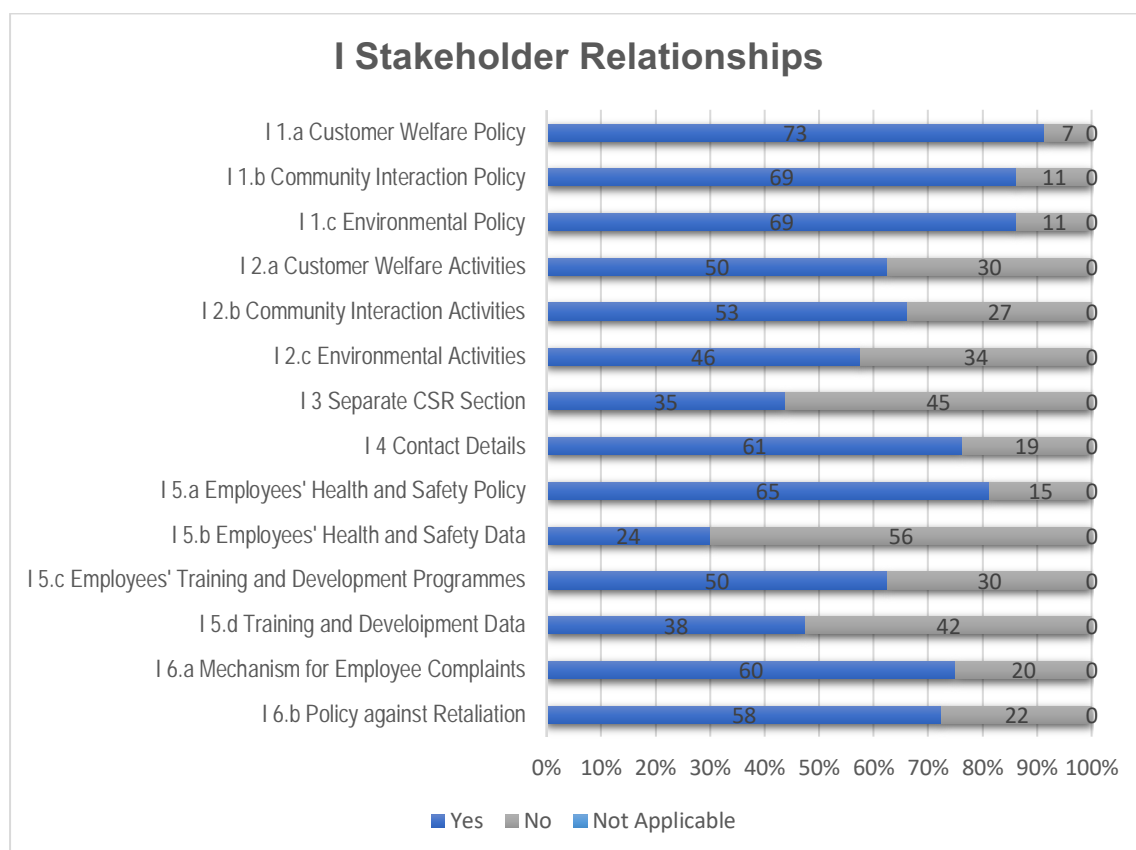


Figure 8. GOCCs' Adherence to the Disclosure & Transparency Section of the CGS 2019

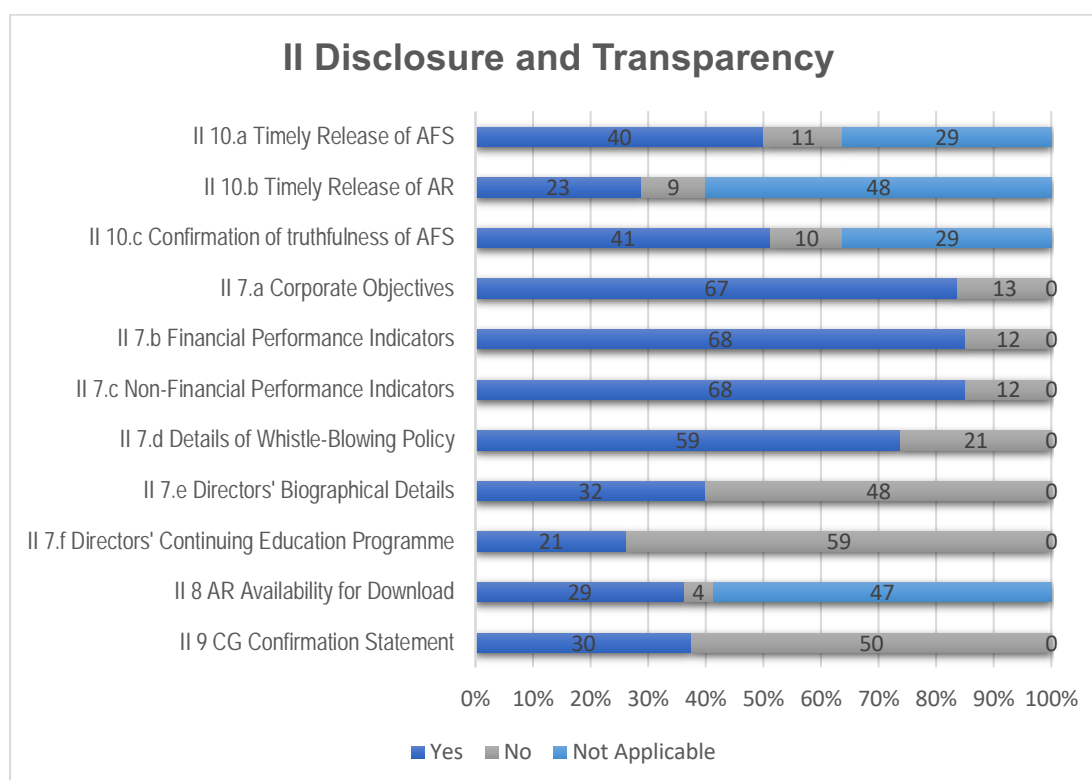
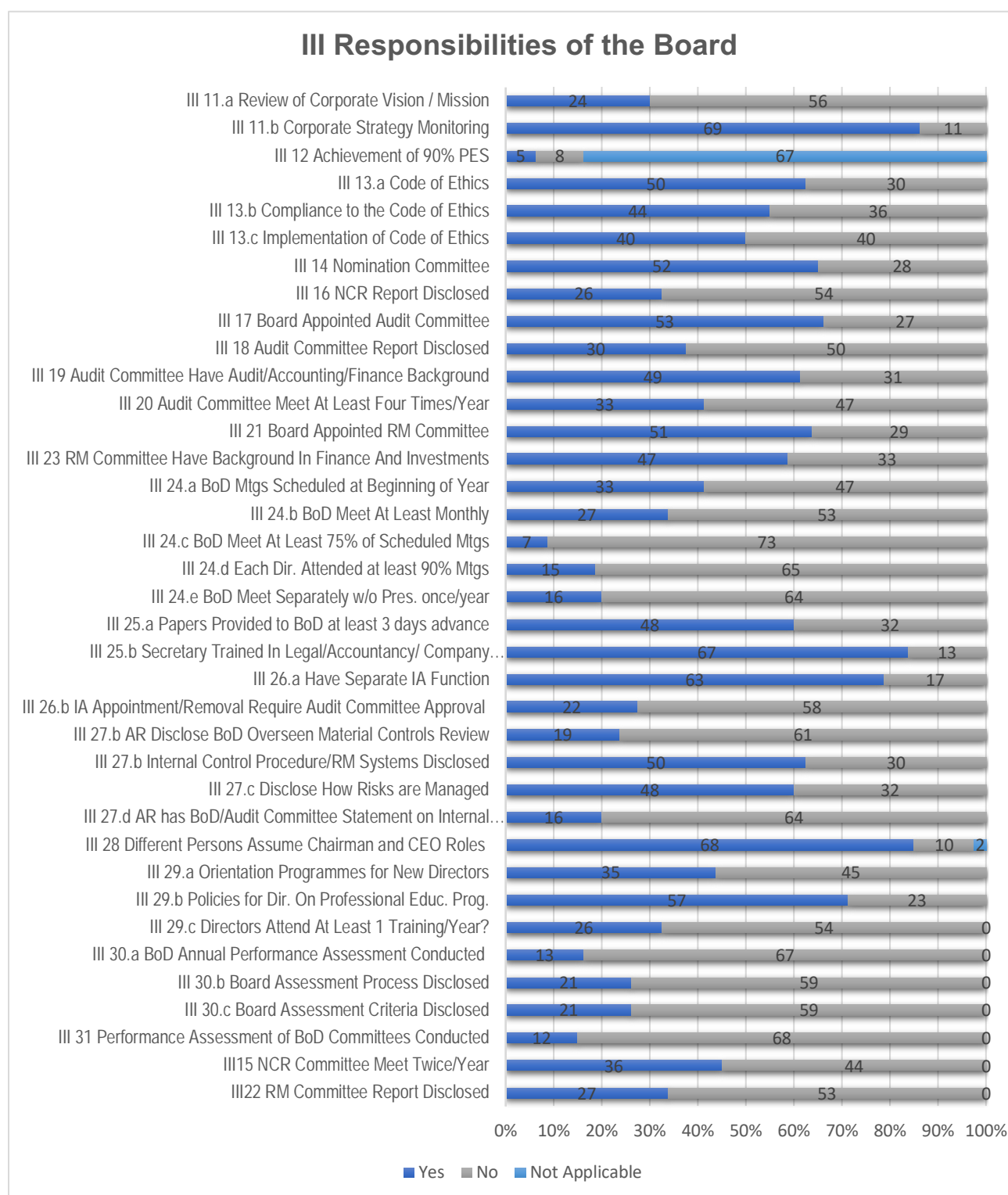


Figure 8 shows the compliance of GOCCs to the Disclosure & Transparency section of the CGS in 2019. Most GOCCs are able to adhere to the items of this section. The satisfactory level of adherence may be attributed to the other existing regulations and policies of the government requiring all public offices and agencies of disclosures. As seen in the figure, majority are able to comply with disclosures on corporate objectives, financial and non-financial performance indicators. However, GOCCs have the most difficulty in the timely release of their annual reports and audited financial statements.

Most GOCCs have the lowest compliance in the Responsibilities of the Board section. As shown in Figure 9, several GOCCs have difficulty in adhering to the standards on board protocols as well as practices and functions of the board. In 2015, there are still GOCCs that do not have the recommend board committees. There are also a number of GOCCs that were found to have constituted board committees, but such committees are not functional. Only 30% of the GOCCs have Board of Directors who review the corporate vision. Only 8.75% are able to conduct board meetings as scheduled. Several GOCC boards were unable to conduct meetings regularly, as prescribed by the governance code. In addition, there is low compliance on recommended practices on trainings and assessment of the board. Only 32% of GOCCs have Board of Directors who have attended director trainings, 15% of GOCCs have established board assessment procedures and 20% have put in place and reviewed internal controls.

Figure 9. GOCCs' Adherence to the Responsibilities of the Board Section of the CGS 2019



Overall, the results of the CGS assessment show inadequate stakeholder relationship policies and activities, insufficient transparency and incoherent disclosure practices, as well as weak board governance and accountability mechanisms.

CHAPTER 3: REVIEW OF RELATED LITERATURE

3.1 Introduction

This chapter provides a review of studies and research gaps on corporate governance in SOEs. It discusses the relevant theory, agency theory and further explains the importance of corporate governance in SOEs based on previous research works conducted.

3.2 Review of Related Studies

Corporate governance in SOEs has become an emerging concern and interest of governments, policymakers, economists, scholars, stakeholders and shareholders as brought about by the crucial role of SOEs in the society. There has been a growing interest in SOE corporate governance.

Studies that have associated corporate governance with stakeholder relationship has shown results of improved organization performance. Omukubi, Egessa and Kwendo conducted a study on sugar manufacturing SOEs in Western Kenya, where they investigated the linkage between stakeholder relationship and performance of the firm. The findings of the study show that stakeholder relationship as a component of corporate governance leads to increased firm performance (Omukubi, Egessa, & Kwendo, 2018). With this conclusion, the study recommended that management of the state-owned sugar firms should invest much of its resources in improving their stakeholder relationship, through regular stakeholder's communication of board and management changes, communication distribution to stakeholders in line with Corporation Act and Listing rules, and having roles/responsibilities clearly articulated in a memorandum of understanding. Another study by Vorster and Marais assessed the stakeholder management outcomes in Eskom, a state-owned utility generating electricity in South Africa. It was found that stakeholder management is an important component of ensuring a stakeholder-inclusive approach to corporate governance and achieving transparency and accountability. In the case of Eskom, it integrated stakeholder management with its transactional business practices and used integrated report as a key tool to communicate with the company's stakeholders (Vorster & Marais, 2014).

In a study by Ernst on methods for resolving problems of responsibility and transparency in SOE activities in market economies, he looked into the basic challenges and response options in developing good or adequate corporate governance structures for SOEs. By reviewing some examples of specific countries, he assessed lessons for the Ukrainian case (Ernst, 2004). One of the country examples was New Zealand, where at the core of its corporate governance structure is an intensive reporting program and schedule, including annual outlook

reports, business plans, Statements of Corporate Intent (SCI), as well as monthly, quarterly and annual financial reports. The SCI is a key document that sets the scope of business for the SOE and identifies broad goals and performance targets. In Greece, the operations of the SOEs are supervised by a board of directors, where the chairman of the board and the managing director sign a contract with the respective ministry which sets the annual targets for the implementation of an agreed-upon business plan. Similarly, SOEs must publish quarterly and annual financial statements, and submit strategic plans to the parliament. In South Africa, the government sees appropriate corporate governance structures for SOEs as means of protecting consumers. Many SOEs have established codes of conduct. In the South African approach to corporate governance rely on SOEs' "self-regulation" as the board and management are expected to uphold appropriate standards of ethics and probity which the government approves and monitors compliance. Corporate governance in Sweden is characterized by an explicit emphasis on the SOEs' ability to create value. A key element of which is a comprehensive system for external reporting that constitutes the most important source of information for assessing the SOE's capacity for creating value such as future cash flow with regard to the degree to which it has met its specific objectives. In Ukraine, serious approaches to improving corporate governance for SOEs stress disclosure and transparency, wherein efforts go beyond detailed reporting to insist on public disclosure. Publication of financial and operational reports facilitates the task of monitoring and strengthening performance by expanding the group of monitors and analysts to all interested parties (Ernst, 2004).

Most research conducted are empirical studies that have looked into the relationship between corporate governance and SOE performance, analyzing the effects of corporate governance on performance. A study by Heo, investigated whether good governance led to better SOE performance, and further looked into the specific aspects of corporate governance that have significant relationship with SOE performance. Heo identified the important dimensions of corporate governance explaining firm performance as: ownership structure, CEO duality board independence, board size, board committee, remuneration, performance monitoring, transparency and disclosure (Heo, 2018). Research on SOEs has shown a positive relationship between corporate governance and performance of SOEs.

Table 3.1. Prior Research on The Impacts of Corporate Governance in terms of the Board

Dimension of Corporate Governance (Board of Directors)	Relationship	Performance	Samples	References
Board composition (politically connected CEOs)	-	Stock price Earnings growth Sales growth	Partially Privatized SOEs in China	Fan, Wong, and Zhang (2007)
Board composition (Politically connected directors)	-	(+) Employment (-) Performance	Local public utilities in Italy	Menozzi, Gutiérrez Urtiaga, and Vannoni (2011)
Board composition (board quality)	+	Efficiency	Commercial SOEs in Lithuania	Curi, Gedvilas, and Lozano-Vivas (2016)
Board independence	+	ROE	SOEs in Lithuanian	Jurkonis and Petrusauskaitė (2014)
Board size and composition	+	Firm performance	SOEs in Kenya	Miring'u and Muoria (2011)

Source: Effects of Corporate Governance on the Performance of Sate-Owned Enterprises (Heo,2018)

In gathering data from previous research work conducted, it was found that the characteristics of the board of directors are significant in predicting SOE performance. In the study of Fan, Wong and Zhang on the relationship between board composition and financial performance of newly partially privatized SOEs in China, the politically connected CEOs negatively affected the financial performance of SOEs (Fan, Wong, & Zhang, 2007). Similarly, in the study of Menozzi, Gutierrez Urtigga, and Vannoni on the effects of board composition in 114 Italian local public utilities on employment and performance, results showed that politically connected directors significantly increased employment but decreased performance (Menozzi, Gutiérrez Urtiaga, & Vannoni, Board Composition, Political Connections, and Performance in State-owned Enterprises, 2011). Curi, Gedvilas, and Lozano-Vivas investigated on the impacts of corporate governance on the efficiency of commercial SOEs in Lithuania and found that board quality and strategic planning enhanced firm efficiency (Curi, Gedvilas, & Lozano-Vivas, 2016). In a study by Jurkonis and Petrusauskaite on Lithuanian SOEs, results showed that improved corporate governance practices, specifically board independence led to better financial performance (Jurkonis & Petrusauskaitė, 2014). Miring and Muoria investigated on SOEs in Kenya and found that larger board size and a higher ratio of nonexecutive directors on the board led to positive impacts on financial performance (Miring'u & Muoria, 2011).

Sari, Kuncoro and Sarjono investigated on the impacts of board structure to the roles of the board of directors in implementing good corporate governance in Indonesian SOEs. The empirical study indicated that existing board structure of Indonesian SOEs did not highly impact the performance of the board of directors (Sari, Kuncoro, & Sarjono, 2010). For instance, board size does not have an impact to the dynamics of the board, instead, knowledge, ability, experience and independency give more significant impact. In terms of composition, independent commissioners give advantage to the SOE in monitoring and controlling functions as well as formulating strategies. The study also showed that diversity in education and experience background of the members of the board enhance the performance of the board of directors. Likewise, according to OECD, “the boards of state-owned enterprises should have the necessary authority, competencies and objectivity to carry out their function of strategic guidance and monitoring of management” (OECD, 2006).

Board of directors has been a central focus in SOE corporate governance literature for years. As a dimension of corporate governance, it has been a central institution in internal governance of a company as it provides a key monitoring function for aligning the interests of agents and shareholders (O'Regan, O'Donnell, Kennedy, Bobtis, & Cleary, 2005). Many studies have recognized the effects of the board of directors and the impacts of its characteristics (board composition and board leadership, and board size) on firm performance (Kesner & Dalton, 1985, (Thomas, 1994, Peng, Buck, & Filatotchev, 2003). Khongmalai, Tang and Sieghthai conducted a study on corporate governance in Thai SOEs to develop a multi-attribute pattern of corporate governance and assess the relative importance of the different corporate governance practices. From a theoretical perspective, the study illustrated the multi-attribute nature of corporate governance model filling a gap in the corporate governance literature as most have tended to focus on a single practice or dimension of corporate governance. In the study, board of directors ranked as the third most important corporate governance practice in the case of Thai state-owned enterprises. The most important corporate governance practice was strategic human resource management and considered to be the most critical issue of corporate governance restructuring of Thai SOEs (Khongmalai, Tang, & Siengthai, 2010).

3.3 Agency Theory

The foremost and widely used theory is agency theory which posits that there are several relationships such as employer and employee, shareholder and management, and may more, that take the form of a principal-agent relationship (Berle & Means, 1932; Jensen &

Meckling, 1976; Ross, 1973; Watts, Watts, & Zimmerman, 1978). Agency theory views the firm as a nexus of contracts between principals (such as owners) and agents (such as managers and employees). Since agents do not completely share the owners' goals and because agents tend to have better information about the tasks, agents may have both motivation and opportunity to behave in a way that maximizes agents' own utility at the expense of principals (Jensen & Meckling, 1976). Agency theory argues that firms led by self-interested managers may grow to a point with diminishing returns to owners unless there are proper corporate governance mechanisms to rein in the managers.

Traditionally, the focus has been on shareholders and managers relationship, hence the "principal-agent problem" arising from the separation of ownership (shareholders/principal) and management of resources (managers/agent). In the principal-agent problem, the theory argues that when the principal and agent are different, their interests and objectives can differ, resulting in potential miscommunications in performance and expectations. The principal-agent problem causes information asymmetry, goal conflicts, and opportunistic behavior on the part of the contracting parties, especially the agent (Eisenhardt, 1989; Fama & Guthrie, 1983; Jensen & Meckling, 1976; Noreen, 1988). According to the theory, a potential governance problem is built into corporate system because of the separation of ownership from control. Agency problems emerge when the manager, who is a hired agent with the responsibility of representing the owners' best interests, pursues self-interest instead of the owners' best interests.

SOES are likely to suffer more severe agency problems than other firms. First, they undergo a "double agency" problem because an agent, who will usually be a politician with his own agenda, will represent the state's interests in the company. Second, they also suffer a "common agency" problem, because they are overseen by several levels of government, or by both the state and minority shareholders with potentially conflicting interests, which may be inconsistent with profit maximization. Even worse, they usually operate in non-competitive industries and therefore they do not benefit from the discipline of market pressure in case of underperformance. Managing multiple and potentially conflicting objectives is one of the central challenges in the governance of SOEs. All of these problems imply that good corporate governance can make a great difference for these firms (Menozzi, Gutiérrez Urtiaga, & Vannoni, 2011).

SOEs have the core problem in terms of separation of control and ownership—the owners in this case being the citizens of a country—but they also face additional challenges that can severely undermine their efficiency (Berle & Means, 1932; Jensen & Meckling, 1976).

Although an SOE has very diffused owners, it generally has a higher body or bodies that oversee it. This can be one or more ministries, an ownership entity specifically created to oversee SOEs, the parliament, or frequently some sort of combination. This complex agency chain through and across various levels of the government may bring difficulties that are not present in the more straightforward relationship between a company's board and managers on the one hand and its shareholders on the other (Estrin, 1998; OECD, 2005).

The challenge is to align the conflicting objectives and instill rules and processes to enhance the flow of information and performance monitoring. One of the arrangements for monitoring the activities of managers and providing them with the needed incentive to align their interest to that of owners is corporate governance. There is a need for incentives to encourage agents to act in unison with the principal's interest. Through corporate governance, rules under which the agent operates can be changed and the principal's interests can be restored. The role of corporate governance is to identify clear reporting rules and objectives for agents, performance criteria against which they will be evaluated, and incentives (or consequences) that flow from the evaluation results. Solutions to agency problems include establishing contracts between the owners and management of the company, setting clear legal frameworks, and improving the composition and independence of the board of directors.

3.4 Importance of Corporate Governance in SOEs

Recent studies on transition and developing economies have given attention to such corporate governance issues wherein the fundamental problems in the governance of SOEs explain much of the poor performance of SOEs (The World Bank, 2006). Studies show that a good corporate governance system in general is associated with a number of benefits for all companies, private or state owned. As documented by Claessens and Yurtoglu, good corporate governance leads to a number of positive outcomes such as better access to external finance, lower costs of capital and higher firm valuation, improved strategic decision-making and operational performance, reduced risk of corporate crises and scandals, and better relationships with stakeholders (Claessens & Yurtoglu, 2012). In addition, benefits also include better allocation of resources and more efficient management. Not all, but many of these benefits apply to SOEs. Moreover, corporate governance is intended to drive better decision making, resulting in efficiency gains and more outputs (Heo, 2018).

Taken together, the benefits can boost the efficiency of SOEs and, in turn, that of the economy as a whole. For instance, transactions among companies are more competitive and transparent and there is more efficient allocation of resources. These result to reduced fiscal

burden and risk of SOEs and lead to greater public and private investment in critical sectors such as infrastructure. Overall, these contribute to competitiveness and growth; reduce vulnerabilities and promote financial sector development more broadly. The underperformance and high opportunity costs of SOEs are symptomatic of a number of underlying problems. Exogenous factors, such as shifts in commodity prices, may play a role, as do sector-specific factors such as public service obligations and regulated prices. However, there is increasing recognition that poor corporate governance of SOEs is at the center of the matter. Understanding the governance challenges and addressing them in SOEs that play significant roles in an economy are thus a central concern for economic growth and financial sector development.

The OECD and the World Bank emphasize corporate governance as a means to enhance operational efficiency and effectiveness of SOEs (OECD, 2005; World Bank, 2014). Rising stakeholder expectations have forced governments in many countries to reform the corporate governance systems of state-owned enterprises, with expectations of improving their operations to reduce deficits and to make them strategic tools in gaining national competitiveness (Parker, 1999; Dockery and Herbert, 2000). Corporate governance consists of having well-defined stakeholder relationships and rights, strong board practices and commitment, effective internal controls, and complete transparency and disclosure.

3.5 Summary

In reviewing the related literature, it can be observed that there are only a few empirical studies conducted on the impacts of corporate governance on SOEs as most are on private firms. In addition, such studies on SOEs have been limited to a few countries. The main constraint to conducting research is the limited data available. Furthermore, one of challenges is the complexity of measuring the performance of SOEs. With SOEs having both financial performance and social objectives, it is difficult to comprehensively measure their performance.

Empirical research on SOE governance is a growing field. Most studies on SOE corporate governance investigated on the relationship between corporate governance and performance. Several were empirical studies that used quantitative methods showing which dimension or attribute of corporate governance impacts performance. Moreover, majority of the studies investigated on the board of directors and very few on other aspects of corporate governance such as transparency and disclosure as well as stakeholder relationships.

It is evident that there are very few studies on the assessment of corporate governance of SOEs. Likewise, there is very limited data of on corporate governance of SOEs of most countries. There is challenge in examining the relationship of corporate governance and performance, when there is inadequate data and analysis of SOE corporate governance. Sufficient data on corporate governance of SOEs of a country is needed and useful in producing more valuable analysis when relating corporate governance to performance. The lack of qualitative empirical research and the immense focus on regressions analyses should consider different methods and more sources of data. Hence, to address the mentioned gaps, this study intends to contribute relevant data and analysis on SOE corporate governance.

CHAPTER 4: RESEARCH APPROACH AND METHODOLOGY

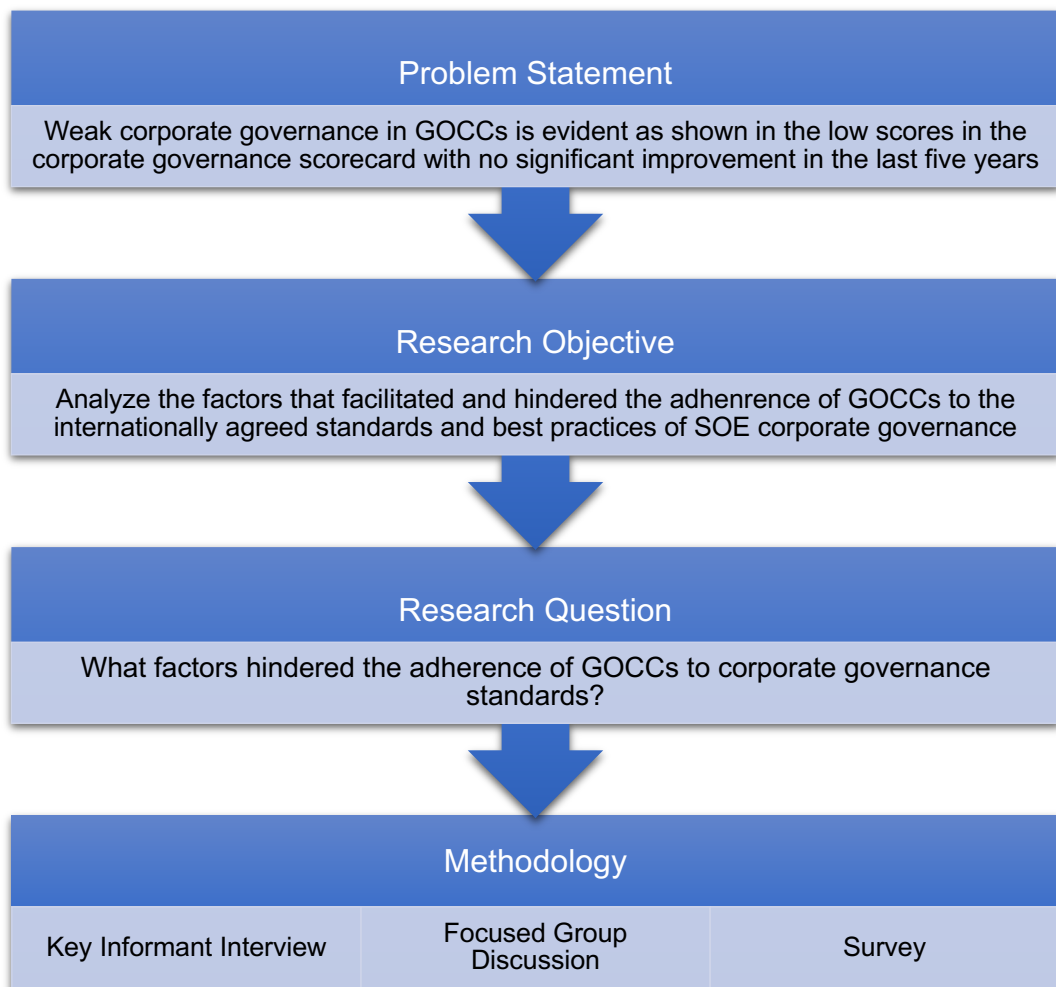
4.1 Introduction

This chapter discusses the research approach and methods the author conducted to attain the research objective. It outlines the process and steps on how data were gathered and analyzed.

4.2 Research Framework

With the context and background discussed as well as related literature reviewed in the previous chapters, figure 10 below outlines the process of the research to attain the identified objective.

Figure 10. Research Framework



Discussed in previous chapters are the background on GOCCs in the Philippines and the governance challenges and issues they face. Weak corporate governance in GOCCs is evidenced by the low scores in the corporate governance scorecard (CGS). The CGS consists of internationally agreed standards and best practices. It is the tool being used to assess the governance practices of GOCCs annually. Based on the annual results of CGS assessment, majority of the GOCCs continue to score low with no significant improvement in the last five years. In 2015, 88% of the GOCCs scored below 80.00% and in 2019, 75% of the GOCCs still scored below 80.00%. The objective of this research is to analyze the factors that hindered the adherence of GOCCs to the internationally agreed standards and best practices of SOE corporate governance. The study will answer the research question “What factors hindered the adherence of GOCCs to corporate governance standards?”

4.3 Methodology

The research is an explanatory study that uses qualitative research method to describe the factors that facilitated and hindered the adherence of GOCCs to corporate governance standards. An explanatory study answers “what” and “why” questions leading to an improved understanding of an undefined problem. This method is widely used in social research to investigate a phenomenon and distinguish its causes and factors why certain phenomena arise. The purpose of an explanatory study is to develop a deeper understanding of the cause of the occurrence or problem (Holden & Linch, 2004). It investigates an occurrence or problem that had not been studied before or had not been previously explained (Kothari & Sullivan, 2004). There are no studies on Philippines’ GOCCs’ corporate governance practices that have been conducted as most studies focused on the performance of GOCCs.

A qualitative research method is geared towards creating a complete and detailed description of observations; it provides a contextualization and interpretation of data gathered (Macdonald & Headlam, 2008). Accordingly, this study uses qualitative research method in order to contextualize the case of Philippines’ GOCCs and provide a detailed description of their experience and observations in adhering to corporate governance standards. As qualitative research is intended to generate knowledge grounded on experience (Sandelowski, 2004), this study gathers in-depth insights to understand the experiences of the GOCCs.

4.3.1 Data Collection Methods

Depending on the research question, qualitative research uses a variety of data collection methods such as in-depth interviews, focus groups, and observations (Mills & Birks, 2014).

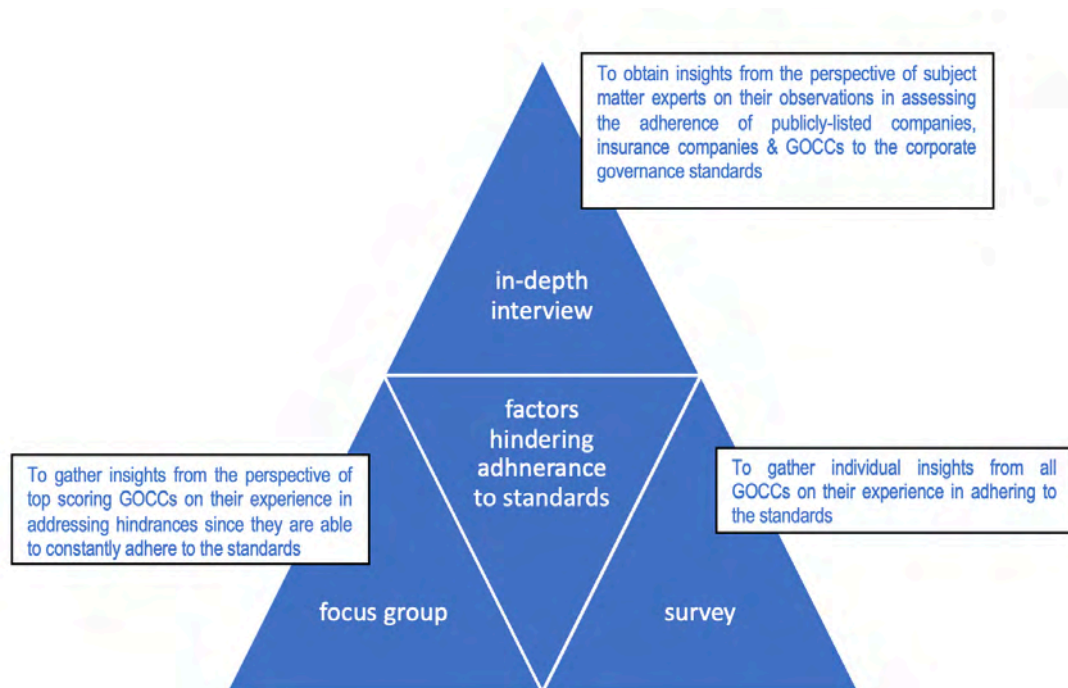
Table 4. Data Collection Methods in Qualitative Research

METHOD	DESCRIPTION
IN-DEPTH INTERVIEWS	collecting data of personal histories, perspectives, and experiences, particularly when specific topics are being explored from an individual knowledgeable on the topic or with experiences relating to the topic
FOCUS GROUPS	is eliciting data through group interview involving a group or a small number of people who have common experiences or traits to generate overviews of an issue or concern
OBSERVATIONS	watching of behavioral patterns of people in certain situations to obtain information about the phenomenon; to collect data on naturally occurring behaviors in their usual context

Source: Qualitative Methodology: A Practical Guide (Mills & Birks, 2014)

Since the research question asks for factors that hinder the adherence of GOCCs, it seeks to gather data on the experience, perspective or overview of individuals or group of individuals. The in-depth interview and focus groups are the appropriate methods in gathering data on the experience and perspective of GOCCs. In lieu of individual interviews with 83 GOCCs, a survey will be conducted to elicit data from all GOCCs. The author applies a triangulation which refers to “the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena” (Carter, Bryant-Lukosius, Dicenso, Blythe, & Neville, 2014, p.546). Triangulation is mainly used in qualitative research to enhance the validity and credibility of findings, by convergence of information from different sources. Types of triangulation are method triangulation, investigator triangulation, theory triangulation and data source triangulation (Denzin, 1978; Patton, 1999). Method triangulation involves the use of multiple methods of data collection about the same phenomenon (Polit & Beck, 2012). The author uses three methods namely, in-depth interview, focus group and survey in collecting data as seen in the Figure 11 below:

Figure 11. Method Triangulation



4.3.1.1 In-depth Interview

An in-depth interview is conducted to obtain insights from the point of view of subject matter experts on their observations for the years they have assessed the adherence of publicly-listed companies, insurance companies and GOCCs to the corporate governance standards. The participants of the in-depth interview are subject matter experts in the field of corporate governance, the corporate governance analysts of the Institute of Corporate Directors (ICD). A subject matter expert “has specialist skills, knowledge, and experience in particular field” (Hopkins & Unger, 2017, p.228). Their skills, knowledge and experience are acquired over many years and are demonstrable. In addition, their expertise are recognized by their industry and peers (Hopkins & Unger, 2017). The ICD is a non-stock, not-for-profit organization working on professionalizing corporate directorship and raising the corporate governance standards of the Philippines. The ICD has several years of experience in corporate governance work, continuously collaborating with organizations and institutions such as OECD, ADB, IFC and institutes of directors of several countries. ICD was a pioneer in the development of the ASEAN corporate governance scorecard. It has also been working with the Securities and Exchange Commission (SEC) and Insurance Commission in assessing the corporate governance practices of publicly-listed companies and insurance companies in the Philippines. The ICD also took part in developing the corporate governance scorecard for GOCCs and in

the initial years of the scorecard assessment. The 2 corporate governance analysts of ICD were selected for their knowledge and years of practice. The interview consisted of open ended questions. The corporate governance analysts discussed their observations from their annual scorecard assessment of publicly-listed companies, insurance companies and GOCCs. ICD corporate governance analysts also shared the feedbacks of these companies on their experience in adhering to the standards.

4.3.1.2 Focus Group Interview with top ranking GOCCs

A focus group interview is carried out to gather insights from the perspective of top scoring GOCCs on their experience in constantly being able to adhere to most of the corporate governance standards. The participants are GOCCs who have been consistently scoring 80.00% and above in the CGS for the past 5 years. Top ranking GOCCs were selected to elicit best practices as well as gather their observations and experience in addressing hindrances to adhering to the standards. 12 GOCCs attended whose participants were corporate secretaries, compliance officers and corporate planners who have been working on the CGS of their GOCCs for several years. These participants have been in their GOCC since the Governance Commission for GOCCs started the scorecard initiative. The focus group interview consisted of open ended questions to gather insights from the point of view of GOCCs. Through the open-ended questions, the participants discussed their experiences in their GOCCs for the years they have worked on adhering to the standards.

4.3.1.3 Survey

The survey is composed of open-ended questions and semi-structured questions. The semi-structured questions also provided an additional comments section for participants to elaborate their answers. The semi-structured questions of the survey were formulated based on i) the responses from the in-depth interview with corporate governance analysts and focus group interview with GOCCs and ii) review of relevant survey questionnaires used by institutions and organizations on assessing compliance function and audit in banks. Appendix C shows the survey questionnaire and Appendix D shows the steps how the survey questionnaire was developed.

For validity and reliability of the survey questionnaire, the set of questions were reviewed by the ICD corporate governance analysts. A pilot testing to GCG officers and assessors was then conducted. After minor adjustments from the review and pilot testing, the refined survey questionnaire was distributed to the GOCC participants through Google Forms

online. For the sampling, all 83 GOCCs being assessed against the corporate governance scorecard annually were selected. As a purposive sampling, the targeted participants are the corporate secretaries, compliance officer and other corporate governance focal persons of each GOCC.

4.3.2 Method of Data Analysis

A method widely used in qualitative data analysis is Thematic analysis which involves systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set (Braun & Clarke, 2012). Thematic analysis is an appropriate method of analysis for seeking to understand experiences, thoughts, or behaviors across a data set. Accordingly, this method of data analysis is used to understand the experiences and thoughts of the GOCCs. Thematic analysis is a method used in analyzing large qualitative data sets (Nowell, Norris, White, & Moules, 2017). Using a thematic analysis, data gathered are examined to identify repeated ideas and establish sets of codes and draw overarching themes.

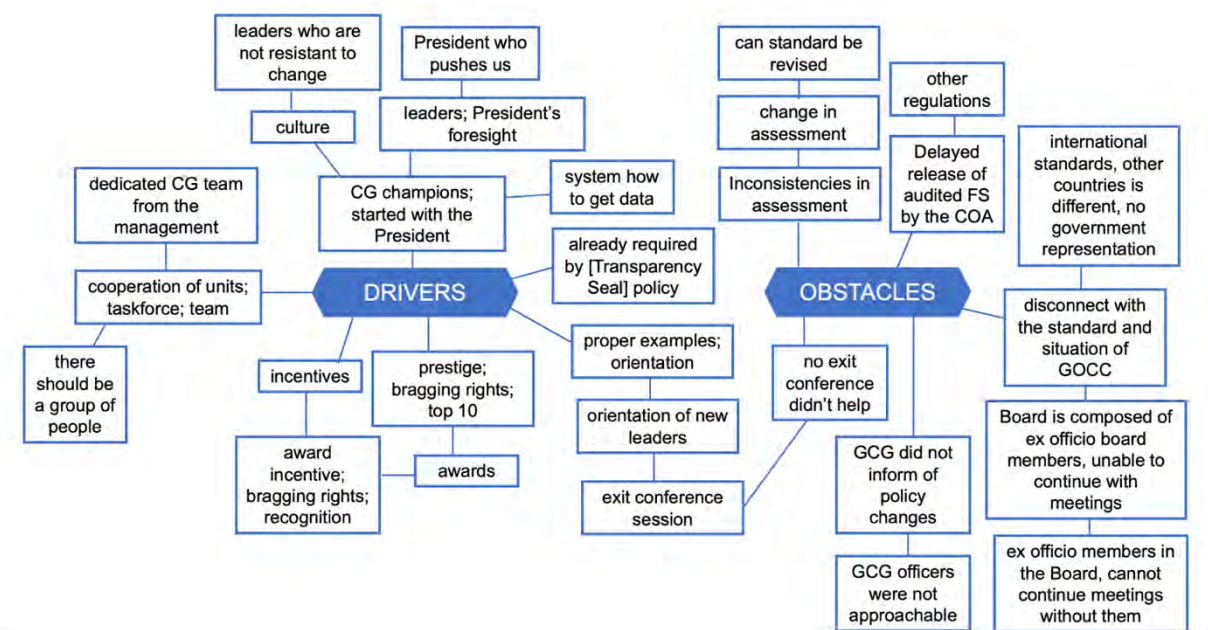
The framework for conducting thematic analysis involves a six-step process (Kiger & Varpio, 2020):

- 1) familiarizing with the data
- 2) generating initial codes
- 3) searching for themes
- 4) reviewing themes
- 5) defining and naming themes
- 6) producing the report

First step is *familiarizing with the data* which entails repeated and active reading through of the data (Braun & Clarke, 2006). The author reads through the transcripts of the in-depth interview with the corporate governance specialists and of the focus group interview with GOCCs as well as the data collected from the survey. The second step is *generating initial codes*, where a code is defined as “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon” (Boyatzis, 1998, p.63). Coding can be inductive or deductive. Inductive is reflective of pertinent issues raised by the data alone while deductive is guided by specific theories or theoretical frameworks (Attride-Stirling, 2001). The author used inductive approach in coding as codes were generated from the data set itself, the responses of the participants. Appendix E show the coding of the transcripts from the in-depth and focus group interviews as well as responses from the survey. The third step is *searching for themes*, which consists of examination of the

coded data extracts and to look for potential themes of broader significance (Braun & Clarke, 2006). Themes are actively constructed patterns (or meanings) derived from a data set that answer a research questions (Kiger & Varpio, 2020). In inductive approach, the themes are derived from the coded data where the theme identified is reflective of the entire data set. While in the deductive approach, theories or theoretical framework determines the theme development (Braun & Clarke, 2006). As the author used inductive approach in coding, consequently, inductive approach is used to theme development. When creating and organizing themes, thematic maps are used to visually demonstrate cross-connections between concepts and among main themes and sub-themes (Braun & Clarke, 2006). The author mapped out the codes into a thematic map, where similar concepts were cross-connected. Figure 12 below is the thematic map for the codes created from the transcripts of the focus group interview with GOCCs.

Figure 12. Thematic Map of Codes from Transcripts of Focus Group Interview with GOCCs



In the thematic map, similar codes were put together and connected. In step 4, *reviewing themes*, relevant codes and data extracts under each theme are reviewed whether coded data are coherent in supporting such the themes. Coded data within each theme should have adequate commonality and coherence in supporting their respective themes. Themes are likewise reviewed if these interrelate or are able to represent the question or construct of interest (Braun & Clarke, 2006). Step 5 is *defining and naming themes*, each definition and narrative description of each theme is created (Braun & Clarke, 2006). It is being checked which aspects

of the data set is covered by each theme. Lastly, step 6 is *producing the report*, which involves writing the final analysis and findings (Braun & Clarke, 2012).

CHAPTER 5: DATA ANALYSIS and FINDINGS

5.1 Introduction

This chapter presents the data collected, analysis and findings. It begins with presenting profile of respondents to the survey. It proceeds to presenting data collected (from the in-depth interview, focus group interview and survey) and data analysis of the drivers of adherence to corporate governance. Then, it presents data collected and data analysis of the obstacles to adherence to corporate governance.

5.2 Profile of Respondents

There were 74 respondents out of the 83 invited to participate in the survey. The respondents of the survey are the personnel who are the focal persons for corporate governance matters of their GOCC. Their designation and office unit were inquired as well as the number of years they have been an employee of their GOCC.

Figure 13. Respondents Distribution by No. of Years in the GOCC

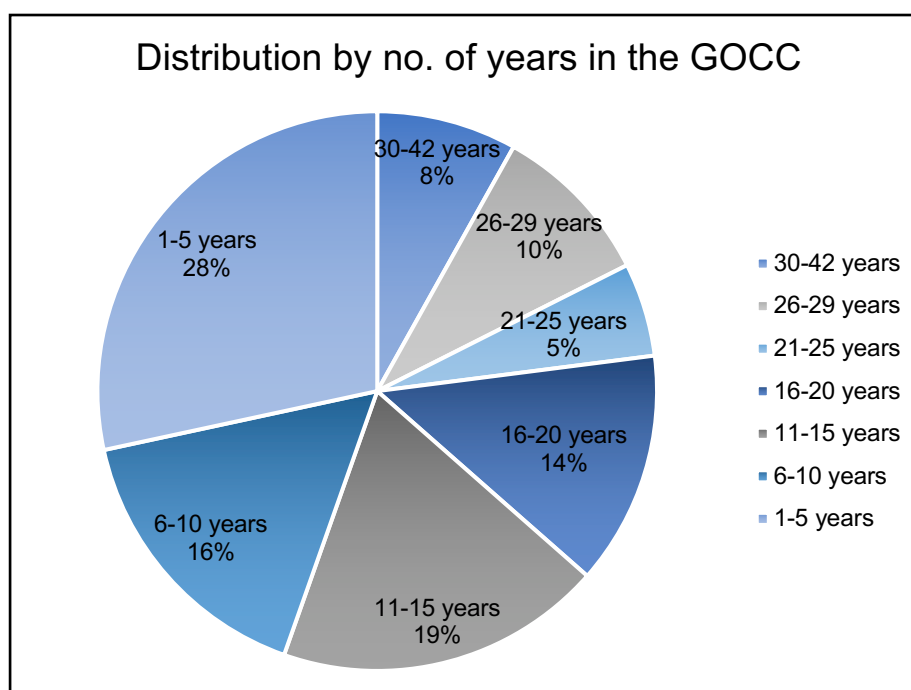


Figure 13 shows the distribution of the respondents by the number of years they have been in the GOCC. This attribute was asked since the author associates the number of years being in the GOCC with the familiarity and knowledge of the respondent of his/her GOCC. The length of years of an employee is associated with his/her institutional knowledge; of how much he/she knows of his/her GOCC as an organization. Having institutional knowledge and familiarity of

the organization gives the respondent an adequate basis to answer the survey and provide insights on his/her observations and experiences in the GOCC.

Data shows 28% of the respondents have been in his/her GOCC for 1-5 years, 19% for 11-15 years, 16% for 6-10 years, and 14% for 16-20 years. On the other hand, 8% have been an employee of his/her GOCC for 30-42 years, 10% for 26-29 years, and 5% for 21-25 years. Overall, 72% of the respondents have been in their GOCC for at least 6 years, this length of period as an employee implies they have familiarity of their organization and sufficient institutional knowledge.

The designation or position of the respondents is considered important information as this is also a basis of the respondent's adequate capacity and knowledge to answer the survey. The figures (Figure 14 and 15) below shows the distribution of the designation/ position of the respondents and their departments.

Figure 14. Respondents Distribution by Designation/Position

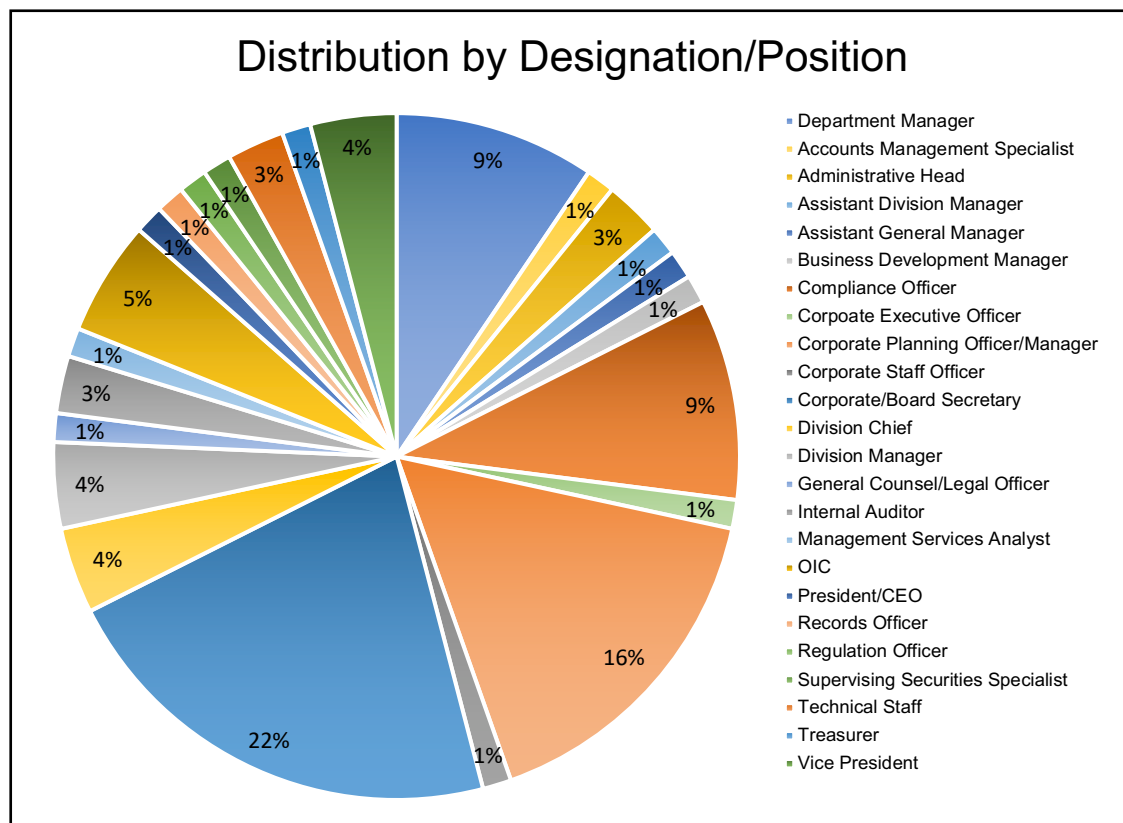
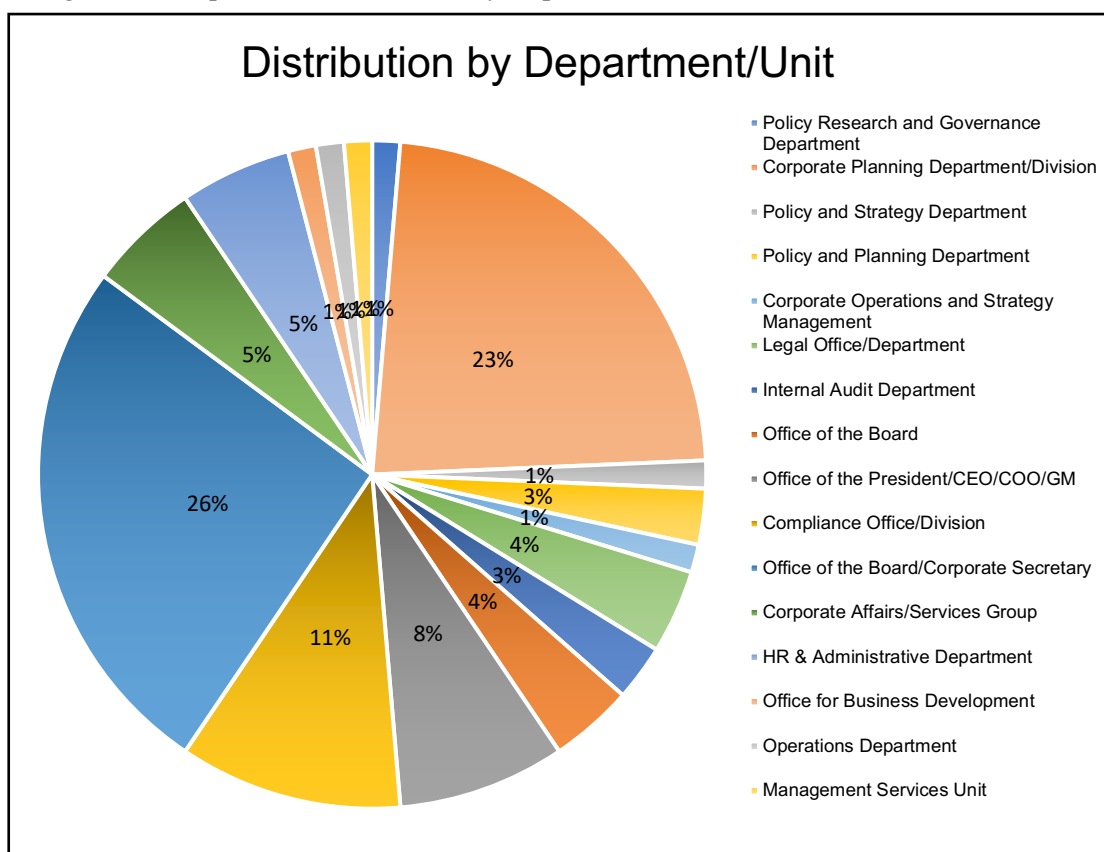


Figure 15. Respondents Distribution by Department/Unit



Most of the respondents, 22%, are Corporate/Board Secretaries, which is commonly the personnel in the most GOCCs assigned to corporate governance and compliance functions. Second is the Corporate Planning Officers, 16% of the respondents, followed by Compliance Officers and Department Managers, both 7% of the respondents. The rest of the respondents are Officers-in-Charge, Division Managers and Division Chiefs, and the Vice Presidents. Unique to other GOCCs, respondents were the President/CEO, General Counsel/Legal Officer, Internal Auditor, Technical Staff, Administrative Staff, Regulation Officer, Records Officer, Treasurer, Supervising Securities Specialist and Management Services Analyst.

Accordingly, 26% are from the Office of the Board/Corporate Secretary, 23% from the Corporate Planning Office, and 11% from the Compliance Office/Division of their GOCC.

5.3 Data Presentation, Analysis and Findings

As discussed in the previous chapter, a thematic analysis is used in the data collected from the in-depth and focus group interviews and survey.

5.3.1 Drivers of Adherence to Corporate Governance Standards – Data Presentation and Analysis

The open-ended question asked “What are the major drivers that facilitate adherence to the corporate governance standards? This question was asked in the in-depth interview with ICD corporate governance analysts, in the focus group interview with top GOCCs and in survey with all GOCCs. Below are highlights of the responses:

Table 5. In-depth Interview with ICD Corporate Governance Analysts on "Drivers"

Responses of ICD corporate governance analysts
<ul style="list-style-type: none"> ▪ “Board of directors’ perspective and acceptance on findings and recommendations” ▪ “for those who score well, most of them have CG champions in their board, the approach is from top to bottom” ▪ “in some dedicated CG team, the approach is from management to board (bottom-up), it would depend if they get the trust of the board” ▪ “either way, collaborative effort is the secret of companies to have a good CG performance” ▪ “it is easier for banks, so for GFIs to comply because of BSP; in other countries, SOEs are listed. If GOCCs will be listed, they will be pushed more to comply”

Table 6. Focus Group Interview with top GOCCs on "Drivers"

Responses of top GOCCs
<ul style="list-style-type: none"> ▪ “Incentives for directors, that is one driver that make the organization follow or comply” ▪ “cooperation of units, in PNOC-EC, the approach is decentralized but with the compliance officer as the lead, it’s like a task force that works with their respective contribution per unit, that’s why we get to comply on time. It’s a joint team since the data come from different units such as the HR, planning, finance and office of corporate secretary, there are point persons per unit” ▪ “for us it’s the culture in Land Bank, as a bank, we are already used to these kinds of requirements especially because of BSP [<i>Bangko Sentral ng Pilipinas</i>]; it is not new to us, we just need to consolidate information from different units. It’s really our culture” ▪ “in National Power Corporation (NPC), it is really the CG champions, in our case, it started with our President, she wanted to professionalize the conduct of board meetings, etc. Eventually she became a fellow of ICD. The ICD and GCG has been working on this right?” ▪ “another driver for us is the prestige, as there is no really monetary incentives, we really just wanted to be part of the top 10, as it’s always just the government financial institutions as expected; it is bragging rights for us, that maybe we will be the top for the energy sector. We always review where did we fail? Maybe next year, we try to improve on our practices” ▪ “it has become a culture for us, we have imbibed it, it is not just because we want to comply” ▪ “in PCIC, leaders is a big factor, our president’s foresight, at the start she asks us to prepare our annual report and fix our ISO certification, so when the GCG implemented the CGS, we are already with all our documents” ▪ “there should really be people or a group, but it is really the leader, the president who pushes us to comply” ▪ “for GSIS, it’s the award incentive, the bragging rights to be part of the top 10. For us in the institution, it being given recognition” ▪ “during the inception of the CGS, during the orientation, our leaders were still very open and receptive. The CGS has new items that we do not really do in terms of reporting, board assessment and schedule of meeting. The new leaders were not resistant to change” ▪ “there are already reportorial requirements being asked by the Transparency Seal” ▪ “we were able to establish a system on how to get data”

- “benchmark of actual practices from international SOEs and proper examples during the orientation
- “exit conference session really helps for us to be more clarified of the assessment results”

Table 7. Survey with all GOCCs on "Drivers"

Responses of GOCCs in the Survey
Performance evaluation
PBB entitlement
Government regulation, policy issuances
Organized preparation of documents for easy reference and submission
Adherence to existing laws and the guidelines thereof
Management and Board of Directors
Management Support in the attainment of Performance Targets.
Guidance from regulators
Compliance with regulatory requirements such as BSP, GCG, AMLA, SEC and other regulatory bodies
Online submission of compliance reports
Cooperation of the units concerned
leadership of the Executive Committee, pursuit of excellence embodied in vision-mission and quality objectives
Proactive management
Employee cooperation
Management directives and in pursuit of the principle of good governance
complete orientation of all requirements from GCG and annual exit conference meeting
(1) Doing things right - complying with the best corporate practices; (2) giving recognition to the good work of PNOC EC's personnel by getting a high rating in the CGS
It is a GCG requirement for compliance
Consistent monitoring and supervision
Agency Strategic Plan, directives of oversight agencies, mandate
Quality of Service / Quality Management System
For Compliance to GCG Requirements
value adding impact to the organization
strict monitoring of compliance to regulatory requirements
Compliance with the principle of transparency in the government service
And ofcourse the persistent follow-ups of Corporate Governance Officers of GCG
Close coordination and cooperation among functional groups/teams
Supportive board and senior management
The major driver that facilitates CG compliance is the Corporation's adherence with the law
Compliance to GCG policies and guidelines; desire to increase productivity and competence of the Authority
GOCC's adherence to corporate governance standards helps to identify the GOCC's' strengths and weaknesses compared to existing corporate governance provisions and their adherence to best practices and international standards, thereby ensuring the improvement in the transparency of GOCCs on corporate governance initiatives and practices
Board and Management support and commitment to good governance
Compliance with good corporate governance as condition precedent to PBB and PBI
Management instructions
and based on the expected contributions from a given unit or department
willingness of leaders; commitment to service excellence
Good leadership

The system is already in place
Board policies in place that supports and directs the agency's compliance with corporate governance practices
Corporate governance is important because it determines how SHFC operates, taking into account the interest of all its stakeholders. Good corporate governance leads to ethical business practices, which leads to financial viability
Head of Agency's drive to comply
cooperative and competent members of Technical Working Group for the NFA-CGS
organizational culture
leadership of top management
Strict observance and adherence to the corporate governance rules and principles provided in the Code of Corporate Governance for GOCCs
reports re submitted through emails and GCG reminds us always of the schedule of submission
From a low score and ranking in the 2016 Corporate Governance Scorecard (58.50%), SB Corporation has improved its scores (79.50% in 2017, 93.00% in 2018, 97.27% in 2019 and 96.88% in 2020). The GCG Corporate Governance Scorecard (CGS) Orientation conducted last May 16, 2019 with detailed explanation and examples has contributed to a better understanding of the disclosure requirements of the CGS. Most of the disclosure requirements were found to be already in place while some needed improvement
The Office of the Chief Compliance Officer (now Office of the Board Secretary and Chief Compliance Officer) has coordinated with the concerned units and consolidated all disclosure requirements. The same office has also coordinated with the GCG Corporate Standards Office in clarifying the CGS requirements to ensure that the same are met
Transparency from Governing Board to the lowest rank in the organization
To be able to comply with the directives of GCG and to become a better and organised GOCC
Inquiries with the Person in Charge in GCG
strict monitoring by the GCG
If I may answer on behalf of our organization and based on the CG compliance, the underlying drive comes from the concept of good governance and one way of establishing that is to control and/or mitigate risk, maximize opportunities and ensure accountability, transparency, and integrity across the organization.
commitment of employees

From the transcripts and responses, initial codes were generated. Tables below show transcripts/responses and corresponding codes for each.

Table 8. In-depth Interview Transcript and Codes

interview with corporate governance analysts	code
"Board of directors' perspective and acceptance on findings and recommendations"	board of directors' perspective
"for those who score well, most of them have CG champions in their board, the approach is from top to bottom"	CG champions in the board of directors
"in some dedicated CG team, the approach is from management to board (bottom-up), it would depend if they get the trust of the board"	dedicated CG team from the management
"either way, collaborative effort is the secret of companies to have a good CG performance"	collaborative effort

Table 9. Focus Group Interview Transcript and Codes

interview with GOCCs	code
"incentives for directors, that is one driver that make the organization follow or comply"	incentives
"cooperation of units, in PNOC-EC, the approach is decentralized but with the compliance officer as the lead, it's like a task force that works with their respective contribution per unit, that's why we get to comply on time. It's a joint team since the data come from different units such as the HR, planning, finance and office of corporate secretary, there are point persons per unit"	cooperation of units; taskforce; team
"for us it's the culture in Land Bank, as a bank, we are already used to these kinds of requirements especially because of BSP [<i>Bangko Sentral ng Pilipinas</i>]; it is not new to us, we just need to consolidate information from different units. It's really our culture"	dedicated CG team from the management
"in National Power Corporation (NPC), it is really the CG champions, in our case, it started with our President, she wanted to professionalize the conduct of board meetings, etc. Eventually she became a fellow of ICD. The ICD and GCG has been working on this right?"	CG Champions; started with President
"another driver for us is the prestige, as there is no really monetary incentives, we really just wanted to be part of the top 10, as it's always just the government financial institutions as expected; it is bragging rights for us, that maybe we will be the top for the energy sector. We always review where did we fail? Maybe next year, we try to improve on our practices"	prestige, bragging rights, top 10
it has become a culture for us, we have imbibed it, it is not just because we want to comply"	culture
"in PCIC, leaders is a big factor, our president's foresight, at the start she asks us to prepare our annual report and fix our ISO certification, so when the GCG implemented the CGS, we are already with all our documents"	leaders; president's foresight
"there should really be people or a group, but it is really the leader, the president who pushes us to comply"	there should be people or group president who pushes us
"for GSIS, it's the award incentive, the bragging rights to be part of the top 10. For us in the institution, it being given recognition"	award incentive; bragging rights; recognition
"during the inception of the CGS, during the orientation, our leaders were still very open and receptive. The CGS has new items that we do not really do in terms of reporting, board assessment and schedule of meeting. The new leaders were not resistant to change"	leaders were not resistant to change
"there are already reportorial requirements being asked by the Transparency Seal"	already required by [Transparency Seal] policy
"we were able to establish a system on how to get data"	system how to get data
"benchmark of actual practices from international SOEs and proper examples during the orientation"	proper examples; orientation
"exit conference session really helps for us to be more clarified of the assessment results"	exit conference session

The coding for the survey responses from GOCCs is found in Appendix F. From generating initial codes, coded data were mapped out in order to search and formulate themes. Below are the thematic maps for each set of coded data

Figure 16. Thematic Map for In-depth Interview Coded Data

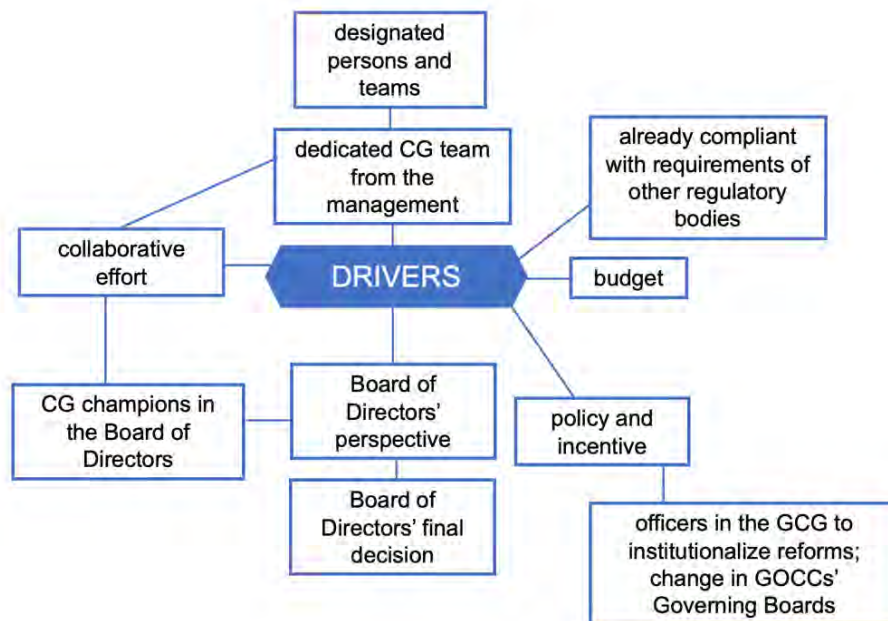


Figure 17. Thematic Map for Focus Group Interview

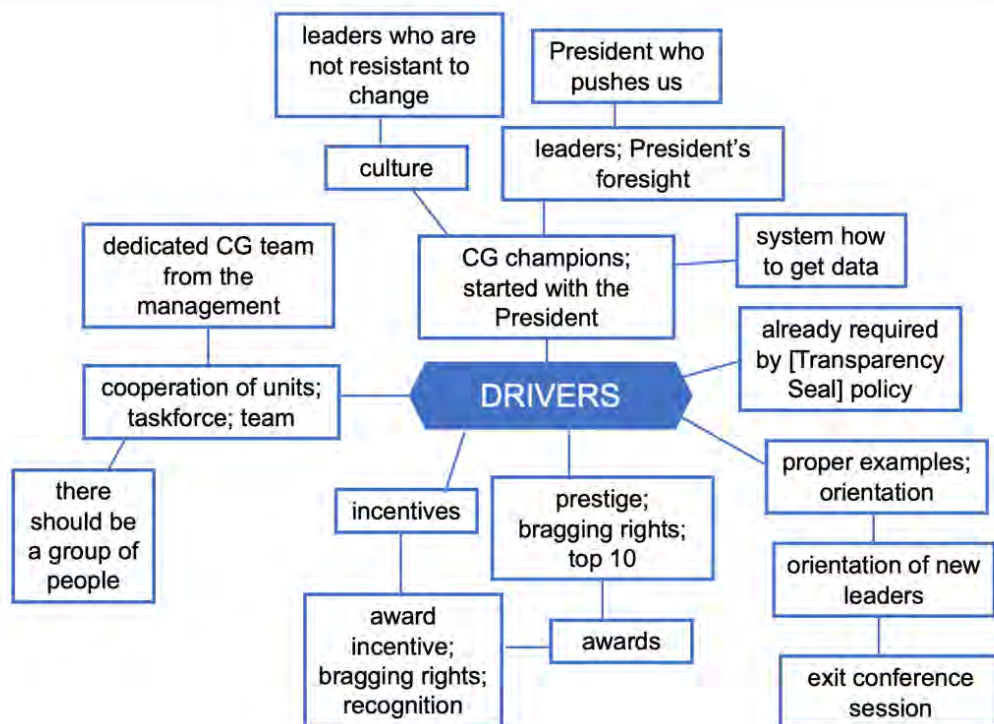
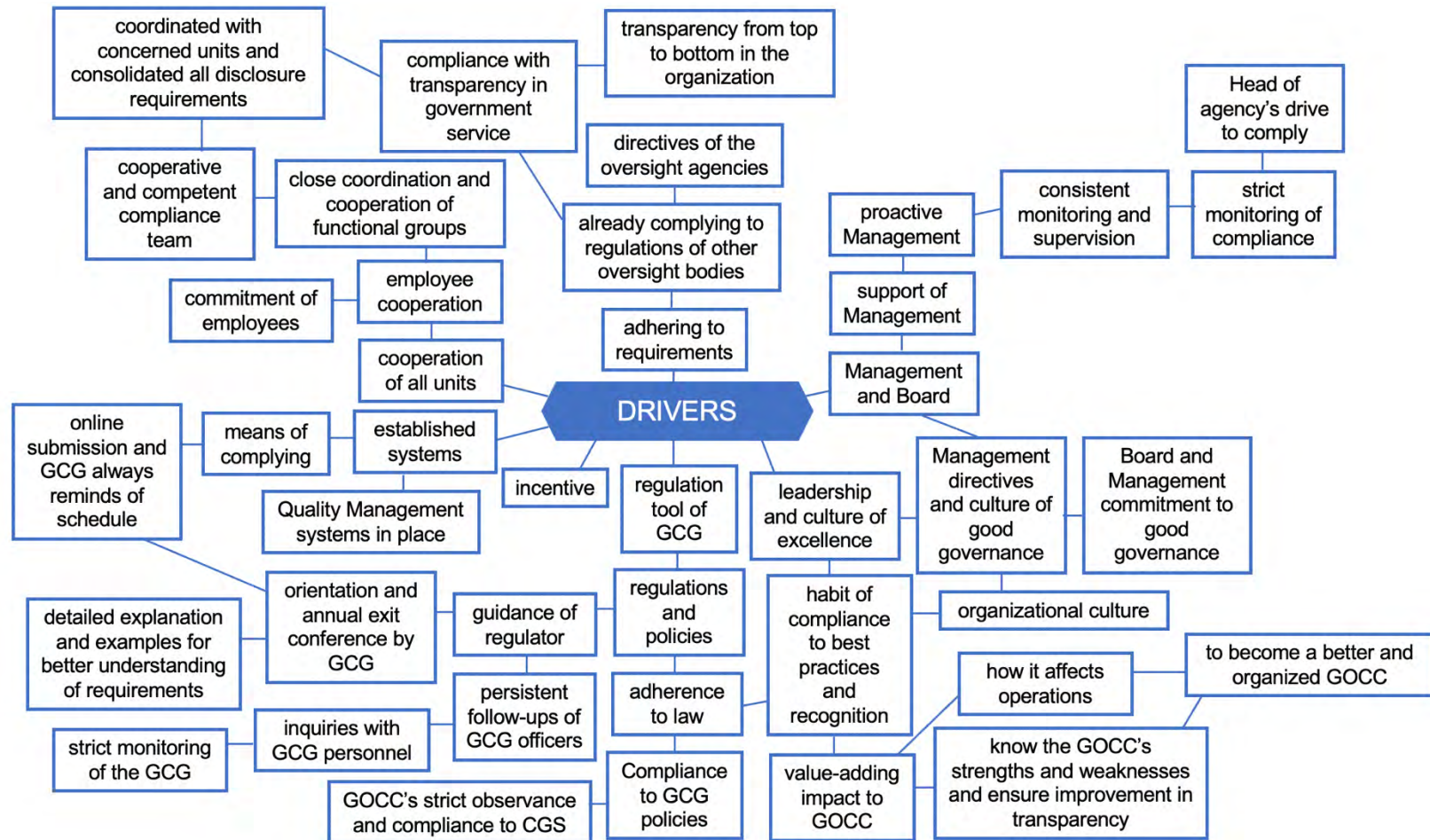
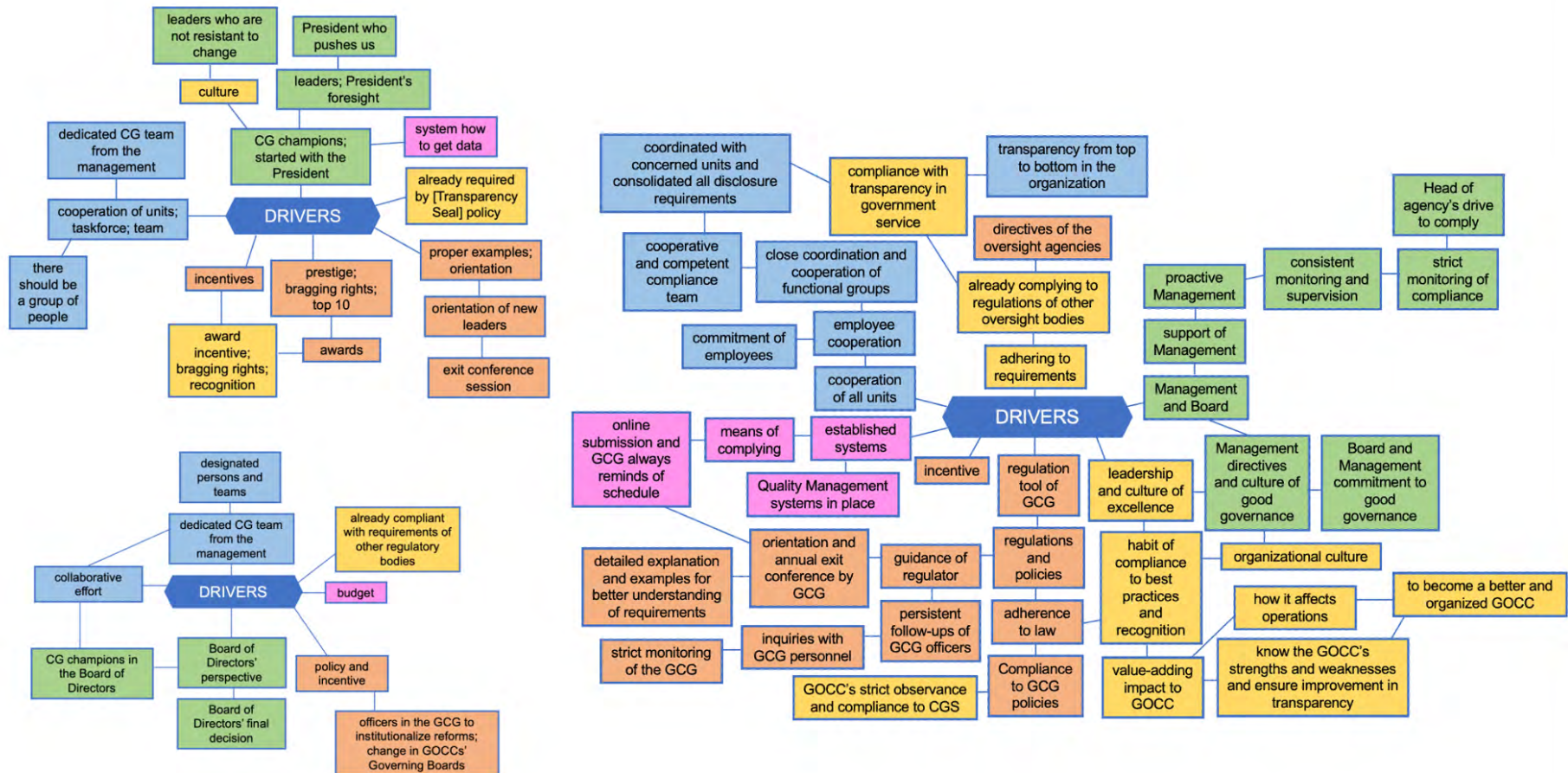


Figure 18. Thematic Map for Survey Coded Data



The thematic maps showed codes of similar and connected content. Codes of similar content are in the same color. From the commonality across the codes, overarching themes emerged. This is shown in the Figure 19 below:

Figure 19. Color-coded Thematic Map



Below are the themes that emerged, and descriptions are created by the author.

Table 10. Themes

Theme	Description
Leadership	Factors that include the actions, traits and attributes referring to the individuals who lead the organization namely, the Board of Directors and Management team
In Relation to the Regulator	Factors related to the regulatory function and mandate of the GCG; includes regulations, policies, governance tools and mechanisms used by the GCG in carrying out its function; other matters concerning regulations and policies in the government as well as those of other regulatory bodies will be considered in this theme
Organizational Structure	Factors concerning the office units/ departments of the organization, such as relationship, positions and structure, and attributes that outline how activities/ process flow or are directed in the organization
Knowing and Understanding	Factors related to the awareness, knowledge and understanding of the members of the GOCC of the compliance and standards; also includes the culture, environment, perception and how these are translated into actions/ activities
Resources	Factors include budget, tools, systems and staff in implementing and operationalizing CG mechanisms; also consists of the description of the situation brought about by the identified factors or the status of the factors

Source: Author

5.3.2 Drivers of Adherence to Corporate Governance Standards – Findings

In Relation to the Regulator

38.75% of the responses in the survey were found to be factors under the *In Relation to the Regulator*. These are factors in relation to the Governance Commission for GOCCs (GCG) as the regulatory body, its regulations and policies as well as its manner of exercising its functions. It was mentioned that the existing policies and governance tools of the GCG in terms of incentives such as the Performance Based-Bonus, Performance-based Incentives as well as in terms of evaluation such Performance Evaluation System and the Corporate Governance Scorecard Awards (Top GOCC Scorers) are what drives them to adhere to the standards. The National Power Corporation shared it is the “prestige” as they really strive to be part of the top 10 among all GOCCs, since it is expected for GOCCs in the government financial institutions sector to be part, for them it is a “bragging right” to be part of the top from the energy sector.

The survey asked whether CG-related policies are aligned and consistent with other government policies, 85.1% responded Yes. The existing policies of the national government such as the Transparency Seal are also drivers, as these have already been requiring transparency and disclosures to government offices, hence, such policies have already instilled in the GOCCs the practice of complying with reportorial requirements. GOCCs under the government financial institutions sector such as the Land Bank of the Philippines mentioned they have already been adhering to existing laws and guidelines of other regulatory bodies such as the *Bangko Sentral ng Pilipinas* (Central Bank of the Philippines), thus, they are used to complying to disclosure standards. On the manner of exercising its regulatory function, GCG's strict monitoring, reminders of schedule of submission/deadlines and open communication with GCG persons-in-charge drive the GOCCs to comply with the CG standards. It was also mentioned that GCG's conduct of orientation with detailed explanations and examples have contributed to the understanding of the requirements of the corporate governance scorecard.

Knowledge and Understanding

27.5% of the responses are factors under *Knowledge and Understanding*, an awareness of existing governance policies and an understanding of how the standards impacts their GOCC is a driver. GOCCs stated value-adding impact of adhering to the standards and how it affects their operations push them to commit to compliance. In pursuing to be a better and organized GOCC, and to know his/her GOCC's strengths and weakness drive them to comply with the standards. Having had the habit to comply with requirements of other regulations of oversight bodies also facilitates their adherence to the standards.

Leadership

17.5% of responses are factors under the *Leadership*, which refer to matters involving the GOCC board of directors and management. Having "corporate governance champions" in the board of directors and in the management is a major driver as they set the culture in the GOCC pushing the employees to adhere to the standards. Shared by the National Power Corporation (NPC) in the discussion, it is their President/CEO who is the "corporate governance champion." NPC shared that the push of their President created a culture in the organization of not only mere complying with the standards, but also imbibing the practices in their daily activities. The drive to comply of agency's head, the support of the board of directors and proactive management are identified drivers. These are translated into board policies and management directives put in place to support and direct the GOCCs to comply. The Philippine

Crop Insurance Corporation shared that their President's foresight was the key as she made their GOCC an ISO-certified (International Organization for Standardization) organization, where the employees are used to the practice of preparing documentary requirements and complying to ISO standards. From the in-depth interview with ICD corporate governance analysts, a collaborative effort from corporate governance champions in the board and in the compliance team is the key in most companies.

Moreover, respondents were asked of their assessment of the Board of Directors level of knowledge and understanding. 63.5% assessed High, 31.1% Medium and only 5.4% assessed Low. On the Board of Directors' level of receptiveness, 66.2% assessed High 31.1% Medium and 2.7% Low.

Figure 20. Assessment of Board of Directors' Level of Knowledge & Understanding

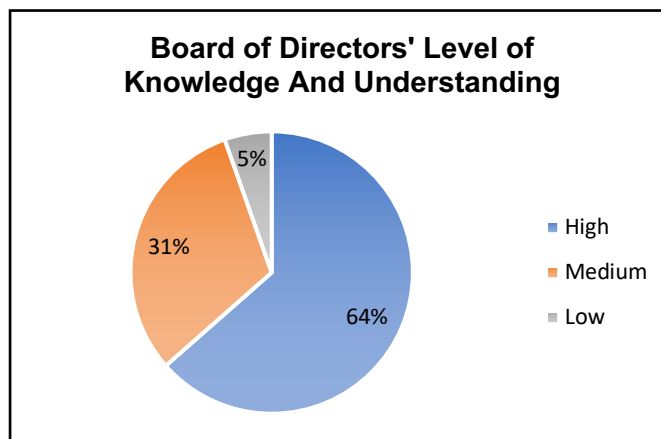
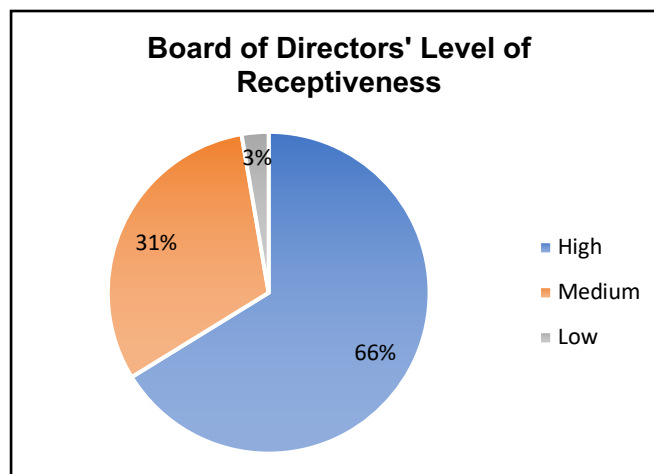


Figure 21. Assessment of Board of Directors' Level of Receptiveness



A respondent stated that the level of knowledge and understanding may differ per individual director, but there is a good number of directors with high level of knowledge and understanding.

On whether the Board Directors prioritize CG principles and give importance to complying with standards and instilling practices in the GOCC, 97.3% stated Yes. Regarding the management, it was asked whether there are members of the management who take the lead and work closely with the compliance team, 93.2% stated Yes. There are usually set-ups where i) specific members of the management take the lead such as the President & CEO, Assistant General Manager, Vice President for Legal and General Counsel Group, Vice President for Corporate Affairs, or, ii) all the Heads of departments or all Managers of business units take the lead.

Organizational Structure

10% of the responses are factors under *Organizational Structure*, where respondents identified the cooperation of units in the GOCC is what facilitates compliance. The close coordination among functional groups in the GOCC where each department/unit contributes, and commitment of employees are drivers. From the focus group interview, the Philippine National Oil Company Exploration Corporation (PNOC-EC), their approach is decentralized where a “taskforce” or technical working group is composed of competent members (from the Planning Unit, Human Resource, Finance and Office of the Corporate Secretary) and are led by the Compliance Officer.

Resources

6.25% of the responses pertained to factors under *Resources*. Having systems of collecting data such as having an established system of preparing documents facilitates adherence. In addition, to have systems in place such as the Quality Management System is a driver as having complied to its standards have already organized the data of each unit in the organization.

GOCCs were asked if there is budget allotted to support tools, technology, staff and activities to carry out corporate governance compliance, to which 70.3% responded Yes. Most of the GOCCs in the government financial institutions sector stated that they provide budget to ensure the corporate governance culture is implemented in the bank.

5.3.3 Obstacles to Adherence to Corporate Governance Standards – Data Presentation and Analysis

The open-ended question asked “What are the obstacles or challenges that hinder adherence to the corporate governance standards? This question was likewise asked in the in-

depth interview with ICD corporate governance analysts as well as focus group interview and survey with GOCCs. In familiarizing with the data, below are highlights of the responses:

Table 11. In-depth Interview with ICD Corporate Governance Analysts on "Obstacles"

Responses of ICD corporate governance analysts
<ul style="list-style-type: none"> ▪ "we still face the same challenges in publicly listed companies and insurance companies, as ICD, we are thinking of some initiatives, but it's not easy since the final decisions is still the board's" ▪ "Some companies do not have designated persons and teams that work on their CG disclosures" ▪ "Other say they do not have the budget" ▪ "Sometimes, some companies do not have transitions in their CG/compliance team, so the new members are not familiar with the scorecard" ▪ "comparing the situation of PLCs and GOCCs, for the GOCCs, the policy needs to have more teeth, maybe link it with other policies on incentives"

Table 12. Focus Group Interview with top GOCCs on "Obstacles"

Responses of top GOCCs
<ul style="list-style-type: none"> ▪ "in the past 2 years, there is no more awarding ceremony. In our institution, the awards are basis for monetary incentives for us employees who contributed" ▪ "inconsistencies, we observed that the assessment of the compliance was different from the previous year, in the previous year, it was assessed that we were able to comply, but suddenly this year we are not compliant or did not meet the requirement" ▪ "it didn't help that recently there was no exit conference held where we can discuss considerations and clarifications" ▪ "there seems to be a disconnect with the standard itself and the current situation of the GOCC, it is unfair when we are assessed to be non-compliant on the standard on 'scheduled meetings', when our board really wants to meet" ▪ "we felt a change in the assessment, the validation from previous year is different" ▪ "we have difficulty on meeting the standard on meetings, since our board is composed of <i>ex officio</i> board members, they have many assignments or meetings from their department, and that is not the fault of our GOCC. The department we are attached to is higher than us, so they really need to attend to meeting called by the department secretary" ▪ "it is based on international standards, in other countries they are independent, there is not much state control, the government does not really have a representation but here we have in our GOCCs" ▪ "there was a change in our board composition, we also felt the same challenge, we used to not have <i>ex officio</i> board members, but with the change in the administration, we now have department secretaries and undersecretaries who cannot attend the board meetings. We can't continue with the meeting without them, so we have problems with complying with that standard" ▪ "we have problems with the Commission on Audit (COA), they are not able to release on time our audited financial statements" ▪ "an obstacle for us is duplicate requirements from other regulations" ▪ "similar for Land Bank, can the standard be revised? Is it really about the scheduling ort the actual meetings held? I think the rescheduling does not matter, but more of the held meeting. If the BSP accepts this but the GCG does not?" ▪ "changes in the policy, we were not informed by the GCG, like on the schedule of assessment, we were not advised" ▪ "there were GCG officers who were not approachable, communication is important to us who we can talk to"

- “we need to keep orientating our new leaders, like this administration, we had 3 changes of chairman”

Table 13. GOCC Survey Responses on "Obstacles"

Responses of GOCCs in the Survey
Passive Employees
The members of the Board of Directors have shorter terms
overlapping duties and functions of different offices
Lack of funds to properly implement all necessary reforms. Salary cap that hinders the procurement of key personnel to jumpstart workforce.
Difficult procedural rules
Lack of manpower, implementation and familiarity with the different requirements of the GOCC since we are in the transition stage of being a GFI
Reportorial generation from concerned offices in the corporation
Inconsistent assessment, lack of an exit conference during the pandemic which would have been done virtually, some standards need review such as the 90% attendance of all Board members
Schedule conflicts, Prioritization of Programs & Projects
variance or difference in the appreciation of metrics (measure)/standards relative to accomplishments
DAP as a unique GOCC has difficulty complying the requirements for the Board of Trustees
For PNOC EC, the transition from a non-ex officio chairperson to an ex officio chairperson was challenging, as the schedule and focus of the Board became dependent on the very busy schedule of the ex officio chairperson and his alternate (secretary and usec).
The repetitiveness and redundancy sometimes is too taxing to PNOC EC's personnel who are already spread too thin, as it is.
The information being requested to be furnished comes from different divisions and departments, sometimes it is difficult to get the data within the prescribed period.
Diverse and amount of compliance requirements
Limited Manpower
Lack of information, late submission of documents and inputs
appointment of directors that are not entirelyan essentially qualified or does not even know the business of the corporation
voluminous work load with limited personnel to do the work
Lack of training on how to comply with the compliance
Lack of information regarding the schedule of compliance
Deadlines and limited manpower
low corporate cultural inertia and internal arrangements
I would say that there are not much challenges except for the timely release of the GOCC's financial and annual reports. Being a GOCC with the given mandates nationwide, it is not quite easy to consolidate and prepare the financials.
COA AOM restricting training of Appointive Directors
Conflicting schedules of the ex-officio members of the Board;
difficulty/lack of understanding on how to use GRI standard of reporting
Timelines/period of required CG submission and/or posting which is earlier than the period/timeline of the GOCC (e.g. receipt of COA Audited Financial Statements - Preparation of Annual Report of the company); Improvement of Website
Need to improve the SHFC inter-department collaboration in terms of database management
Final and concrete table of organization
Slow management intervention on issues affecting timely completion of targets
adjustments in policy guidelines; dealing with difficult leaders
added work load, setting different standard every now and then (it depends on the perception of the auditor)

The constant changes in the regulation
Insufficient circumstantial models of the best practices in corporate governance in the Philippine setting
Meeting with the deadline
There are some items in the governance scorecard that were not complied with due to the pandemic and movement restrictions. There is also a need to discuss the compliance within the organization.
Workload and under staff
Maybe some resistance of some units in the beginning
Lack of briefing / training, our basis being the Memorandum Circular only, as well as additional research to understand the components of the CGS. Capacity-building is indeed important not only for the CGS-TWG members involved in our Agency, but also in regard to the concerned offices.
gray area on appropriate person/office in regard to the responsibilities for the board
Short turn-around time provided by CSO-GCG to the GOCC and its Board for the CGS Assessment i.e. formal notice/letter from GCG re CGS Assessment was not transmitted/forwarded to the GOCC immediately but weeks be after its issue date.
Lack of Compliance Personnel
We only have a Compliance Officer but no Compliance Office
some offices need constant follow-ups
Operations and System improvements were the focus and CG could not be the priority.
The CGS items 24.c and 24.d have been a challenge for compliance. For 24.c (Did the Board of Directors meet on at least 75% on their scheduled meetings?), blocking the scheduled monthly board meeting is not always possible because of the other commitments of the directors. For 24.d (Has each of the directors/commissioners attended at least 90% of all the board meetings held during the year?), just one (1) absence will result to below 90% if the director had less than 12 applicable meetings for the year (e.g., exempted, newly appointed).
We have no Compliance Department to do such tasks
Change in National administrations and in the appointments to the Governing Board
Basically the change in leadership, additional time used and data gathering
delayed issuance/incomplete content of annual report
lack of appreciation/deep understanding by the BOT
Change in policies/ change in composition of Board

Similarly, initial codes were generated for each of the responses. Tables below show transcripts/responses and corresponding codes for each.

Table 14. In-depth Interview Transcript and Codes

interview with corporate governance analysts	code
"we still face the same challenges in publicly listed companies and insurance companies, as ICD, we are thinking of some initiatives, but it's not easy since the final decisions is still the board's"	board of directors' final decision
"Some companies do not have designated persons and teams that work on their CG disclosures"	designated persons and team
"Other say they do not have the budget"	budget
"Sometimes, some companies do not have transitions in their CG/compliance team, so the new members are not familiar with the scorecard"	no transition, new members are not familiar
"it is easier for banks, so for GFIs to comply because of BSP; in other countries, SOEs are listed. If GOCCs will be listed, they will be pushed more to comply"	already compliant with requirements of other regulatory bodies
"comparing the situation of PLCs and GOCCs, for the GOCCs, the policy needs to have more 'teeth', maybe link it with other policies on incentives"	policy and incentive

"Officers in the GCG are the ones left to institutionalize reforms, change in administration would have change in the Governing Boards of GOCCs"	officers in the GCG to institutionalize reforms; change in GOCCs' Governing Boards
--------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

Table 15. Focus Group Interview Transcript and Codes

interview with GOCCs	code
	awards
"inconsistencies, we observed that the assessment of the compliance was different from the previous year, in the previous year, it was assessed that we were able to comply, but suddenly this year we are not compliant or did not meet the requirement"	inconsistencies in assessment
"it didn't help that recently there was no exit conference held where we can discuss considerations and clarifications"	no exit conference didn't help
"there seems to be a disconnect with the standard itself and the current situation of the GOCC, it is unfair when we are assessed to be non-compliant on the standard on 'scheduled meetings', when our board really wants to meet"	disconnect with the standard and situation of GOCC
"we felt a change in the assessment, the validation from previous year is different"	change in assessment
"we have difficulty on meeting the standard on meetings, since our board is composed of <i>ex officio</i> board members, they have many assignments or meetings from their department, and that is not the fault of our GOCC. The department we are attached to is higher than us, so they really need to attend to meeting called by the department secretary"	board is composed of <i>ex officio</i> board members, unable to continue with meetings
"it is based on international standards, in other countries they are independent, there is not much state control, the government does not really have a representation but here we have in our GOCCs"	international standards, other countries is different, no government representation
"there was a change in our board composition, we also felt the same challenge, we used to not have <i>ex officio</i> board members, but with the change in the administration, we now have department secretaries and undersecretaries who cannot attend the board meetings. We can't continue with the meeting without them, so we have problems with complying with that standard"	<i>ex officio</i> members in the board, cannot continue with meetings without them
"we have problems with the Commission on Audit (COA), they are not able to release on time our audited financial statements"	delayed release of audited financial statements by the COA
"an obstacle for us is duplicate requirements from other regulations"	other regulations
"similar for Land Bank, can the standard be revised? Is it really about the scheduling of the actual meetings held? I think the rescheduling does not matter, but more of the held meeting. If the BSP accepts this but the GCG does not?"	can standard be revised
"changes in the policy, we were not informed by the GCG, like on the schedule of assessment, we were not advised"	GCG did not inform of policy changes
"there were GCG officers who were not approachable, communication is important to us who we can talk to"	GCG officer were not approachable
"we need to keep orientating our new leaders, like this administration, we had 3 changes of chairman"	orientation of new leaders

The coding for the survey responses is found in Appendix G. From generating initial codes, coded data were then mapped out. Below are the thematic maps for each set of coded data

Figure 22. Thematic Map for In-Depth Interview Coded Data

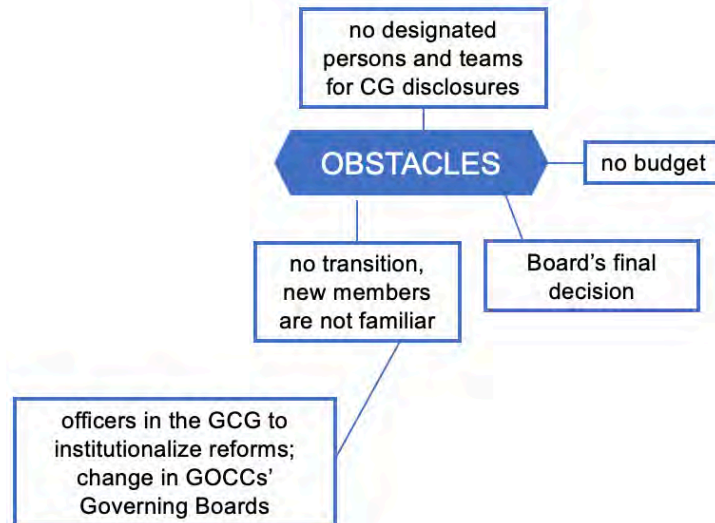


Figure 23. Thematic Map for Focus Group Interview Coded Data



Figure 24. Thematic Map for Survey Coded Data

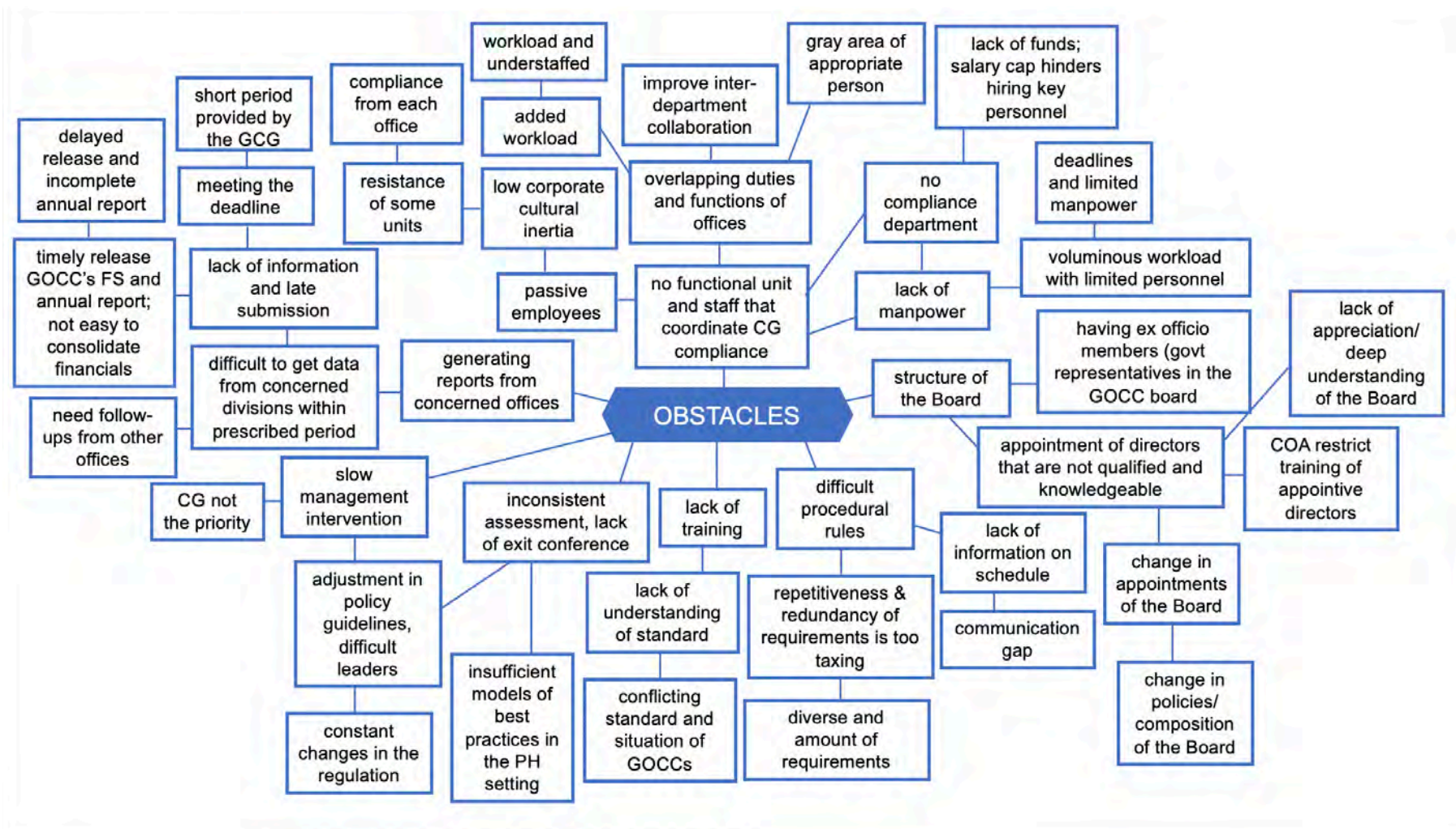
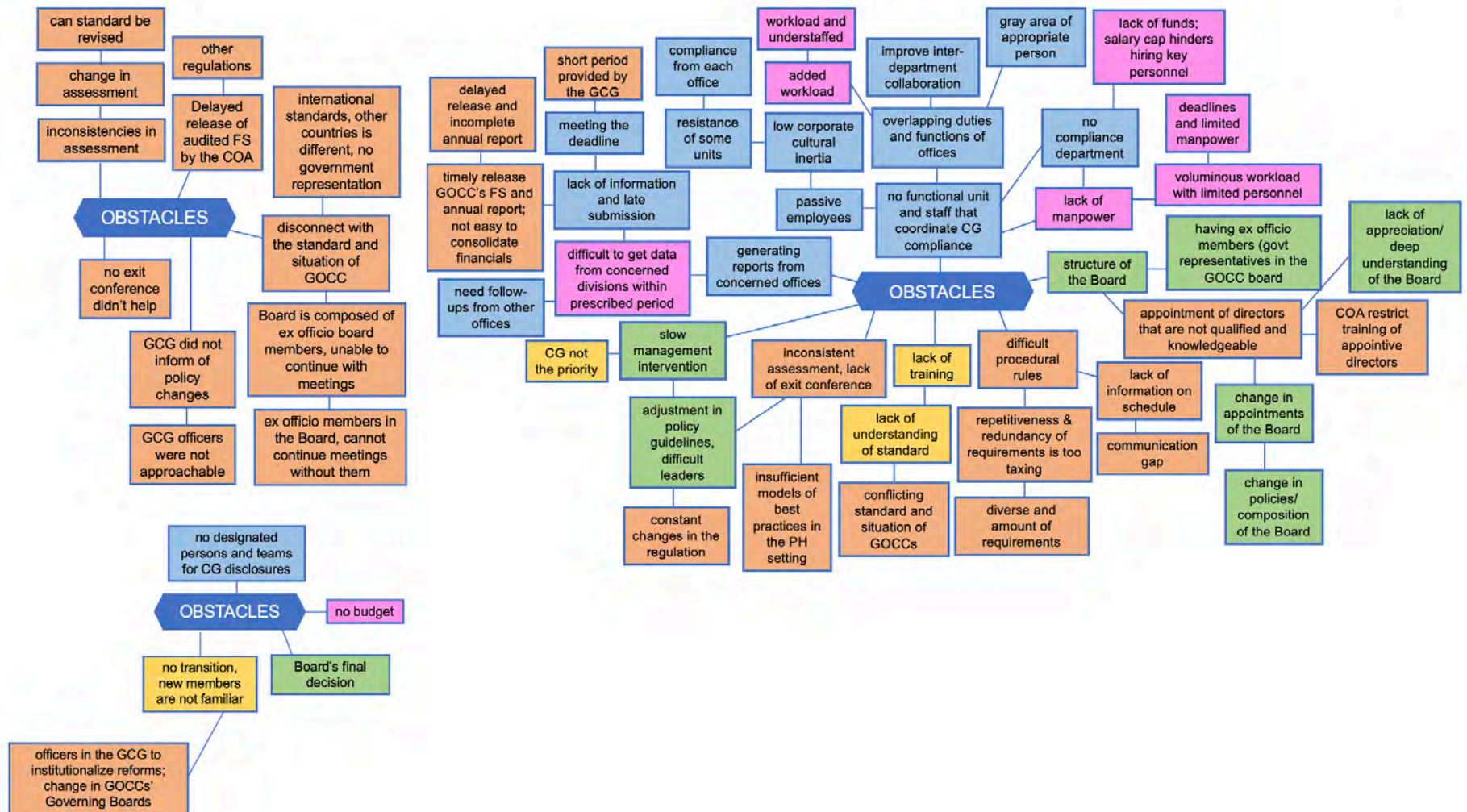


Figure 25. Color-coded Thematic Map for Obstacles



5.3.4 Obstacles to Adherence to Corporate Governance Standards – Findings

In Relation to the Regulator

On the obstacles that hinder adherence, 40.58% of the responses in the survey referred to factors under *In Relation to the Regulator*. One of the factors that hinders compliance are the applicability of standards that the corporate governance scorecard requires. On the same matter, the survey asked if there parts of the policy and tools that need to be revisited, to which 59.5% responded, Yes. Specific standards in the corporate governance scorecard were mentioned that must be revisited such as those relating to a) board meetings, considering the board being composed of *ex officio* board members, b) continuing professional training of all board members and c) need for board evaluation. GOCCs shared experiences of standards difficult to meet. The Philippine Deposit Insurance Corporation (PDIC) cited standards on board meeting protocols, pointing out that the case and situation of Philippines' GOCCs may be different from SOEs in other countries. PDIC shared that their board of directors have *ex officio* members who are government representatives such as department (ministry) secretaries and undersecretaries. Being secretaries and undersecretaries, their conflict in schedule affects the conduct of board meetings; the board is unable to conduct regular board meetings or is constantly changing schedule of meetings. This is a huge challenge since the GOCC is penalized for failing to meet the standard on the conduct of board meetings in the corporate governance standard. Another standard in the scorecard that is difficult to meet is the professional education/training of board of directors, wherein, with GOCCs having a stringent budget allocation, they are usually flagged by the Commission on Audit if they exceed the allotted training budget. The said standard is misaligned with the rules of the Commission of Audit on budget allocated for trainings. Further mentioned are hindrances caused by GCG regulations and policies in relation to the board of directors are the short term of the board directors and appointment of board directors who are not essentially qualified or knowledgeable of the GOCC's business.

Another obstacle is the inconsistent assessment of the GCG on the compliance of the GOCC and the everchanging results of assessment whether the GOCC met the standard or not. Compliance to the standards in the corporate governance scorecard are assessed by GCG assessors annually. GOCCs like the Philippine National Oil Company Exploration Corporation (PNOC-EC) and Land Bank of the Philippines (LBP) shared in the focused group interview these similar challenges they encountered. They stated that assessments are inconsistent, for instance, they are compliant or have met a particular standard this year but the following year,

they are found to be non-compliant even if they disclosed the same item for both years. This is a challenge to adherence as it causes confusion on the part of the GOCC on what should be the standard or how should the requirement be met. Moreover, the regular review, updating, and testing of tools (scorecard) are suggested to ensure these are still attuned to the changes in regulation and policy and applicable to the case/situation of GOCCs.

Another obstacle is the timelines of other regulatory bodies are in not congruent with the timelines of the corporate governance scorecard required by the GCG. For instance, a standard in the corporate governance scorecard is the “timely release of the annual reports.” GOCCs have difficulty releasing their annual reports on time due to the delayed release by Commission on Audit of their audited financial statements. This finding was mentioned in the focus group interview and in the survey. GOCCs mentioned that GCG consider revising the deadlines and timelines to be in congruent with other policies. Responses in the survey pointed out the need to review and harmonize with the reportorial requirements of other regulations and policies since some requirements are redundant and becomes too taxing on the GOCCs.

Lastly, on the factors under *In Relation to the Regulator*, are on the administrative concerns of the corporate governance scorecard such as the communication gap on the changes on the submission deadline. GOCCs cited they are not informed ahead by the GCG and so they have difficulty complying with the deadline. In the survey, GOCCs were asked if the GCG clarifies and explains the CG-related policies, to which, 75.7% responded Yes. GOCCs stated that although policies are issued, there are no regular meetings or training conducted on the issuances, rather, the policies are only explained through memorandum circulars and guidelines. The PDIC also stated it was more difficult when there was no longer exit conference session held. The exit conference session is held annually after the assessment of corporate governance scorecard to discuss with the GOCCs the results and findings. In the past 2 years, there were no longer exit conference sessions conducted. PDIC shared they sent written communication in lieu of the exit conference to seek clarifications from the GCG. GOCCs expressed this is an obstacle as they are unable to seek for clarifications on their compliance and unable to consult on how to meet the standard. It was likewise mentioned that the Corporate Governance Scorecard Awards not being held in the past 3 years has become a hindrance, the Government Service Insurance System (GSIS) pointed out that the awards are a form of incentive or motivation for them to work on improving their scores.

Organizational Structure

35.59% of the responses are factor under *Organizational Structure*. Majority of the GOCCs shared that having no functional unit with competent staff is an obstacle, as there are overlapping duties/functions and undefined area of responsibilities when it comes to corporate governance matters. The lack of manpower is prevalent as the assigned personnel are overloaded with work.

Challenges arise more due to the weak inter-department coordination when some units in the organization have resistance and are not cooperative.

82.7% answered in the survey that there is an office unit/division in the GOCC designated to perform CG-related tasks and functions. However, 81.3% stated that it is a concurrent unit, while 12% said is a stand-alone unit and 6.7% said no applicable. In a concurrent unit set-up, an ad-hoc group or task force is created composed of members from different units in the GOCC. Typically, the Corporate Planning Office is assigned as the compliance team with the Corporate Secretary or Compliance Officer taking the lead. The 12% of GOCCs who have a stand-alone unit are GOCCs from the Government Financial Sector, where they have a bank compliance division or a corporate governance unit. Further, when asked if the staff of the unit has been increased in number, 85.1% of the respondents stated No. GOCCs answered the office/unit of the Corporate Secretary or Compliance Officer does not have staff, and the Corporate Secretary or Compliance Officer does not have a team under him/her.

In terms of the reporting lines to the President/CEO and the Board of Directors, 90.5% stated the Corporate Secretary or Compliance Officer reports directly to the Board than the President/CEO. In particular, he/she reports directly to the Corporate Governance Committee of the Board and other relevant Committees (Audit and Risk). This indicates the huge responsibility and numerous duties of the office/unit, yet, majority of the GOCCs do not have a stand-alone functional Compliance Unit with competent personnel.

Leadership

10.17% responded factors under *Leadership*. An obstacle is the lack of appreciation and understanding of some board of directors, hence, assigned personnel have difficulty dealing with such leaders. Besides understanding is the board of directors' lack of prioritization of corporate governance matters. It was pointed out that although the Board of Directors have substantial knowledge of the corporate governance principles and standards, the more

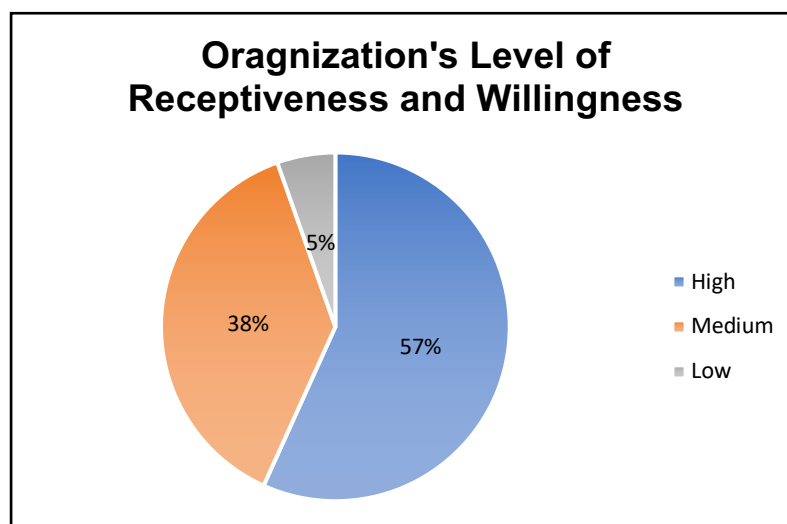
important concern is the dedication, commitment and involvement in directing and guiding the GOCC of adopting and demonstrating the principles and standards.

Knowledge and Understanding

8.47% of the responses mentioned factors under the *Knowledge and Understanding*. The lack of training on corporate governance compliance is an obstacle. The lack of training of not only the assigned compliance team, but also of the concerned offices in the GOCC. Coordination across other units become difficult due to the lack of knowledge on the corporate governance. Further, for new members or newly assigned compliance team, there is no proper transition, hence, leaving new members unfamiliar of the standards.

In the survey, GOCCs were asked to assess the organization's level of receptiveness and willingness to instill CG principles and standards, 56.8% responded High, 37.8% responded Medium and 5.4% responded Low.

Figure 26. Assessment of Organization's Level of Receptiveness and Willingness



GOCCs expressed their willingness to learn and be fully compliant. A GOCC who answered High, mentioned that their management is very open minded and not resistant to change. On whether there are activities in the GOCC that ensure employees know and understand the corporate governance standards, 54.1% responded Yes there are. However, the activities are limited to management committee meetings as well as cascading and corporate planning.

In terms of proper transition or knowledge transfer when there are changes in the staffing or compliance unit, 77% responded Yes there is. Beyond turn-over of functions and tasks, it is ensured that the new members of the compliance team understand. However, a respondent who answered Low mentioned that he/she was not properly trained; there was no

formal transfer of knowledge, and he/she was unable to attend orientation/trainings about the corporate governance policies and scorecard.

Resources

5.08% of the responses stated factors under *Resources*. Commonly mentioned is the limited manpower. Another obstacle is the limited budget or lack of funds to properly implement changes, such as procurement of systems and tools. The limited budget also makes hiring of competent key personnel difficult.

In the survey, GOCCs mentioned there is budget but allocation for corporate governance initiatives is limited. Trainings for corporate governance were found to be expensive and not considered an urgent need.

In terms of consulting CG experts, 48.6% responded they consult CG experts. However, these are not paid consultants as they usually consult CG experts of the Governance Commission for GOCCs (GCG). Very few GOCCs mentioned consulting the Securities and Exchange Commission (SEC) and the Institute of Corporate Directors (ICD); it was not however specified if it they consulted for a fee.

CHAPTER 6: CONCLUSION

6.1 Introduction

As a recapitulation, the research problem the study investigates is the weak corporate governance in GOCCs as evidenced by the low scores in the corporate governance scorecard (CGS). Based on the annual results of the CGS assessment, GOCCs continue to score low with no significant improvement in the past five years. In 2015, 88% of GOCCs scored below 80.00%, and by 2018 still 75% of the GOCCs scored below 80.00%. Out of the 80 GOCCs assessed, 55 scored between 10.01-80.00% and even 5 GOCCs scored 0-10.00%. To analyze the factors that facilitated or hindered the adherence of the GOCCs to the CGS (internationally agreed standards and best practices), the author carried out a qualitative research, using in-depth & focus group interviews as well as survey to gather data from the GOCCs and CG experts. The thematic analysis (developed by Braun and Clarke), was used in analyzing the data.

This chapter presents the summary of key findings of the study. Based on the findings, it also discusses policy recommendations and what could be done to improve corporate governance adherence in GOCCs. It further presents contributions of the study, its limitations and suggestions for further research work.

6.2 Summary of Findings

The study sought to answer the question “What factors hindered the adherence of GOCCs to corporate governance standards?”

Table 16. GOCCs' Response in the Survey

Theme/Category	% of respondents who answered about these factors
In Relation to the Regulator	40.68%
Organizational Structure	35.59%
Leadership	10.17%
Knowledge & Understanding	8.47%
Resources	5.08%

Factors under *In Relation to the Regulator* were the most frequent answers to the question “what factors hinder GOCCs from adhering to the standards?” both in the focus group interview and in survey with the GOCCs. In the survey, 38% of the responses were in relation to the regulator. These factors are, a) the inapplicability of some standards in the corporate governance scorecard (CGS) to GOCCs, b) the inconsistent assessment of GCG on the

compliance of the GOCCs, c) the lack of alignment and harmony with other policies of other regulatory bodies, and d) inadequate administrative support to GOCCs.

- a) On the inapplicability of some standards, the CGS contains internationally agreed standards and best practices; these are standards being practiced by SOEs globally. Although the CGS was created tailored to the attributes of GOCCs in the Philippines, (its differences as an SOE from other countries' SOEs were considered), there are still standards that seem to be not applicable, hence, difficult to meet.
- b) The inconsistent assessment of GCG assessors cause confusion on the part of the GOCC - whether they are compliant or non-compliant; it becomes unclear for the GOCC on how the requirement should be met.
- c) CGS as a policy and governance tool contains standards not aligned with other policies of other regulatory bodies (Commission on Audit); in addition, the lack of harmony is evident in the duplication of requirements being asked for by the CGS and requirements of other government policies such as the Transparency Seal.
- d) Inadequate administrative support pertains to the failure of the GCG to conduct exit conference sessions after the annual CGS assessment and to communicate to the GOCCs the updates/changes in the CGS guidelines.

In terms of *Organizational Structure*, no functional Compliance Unit and competent key personnel; in terms of *Leadership*, the lack of appreciation and understanding of some board members; in terms of *Knowledge and Understanding*, the lack of training, considering the task is undertaken by several units in the organization, the coordination is difficult when other units are unfamiliar with the standards; and in terms of *Resources*, the limited budget to hire personnel, procure systems/tools, and training for corporate governance initiatives.

6.3 Policy Recommendations

Firstly, it is recommended for the GCG, as the oversight and regulatory body of GOCCs to regularly review the Corporate Governance Scorecard (CGS). Revisiting the policy and recalibrating its tools to ensure that it is attuned to other regulations and updated with related policy changes. More importantly, reviewing of the policy investigates whether the regulator achieves the objectives of the policy and evaluates if the policy still serves the purpose of why it was created.

Secondly, capability building and training of GCG officers is important to carry out their functions more efficiently. If GOCCs consults the GCG officers, it is appropriate that the regulator has competent personnel in guiding and handholding the GOCCs. GCG officers may seek other countries' regulatory bodies of similar mandate, this allows sharing of best practices and exchanges of knowledge and experience on governing SOEs.

Thirdly, the constant consultation with the stakeholders, namely the GOCCs and other regulatory bodies is important in improving its regulation and policies. This ensures that the policies being implemented are able to address the issues of GOCCs and facilitate their development. Consulting the stakeholders make policies more responsive to the needs and concerns of the GOCCs. Coordination with other regulatory bodies co-governing GOCCs such as the Commission on Audit, Civil Service Commission, Department of Budget and Management and the Office of the President of the Philippines, make regulation more seamless and harmonized.

Finally, collaboration with the private sector, namely, GOCCs' counterpart corporations, the academe, civil society organizations and non-government agencies will make governance work more comprehensive and relevant. Ultimately, the goal of governance is to make GOCCs more efficient and effective corporations in delivering service to citizens and the society. Tapping the private sector in sharing their expertise and experience will enhance the quality of governance of GOCCs. Likewise, working with the academe, civil society organizations and non-government agencies provide feedback and suggestions on how GOCCs can be more responsive to the needs of the people and have a better impact to the society.

6.4 Contribution of the Study

The study contributes a new literature on assessment of corporate governance practices, this provides the case of the Philippines' GOCCs. The study gives an account of factors that facilitate and hinder compliance to corporate governance standards. This study can be used as reference by other researchers and policymakers on SOE corporate governance.

6.5 Limitations

The study is only a rapid assessment or a broad view of the experiences of all GOCCs. It failed to look closer on the individual case per GOCC. There may be more factors that could be identified if a more focused and comprehensive data gathering method was used for each GOCC, for instance, one-on-one interview or case study per GOCC. The details and in-depth analysis of each GOCC experience is not provided by the study.

6.6 Suggestions future work

GOCCs in the Philippines differ in nature due to the different industries, this indicates differences in several aspects of each GOCC as an organization. As mentioned in the limitations, to understand the experience of the GOCCs, it may be worthy to consider replicating the investigation on a per-GOCC level. It may be valuable to have a closer and deeper analysis of the case of each GOCC.

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APPENDICES

Appendix A. List of GOCCs in the Philippines



Office of the President of the Philippines
GOVERNANCE COMMISSION
 FOR GOVERNMENT-OWNED OR CONTROLLED CORPORATIONS
 3/F BDO Towers Pasay, 8741 Pasay, De Roxas, Makati City, Philippines 1226

22 July 2021

CLASSIFICATION OF GOCCs BY SECTORS

I. GOVERNMENT FINANCIAL INSTITUTIONS SECTOR

Banking Institutions

1. Al-Amanah Islamic Investment Bank of the Philippines	AIIBP	
2. Development Bank of the Philippines	DBP	
3. ***DBP Data Center, Inc.	DCI	
4. Land Bank of the Philippines	LANDBANK	
5. ***Land Bank Countryside Dev't Foundation, Inc.	LCDFI	
6. ***LBP Resources and Development Corporation	LBRDC	
7. Overseas Filipino Bank (formerly PostBank)	OFB	E.O. No. 44, s. 2017
8. United Coconut Planters Bank (PCGG)	UCPB	
9. UCPB Savings Bank	UCPB-SB	

Non-Banking Institutions

10. Credit Information Corporation	CIC	
11. DBP Leasing Corporation	DBP-LC	
12. LBP Insurance Brokerage, Inc.	LIBI	
13. LBP Leasing and Finance Corporation	LLFC	
14. National Development Company	NDC	
15. National Home Mortgage Finance Corporation	NHMFC	
16. Philippine Crop Insurance Corporation	PCIC	
17. Philippine Deposit Insurance Corporation	PDIC	
18. Small Business Corporation	SBC	
19. Social Housing Finance Corporation	SHFC	
20. Philippine Guarantee Corporation	PHILGUARANTEE	E.O. No. 58, s. 2018
21. UCPB Leasing and Finance Corporation	UCPB Leasing	
22. UCPB Securities, Inc.	UCPB-SI	

Social Security Institutions

23. Employees Compensation Commission	ECC	
24. Government Service Insurance System	GSIS	
25. Home Development Mutual Fund	Pag-IBIG Fund	
26. Philippine Health Insurance Corporation	PHILHEALTH	
27. Social Security System	SSS	
28. Veterans Federation of the Philippines	VFP	

II. TRADE, AREA DEVELOPMENT AND TOURISM SECTOR

Trade

29. Center for International Trade Expositions and Missions	CITEM	
30. Duty Free Philippines Corporation	DFPC	
31. Philippine International Trading Corporation	PITC	
32. Philippine Pharma Procurement, Inc.	PPPI	

Area Development

33. Bases Conversion Development Authority	BCDA	
34. Clark Development Corporation	CDC	
35. John Hay Management Corporation	JHMC	
36. Laguna Lake Development Authority	LLDA	
37. National Housing Authority	NHA	
38. Palacio Del Gobernador Condominium Corporation	PDGCC	
39. Philippine Reclamation Authority	PRA	
40. Poro Point Management Corporation	PPMC	
41. Quezon City Development Authority	QCDA	
42. Southern Philippines Development Authority	SPDA	
43. Tourism Infrastructure & Enterprise Zone Authority	TIEZA	



CLASSIFICATION OF GOCCs BY SECTORS

Tourism

44. Corregidor Foundation, Inc.	CFI
45. Marawi Resort Hotel, Inc.	MRHI
46. Philippine Retirement Authority	PRetA
47. Tourism Promotions Board	TPB

III. EDUCATIONAL AND CULTURAL SECTOR

Educational

48. Boy Scouts of the Philippines	BSP	GCG M.O. No. 2013-42
49. Development Academy of the Philippines	DAP	
50. Girl Scouts of the Philippines	GSP	GCG M.O. No. 2013-42
51. Philippine Tax Academy	PTA	R.A. No. 10143

Cultural

52. Cultural Center of the Philippines	CCP
53. Nayong Pilipino Foundation, Inc.	NPF

IV. GAMING SECTOR

54. Philippine Amusement and Gaming Corporation	PAGCOR
55. Philippine Charity Sweepstakes Office	PCSO

V. ENERGY AND MATERIALS SECTOR

Energy

56. National Electrification Administration	NEA
57. National Power Corporation	NPC
58. National Transmission Corporation	TRANSCO
59. Philippine National Oil Company	PNOC
60. Power Sector Assets and Liabilities Management Corporation	PSALM
61. PNOC Exploration Corporation	PNOC-EC
62. PNOC Renewables Corporation	PNOC-RC
63. Philippine Electricity Market Corporation	PEMC

Materials

64. Batong Buhay Gold Mines, Inc.	BBGMI
65. Bukidnon Forest, Inc.	BFI
66. Natural Resources Development Corporation	NRDC
67. North Davao Mining Corporation	NDMC
68. Philippine Mining Development Corporation (formerly NRMDC)	PMDC

VI. AGRICULTURE, FISHERIES AND FOOD SECTOR

Agriculture and Fisheries

69. National Dairy Authority	NDA
70. National Food Authority	NFA
71. National Tobacco Administration	NTA
72. Philippine Coconut Authority	PCA
73. Philippine Fisheries Development Authority	PFDA
74. PHIVIDEC Panay Agro-Industrial Corp. (PMO)	PPAC
75. Sugar Regulatory Administration	SRA



CLASSIFICATION OF GOCCs BY SECTORS

Food

76. Food Terminal, Inc. (PMO)	FTI
77. National Sugar Development Company (PMO)	NASUDECO
78. Northern Foods Corporation (PMO)	NFC
79. Legaspi Oil Company, Inc.	
80. Granexport Manufacturing Corporation	
81. San Pablo Manufacturing Corporation	
82. Cagayan De Oro Oil Company, Inc.	
83. Southern Luzon Coconut Oil Mill, Inc.	
84. Iligan Coconut Industries, Inc.	

VII. UTILITIES AND COMMUNICATIONS SECTOR

Utilities

85. Cebu Port Authority	CPA
86. Civil Aviation Authority of the Philippines	CAAP
87. Clark International Airport Corporation	CIAC
88. Light Rail Transit Authority	LRTA
89. Local Water Utilities Administration	LWUA
90. Mactan-Cebu International Airport Authority	MCIAA
91. Manila International Airport Authority	MIAA
92. Metropolitan Waterworks and Sewerage System-Corporate Office	MWSS-CO
Metropolitan Waterworks and Sewerage System-Regulatory Office	MWSS-RO

93. National Irrigation Administration	NIA
94. PEA Tollway Corporation	PEA-TC
95. Philippine Aerospace Development Corporation	PADC
96. Philippine National Construction Corporation (PMO)	PNCC
97. Philippine National Railways	PNR
98. Philippine Ports Authority	PPA

Communications

99. APO Production Unit, Inc.	APU-PUI
100. People's Television Network, Inc.	PTNI
101. Philippine Postal Corporation	PHLPOST

VIII. HEALTHCARE SERVICES SECTOR

102. La Union Medical Center	LUMC
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IX. REALTY / HOLDING COMPANIES

103. Batangas Land Company, Inc.	BLCI
104. First Cavite Industrial Estate, Inc.	FCIEI
105. G.Y. Real Estate, Inc.	GYREI
106. Kamayan Realty Corporation	KRC
107. Pinagkaisa Realty Corporation	PIRC
108. ASC Investors, Inc.	
109. ARC Investors, Inc.	
110. AP Holdings, Inc.	
111. Anglo Ventures, Corp.	
112. Fernandez Holdings, Inc.	
113. First Meridian Development, Inc.	
114. Randy Allied Ventures, Inc.	
115. Rock Steel Resources, Inc.	



CLASSIFICATION OF GOCCs BY SECTORS

- 116. Roxas Shares, Inc.
- 117. San Miguel Officers Corp. Inc.
- 118. Te Deum Resources, Inc.
- 119. Toda Holdings, Inc.
- 120. Soriano Shares, Inc.
- 121. Valhalla Properties, Inc.

Appendix B. Corporate Governance Scorecard for GOCCs

ANNEX A: CORPORATE GOVERNANCE SCORECARD FOR GOCCS QUESTIONNAIRE				
#	Question	Guiding Reference	Y/N	
I. Stakeholder Relationships				
1	Does the GOCC disclose a policy that:			
a.	Stipulates the existence and scope of its effort to address customer's welfare?	GCG MC No. 2012-07 Chapter VII Sec. 35, Sec. 37		
b.	Elaborates its efforts to interact with the communities in which they operate?	GCG MC No. 2012-07 Chapter VII Sec. 34		
c.	Ensure that its value chain is environmentally friendly or is consistent with promoting sustainable development?	GCG MC No. 2012-07 Chapter VII Sec. 40		
2	Does the GOCC disclose the activities that it has undertaken to implement the abovementioned policies?			
a.	Customer health and safety	GCG MC No. 2012-07 Chapter VII Sec. 35, Sec. 37	OECD Principle IV (A) & Global Reporting Initiative	
b.	Interaction with the communities	GCG MC No. 2012-07 Chapter VII Sec. 34		
c.	Environmentally-friendly value chain	GCG MC No. 2012-07 Chapter VII Sec. 40		
3	Does the GOCC have a separate corporate social responsibility (CSR) report/section or sustainability report/section?	GCG MC No. 2012-07 Chapter VIII Sec. 41, Sec. 43.4.e		
4	Where stakeholder interests are protected by law, stakeholders should have the opportunity to obtain effective redress for violation of their rights.			
	Does the GOCC provide contact details via the company's website or Annual Report which stakeholders (e.g. customers, suppliers, general public, etc.) can use to voice their concerns and/or complaints for possible violation of their rights?		OECD Principle IV (B)	
5	Performance-enhancing mechanisms for employee participation should be permitted to develop.			
a.	Does the GOCC explicitly mention the health, safety and welfare policy for its employees?	GCG MC No. 2012-07 Chapter VII Sec. 39	OECD Principle IV (C) Global Reporting Initiative: Sustainability Report	
b.	Does the GOCC publish data relating to health, safety and welfare of its employees?			
c.	Does the GOCC have training and development programmes for its employees?	GCG MC No. 2012-07 Chapter VII Sec. 38		
d.	Does the GOCC publish data on training and development programs for its employees?			
6	Stakeholders including individual employee and their representative bodies, should be able to freely communicate their concerns about illegal or unethical practices to the board and their rights should not be compromised for doing this.			
a.	Does the GOCC have procedures for complaints by employees concerning illegal (including corruption) and unethical behavior?	GCG MC No. 2014-04	OECD Principle IV (E)	
b.	Does the GOCC have procedures to protect an employee/person who reveals illegal/unethical behavior from retaliation?		OECD Principle IV (E)	

II. Disclosure and Transparency				
7	Does the GOCC's website disclose the following items:		R.A. No. 10149 Chapter V Sec. 25, GCG MC No. 2012-07 Chapter VIII Sec. 41	OECD Principle V (A) OECD Principle V (E) ICGN 2.4 Composition and structure of the board ICGN 2.4.1 Skills and experience ICGN 2.4.3 Independence ICGN 5.0 Remuneration
a.	Corporate objectives			
b.	Financial performance indicators			
c.	Non-financial performance indicators			
d.	Details of whistle-blowing policy			
e.	Biographical details (at least age, qualifications, date of first appointment, relevant experience, and any other directorships of listed companies) of directors/commissioners			
f.	Training and/or continuing education programme attended by each director/commissioner			
8	Are the Annual Reports downloadable from the GOCC's website?			
9	Corporate Governance Confirmation Statement			
	Does the GOCC's website contain a statement confirming the company's full compliance with the code of corporate governance and where there is non-compliance, identify and explain reasons for each such issue?			OECD PRINCIPLE V (A) (8)
10	Timely filing/release of annual/financial reports			
a.	Are the audited annual financial report/statement uploaded on the website within 60 days upon receipt from COA?			OECD Principle V: Transparency and Disclosure, A. OECD Principle II: The State Acting as an Owner, F. (3)
b.	Is the annual report released within 90 days from release of audited financial report?			
c.	Is the true and fairness/fair representation of the annual financial statement/reports affirmed by the board of directors/commissioners and/or the relevant officers of the company?		GCG MC No. 2012-07 Chapter VIII Sec. 42 (d)	OECD Principle V (C) OECD Principle V (E) OECD Principle V-(A) ICGN 7.2 Timely disclosure ICGN 7.3 Affirmation of financial statements
III. Responsibilities of the Board				
11	Corporate Vision/Mission			
a.	Has the Board of Directors reviewed the vision and mission/ strategy in the last financial year?		GCG MC No. 2012-06 Chapter III Sec. 27.1 (a)	OECD PRINCIPLE 6 (P58) ICGN:3.2 Integrity
b.	Does the Board of Directors monitor/oversee the implementation of the corporate strategy?		GCG MC No. 2012-06 Chapter III Sec. 27.1 (b)	
12	Did the GOCC achieve 90% in the PES?			
13	Code of ethics or conduct		GCG MC No. 2012-07 Chapter VIII Sec. 41	OECD PRINCIPLE VI
a.	Are the details of the code of ethics or conduct disclosed?			
b.	Does the GOCC disclose that all Directors/Commissioners, senior management and employees are required to comply with the code?			
c.	Does the company disclose how it implements and monitors compliance with the code of ethics or conduct?			
14	Does the Board appoint a <u>Nomination and Compensation / Remuneration Committee</u> ?		GCG MC No. 2012-07 Chapter III Sec. 16.2.4. RA No. 10149 Chapter IV Sec.23 GCG MC No. 2012-07 Chapter VIII. Sec. 41	OECD Principle II: The State Acting as an Owner, F. (2) ICGN Global Corporate Principles 5.0 Remuneration & 5.4 Transparency 2013 ASEAN Corporate Governance Scorecard E.2.10 & E.2.16 SEC MC No. 2. s. 2002 Sec. 9 (B)(b)
15	Did the Nomination and Compensation/Remuneration Committee meet at least twice during the year?			
16	If yes, is the report of the Nomination and Compensation/Remuneration Committee publicly disclosed?			

17	Does the Board appoint an <u>Audit Committee</u> ?	GCG MC No. 2012-07 Sec. 8 (j) GCG MC No. 2012-07 Chapter III Sec. 16.2.2 GCG MC No. 2012-07 Chapter VIII. Sec. 41	OECD Principle V. Transparency and Disclosure, B. 2013 ASEAN Corporate Governance Scorecard E.2.22 SEC MC NO.2 s. 2002 Sec. 9 (A)	
18	If yes, is the report of the Audit Committee publicly disclosed?			
19	Does at least one member of the Audit Committee have an audit, accounting or finance background (qualification or experience)?			
20	Did the Audit Committee meet at least four times during the year?			
21	Does the Board appoint a <u>Risk Management Committee</u> ?	GCG MC No. 2012-07 Chapter III Sec. 16.2.5. GCG MC No. 2012-07 Chapter III Sec. 8 (b), (h)	OECD Principle VI D (6)	
22	If yes, is the report on Risk Management Committee publicly disclosed?			
23	Does at least one member of the Risk Management Committee have a background in finance and investments?	GCG MC No. 2012-07 Chapter III Sec. 16.2.5.		
24	Board meetings and attendance			
a.	Are the Board of Directors meetings scheduled at the beginning of the year? (end of Q1)			
b.	Does the Board of Directors meet at least monthly?	GCG MC No. 2012-07 Sec. 8 (a)		
c.	Did the Board of Directors meet on at least 75% on their scheduled meetings?		INDO SCORECARD	
d.	Has each of the directors/commissioners attended at least 90% of all the board meetings held during the year?		OECD PRINCIPLE VI (E)	
e.	Did the Board of Directors meet separately at least once during the year without the President/CEO present?		WORLD BANK PRINCIPLE 6	
25	Access to Information			
a.	Does the GOCC have a policy that stipulates board papers for Board of Directors/Commissioners meetings be provided to the Board at least three (3) working days in advance of the board meeting?			
b.	Is the Board Secretary trained in legal, accountancy or company secretarial practices?			
26	Internal Audit			
a.	Does the company have a separate internal audit function?	GCG MC No. 2012-07 Chapter III Sec. 16.1, 16.2.2. (a) & (d)	OECD PRINCIPLE VI (D)	
b.	Does the appointment and removal of the internal auditor require the recommendation of the Audit Committee?		OECD PRINCIPLE VI (D) (7) WORLD BANK PRINCIPLE 6 ASX Principles on CG	
27	Risk Oversight			
a.	Does the company disclose the internal control procedures/risk management systems it has in place?		OECD PRINCIPLE 6 (VI) (D) (7)	
b.	Does the Annual Report disclose that the Board of Directors/Commissioners has overseen a review of the company's material controls (including operational, financial and compliance controls) and risk management systems?		UK CODE (JUNE 2010)	
c.	Does the company disclose how key risks are managed?		OECD PRINCIPLE V (A)	
d.	Does the Annual Report contain a statement from the Board of Directors or Audit Committee commenting on the adequacy of the GOCC's internal controls/risk management systems?			

28	Board Chairman			
		Do different persons assume the roles of Chairman and CEO?		OECD PRINCIPLE VI ICGN: 2.5 Role of the Chair
29	Board of Directors Development			
	a.	Does the GOCC have orientation programmes for new Directors?		
	b.	Does the GOCC have a policy that encourages Directors/Commissioners to attend on-going or continuous professional education programmes?	R.A. No. 10149 Sec. 16, GCG MC No. 2012-05 Art. 5 (f)	OECD PRINCIPLE VI (E)
	c.	Did all Appointive Directors attend at least 1 training for the calendar year?		
30	Board Appraisal			OECD PRINCIPLE VI (D) (2)
	a.	Is an annual performance assessment conducted of the Board of Directors?	GCG MC No. 2012-07 Chapter III	OECD Principle VI. The Responsibilities of the Boards of State-Owned Enterprises, F. 2013 ASEAN Corporate Governance Scorecard E.5.5 & E.5.6
	b.	Does the GOCC disclose the process followed in conducting the Board assessment?		
	c.	Does the GOCC disclose the criteria used in the Board assessment?		
31	Committee Appraisal			UK CODE (JUNE 2010)
		Is an annual performance assessment conducted of the Board of Directors Committees?		
BONUS				
Stakeholder Relationships				
1	Does the GOCC practice Global Reporting Index (GRI) on its annual reports?			International <IR> Framework - DRAFT ,IIRC Council Item 3b Meeting of 5
Disclosure and Transparency				
2	Quality of Annual Report			
		Are the audited annual financial report/statement released within 30 days upon the receipt from COA?		OECD Principle V (C) OECD Principle V (E) ICGN 7.2 Timely disclosure ICGN 7.3 Affirmation of
PENALTY				
Responsibilities of the Board				
1	Are there members of the Board of Directors who hold more than five (5) positions in GOCCs and PLCs?			
2	Is there non-compliance with Good Governance Conditions?			

Appendix C. GOCC Survey Questionnaire

Survey on GOCCs' Adherence to Corporate Governance Standards

Good day!

I am Cyril Marie Benedicto, a student of the Master of Public Policy Program of Meiji University in Tokyo, Japan. For my thesis, I am conducting a study on the corporate governance (CG) practices, policies and initiatives of GOCCs. The study aims to identify the factors that facilitated and hindered the adherence of GOCCs to the internationally agreed standards and best practices of State-Owned Enterprise (SOE) corporate governance. Results of the survey will be used as inputs in the analysis of the adherence of GOCCs to CG standards and will further contribute to SOE governance studies.

In compliance with Republic Act No. 10173, also known as the Data Privacy Act of 2012, all personal data obtained from this survey will be handled and treated with utmost confidentiality. All collected data will be used solely for the research study and will be kept secure and confidential.

Completing the survey will take about 10-15 minutes. Your time and participation is very much appreciated.

For any questions or concerns, please contact me at:
cyril.benedicto@gmail.com
+639178290449 / +818025780439 (viber or telegram)

* Required

Email *

Your identity and other personal information will be kept confidential. Only the researcher will have access to your responses.

Name (Optional)

Employee Number *

Designation/ Position *

Office/Unit/Division *

GOCC *

Number of Years in the GOCC *

A. What are the major drivers that facilitated CG compliance in your GOCC? *

B. What are the obstacles or challenges that hindered CG compliance in your GOCC? *

Leadership

1. How would you assess the Board Directors' level of knowledge and understanding of the CG principles, standards and practices? *

Mark only one oval.

- ☐ High
☐ Medium
☐ Low

Additional Comments:

2. How would you assess the Board Directors' level of receptiveness of the CG principles, standards and practices? *

Mark only one oval.

- ☐ High
☐ Medium
☐ Low

Additional Comments:

3. Do the Board Directors prioritize CG principles and give importance to complying with standards and instilling practices in the GOCC? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

4. Are there members in the management who take the lead and work closely with the office unit in implementing the CG standards and practices in the GOCC? *

Mark only one oval.

☐ Yes

☐ None

If yes, please indicate designation/position in the management. (If none, put N/A): *

Additional Comments:

Organizational Structure

5. Is there an office unit/division in the GOCC designated to perform CG-related tasks and functions? *

Mark only one oval.

☐ Yes

☐ None

Additional Comments:

5.1. Is the office unit/division a stand-alone function or is it concurrent with other functions? *

Mark only one oval.

☐ Stand-alone

☐ Concurrent

☐ Not Applicable

Additional Comments:

5.2. Has the number of staff in the office unit/division increased for CG-related functions and responsibilities? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

6. Does the compliance officer report directly to the CEO/President? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

7. Does the compliance officer report directly to the Board Directors and CG-specific board committees? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

In relation to the Regulator (Governance Commission for GOCCs)

8. Does the regulator clarify and explain the policies (as well as changes, if there are any) related to CG principles, standards and practices? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

8.1. Are there parts of the policy (memorandum circular), tools (scorecard questionnaire) and mechanisms (manner of assessment, presentation/release of results, exit conference, awarding, etc.) that need to be revisited by the regulator? *

Mark only one oval.

☐ Yes

☐ None

If yes, please mention part of policy/the tool/the mechanisms and explain the specific aspect that need to be revisited. (If none, put N/A) *

8.2. Are there changes/modifications that the regulator should consider in any part of the policy (memorandum circular), tools (scorecard questionnaire) and mechanisms (manner of assessment, presentation/release of results, exit conference, awarding, etc.)? *

Mark only one oval.

- ☐ Yes
☐ None

If yes, please indicate and explain the changes/modifications in the policy/the tool/the mechanisms that the regulator should consider. (If none, put N/A) *

9. Are CG-related policies aligned and consistent with other government policies and regulations? *

Mark only one oval.

- ☐ Yes
☐ No

If no, please mention and explain the policies/regulations not aligned and are inconsistent with CG-related policies. (If yes, put N/A) *

Knowledge and Understanding

10. How would you assess your organization's level of knowledge and understanding of the CG principles, standards and practices? *

Mark only one oval.

- ☐ High
☐ Medium
☐ Low

Additional Comments:

11. How would you assess your organization's level of receptiveness and willingness to instill the CG principles, standards and practices in the GOCC? *

Mark only one oval.

- ☐ High
☐ Medium
☐ Low

Additional Comments:

12. Are there activities in the GOCC that ensure employees know and understand the CG principles, standards and practices?

Mark only one oval.

- ☐ Yes
- ☐ None

If yes, please mention the activities. (If none, put N/A) *

Additional Comments:

13. Is there proper transition or knowledge transfer when there are changes in the staffing or office unit/division? *

Mark only one oval.

- ☐ Yes
- ☐ No

Additional Comments:

Resources

14. Does the organization allot budget to support tools, technology, staff and activities for the implementation of CG principles, standards and practices in the GOCC? *

Mark only one oval.

☐ Yes

☐ No

Additional Comments:

15. Does the GOCC consult CG experts outside of the organization? *

Mark only one oval.

☐ Yes

☐ No

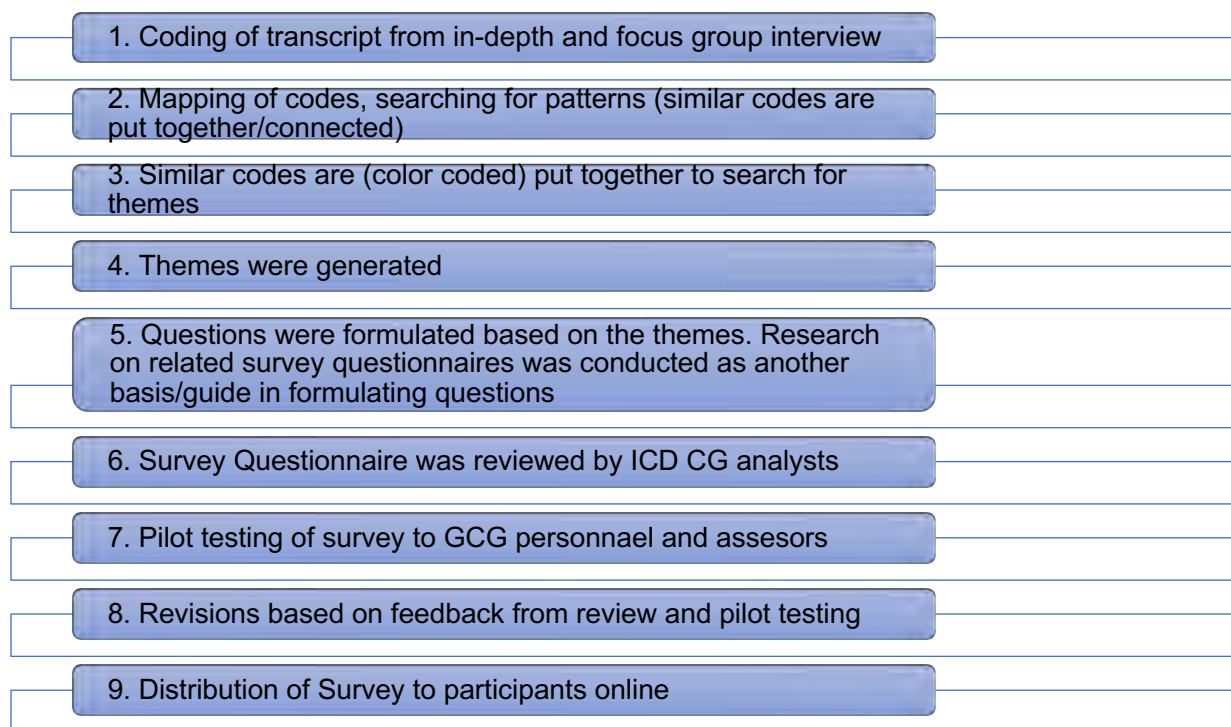
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Google Forms

Annex D. Steps in Survey Questionnaire Development

The following are the steps in developing the survey questionnaire:



1. Coding of transcript from in-depth and focus group interview:

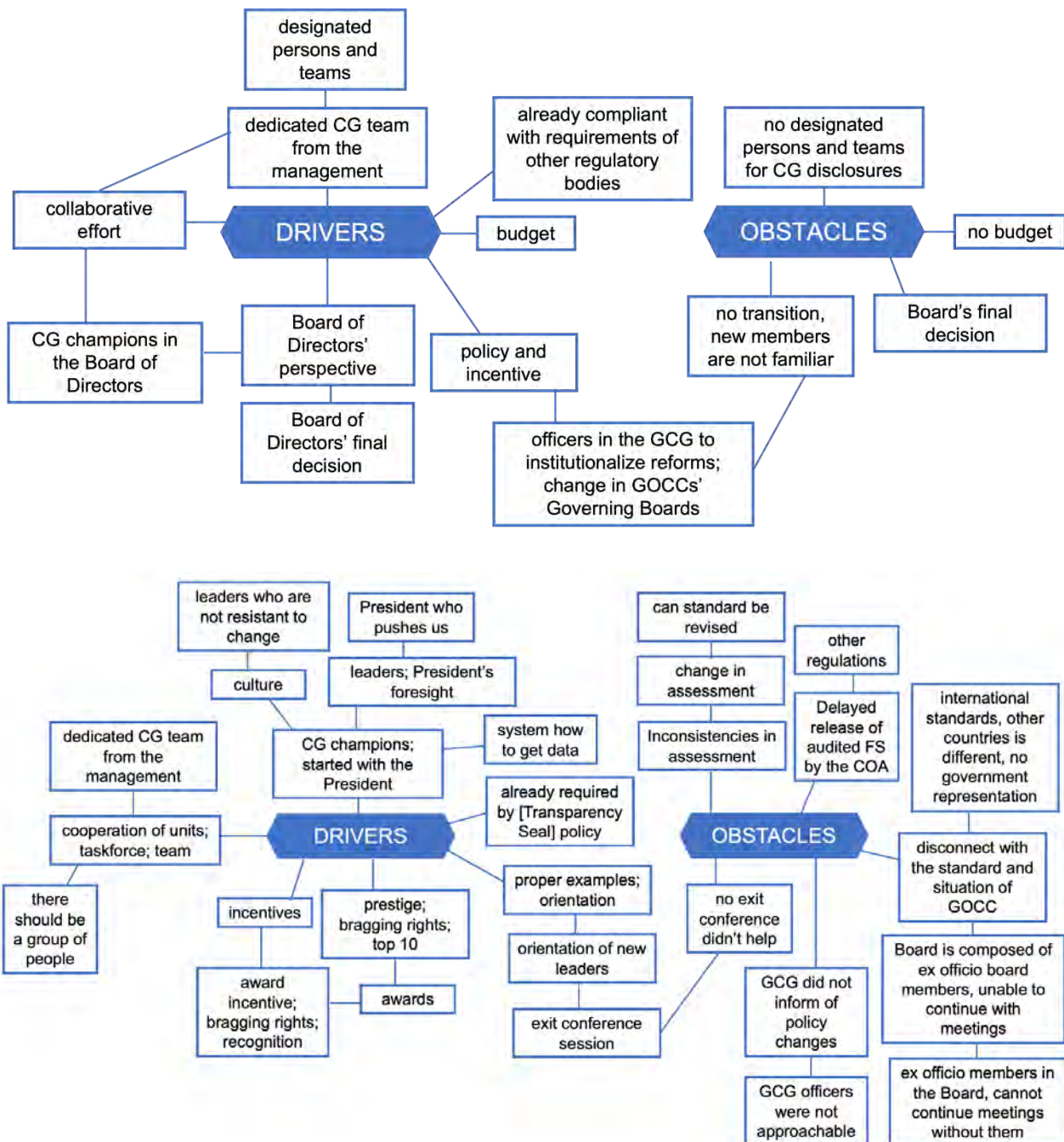
interview with corporate governance analysts	code
"Board of directors' perspective and acceptance on findings and recommendations"	board of directors' perspective
"for those who score well, most of them have CG champions in their board, the approach is from top to bottom"	CG champions in the board of directors
"in some dedicated CG team, the approach is from management to board (bottom-up), it would depend if they get the trust of the board"	dedicated CG team from the management
"either way, collaborative effort is the secret of companies to have a good CG performance"	collaborative effort
"we still face the same challenges in publicly listed companies and insurance companies, as ICD, we are thinking of some initiatives, but it's not easy since the final decisions is still the board's"	board of directors' final decision
"Some companies do not have designated persons and teams that work on their CG disclosures"	designated persons and team
"Other say they do not have the budget"	budget
"Sometimes, some companies do not have transitions in their CG/compliance team, so the new members are not familiar with the scorecard"	no transition, new members are not familiar
"it is easier for banks, so for GFIs to comply because of BSP; in other countries, SOEs are listed. If GOCCs will be listed, they will be pushed more to comply"	already compliant with requirements of other regulatory bodies
"comparing the situation of PLCs and GOCCs, for the GOCCs, the policy needs to have more 'teeth', maybe link it with other policies on incentives"	policy and incentive

“Officers in the GCG are the ones left to institutionalize reforms, change in administration would have change in the Governing Boards of GOCCs”	officer in the GCG to institutionalize reforms; change in GOCCs’ Governing Boards
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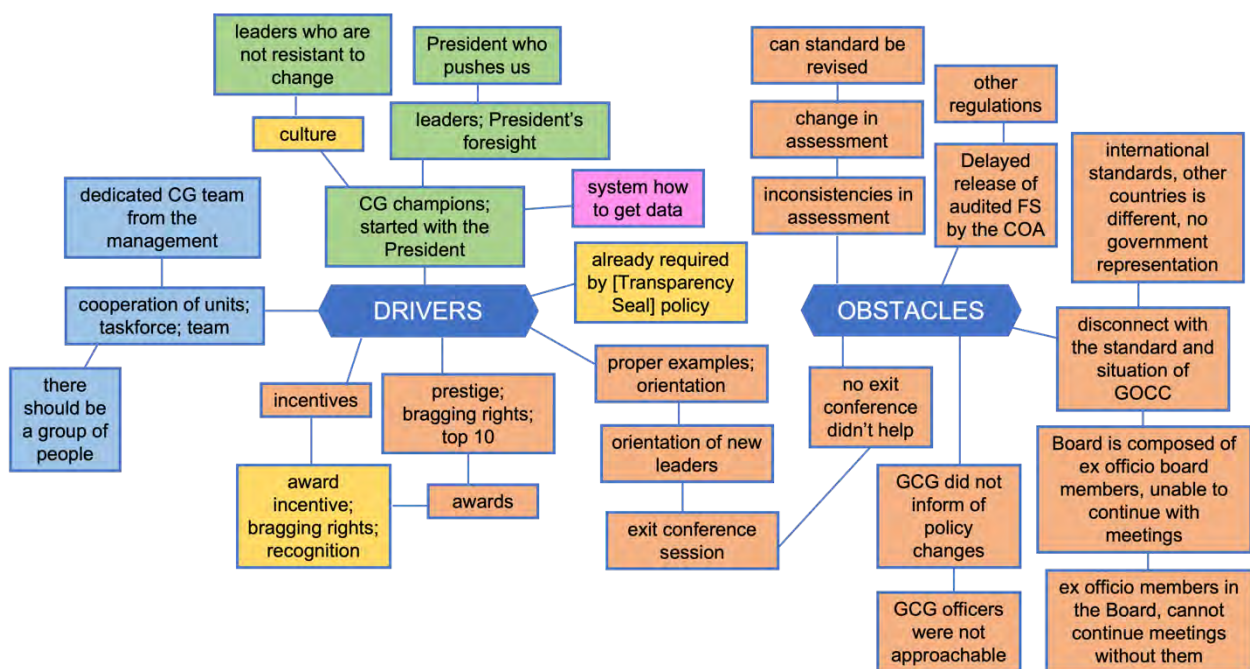
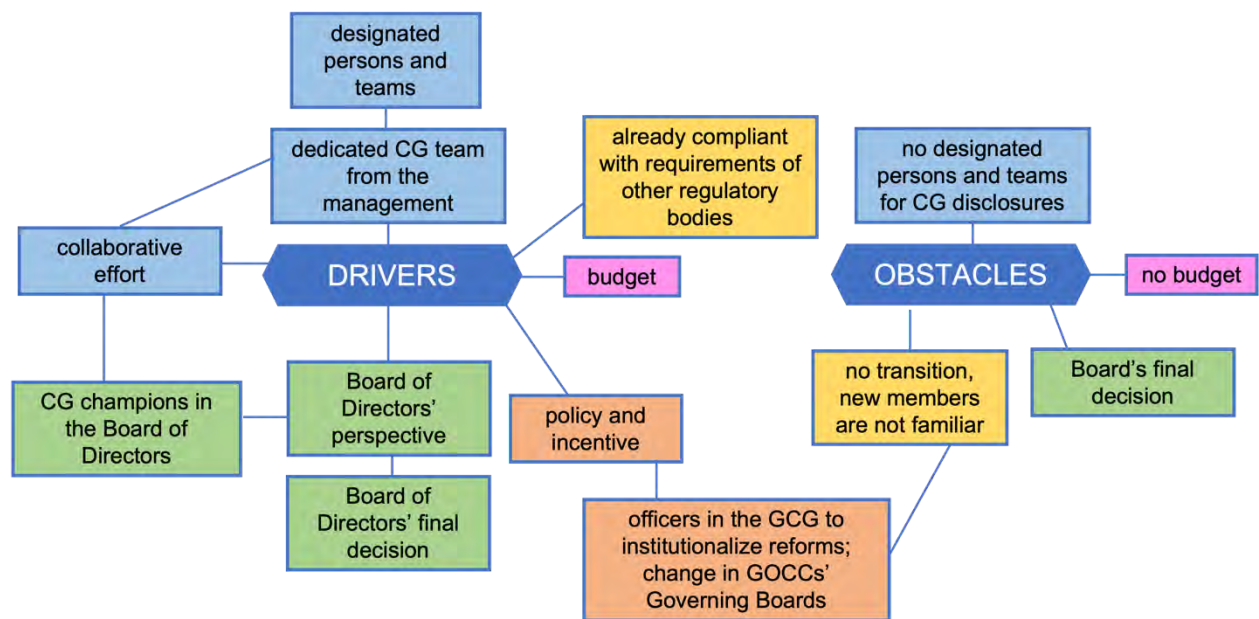
interview with GOCCs	code
“incentives for directors, that is one driver that make the organization follow or comply”	incentives
“cooperation of units, in PNOC-EC, the approach is decentralized but with the compliance officer as the lead, it’s like a task force that works with their respective contribution per unit, that’s why we get to comply on time. It’s a joint team since the data come from different units such as the HR, planning, finance and office of corporate secretary, there are point persons per unit”	cooperation of units; taskforce; team
“for us it’s the culture in Land Bank, as a bank, we are already used to these kinds of requirements especially because of BSP [<i>Bangko Sentral ng Pilipinas</i>]; it is not new to us, we just need to consolidate information from different units. It’s really our culture”	dedicated CG team from the management
“in National Power Corporation (NPC), it is really the CG champions, in our case, it started with our President, she wanted to professionalize the conduct of board meetings, etc. Eventually she became a fellow of ICD. The ICD and GCG has been working on this right?”	CG Champions; started with President
“another driver for us is the prestige, as there is no really monetary incentives, we really just wanted to be part of the top 10, as it’s always just the government financial institutions as expected; it is bragging rights for us, that maybe we will be the top for the energy sector. We always review where did we fail? Maybe next year, we try to improve on our practices”	prestige, bragging rights, top 10
it has become a culture for us, we have imbibed it, it is not just because we want to comply”	culture
“in PCIC, leaders is a big factor, our president’s foresight, at the start she asks us to prepare our annual report and fix our ISO certification, so when the GCG implemented the CGS, we are already with all our documents”	leaders; president’s foresight
“there should really be people or a group, but it is really the leader, the president who pushes us to comply”	there should be people or group president who pushes us
“for GSIS, it’s the award incentive, the bragging rights to be part of the top 10. For us in the institution, it being given recognition”	award incentive; bragging rights; recognition
“during the inception of the CGS, during the orientation, our leaders were still very open and receptive. The CGS has new items that we do not really do in terms of reporting, board assessment and schedule of meeting. The new leaders were not resistant to change”	leaders were not resistant to change
“there are already reportorial requirements being asked by the Transparency Seal”	already required by [Transparency Seal] policy
“we were able to establish a system on how to get data”	system how to get data
“benchmark of actual practices from international SOEs and proper examples during the orientation”	proper examples; orientation

"exit conference session really helps for us to be more clarified of the assessment results"	exit conference session
"in the past 2 years, there is no more awarding ceremony. In our institution, the awards are basis for monetary incentives for us employees who contributed"	awards
"inconsistencies, we observed that the assessment of the compliance was different from the previous year, in the previous year, it was assessed that we were able to comply, but suddenly this year we are not compliant or did not meet the requirement"	inconsistencies in assessment
"it didn't help that recently there was no exit conference held where we can discuss considerations and clarifications"	no exit conference didn't help
"there seems to be a disconnect with the standard itself and the current situation of the GOCC, it is unfair when we are assessed to be non-compliant on the standard on 'scheduled meetings', when our board really wants to meet"	disconnect with the standard and situation of GOCC
"we felt a change in the assessment, the validation from previous year is different"	change in assessment
"we have difficulty on meeting the standard on meetings, since our board is composed of <i>ex officio</i> board members, they have many assignments or meetings from their department, and that is not the fault of our GOCC. The department we are attached to is higher than us, so they really need to attend to meeting called by the department secretary"	board is composed of <i>ex officio</i> board members, unable to continue with meetings
"it is based on international standards, in other countries they are independent, there is not much state control, the government does not really have a representation but here we have in our GOCCs"	international standards, other countries is different, no government representation
"there was a change in our board composition, we also felt the same challenge, we used to not have <i>ex officio</i> board members, but with the change in the administration, we now have department secretaries and undersecretaries who cannot attend the board meetings. We can't continue with the meeting without them, so we have problems with complying with that standard"	<i>ex officio</i> members in the board, cannot continue with meetings without them
"we have problems with the Commission on Audit (COA), they are not able to release on time our audited financial statements"	delayed release of audited financial statements by the COA
"an obstacle for us is duplicate requirements from other regulations"	other regulations
"similar for Land Bank, can the standard be revised? Is it really about the scheduling of the actual meetings held? I think the rescheduling does not matter, but more of the held meeting. If the BSP accepts this but the GCG does not?"	can standard be revised
"changes in the policy, we were not informed by the GCG, like on the schedule of assessment, we were not advised"	GCG did not inform of policy changes
"there were GCG officers who were not approachable, communication is important to us who we can talk to"	GCG officer were not approachable
"we need to keep orientating our new leaders, like this administration, we had 3 changes of chairman"	orientation of new leaders

2. Mapping of codes, searching for patterns (similar codes are put together/connected):



3. Similar codes are (color coded) put together to search for themes



4. Themes were generated

Theme	Description
Leadership	Factors that include the actions, traits and attributes referring to the individuals who lead the organization namely, the Board of Directors and Management team
In Relation to the Regulator	Factors related to the regulatory function and mandate of the GCG; includes regulations, policies, governance tools and mechanisms used by the GCG in carrying out its function; other matters concerning regulations and policies in the government as well as those of other regulatory bodies will be considered in this theme
Organizational Structure	Factors concerning the office units/ departments of the organization, such as relationship, positions and structure, and attributes that outline how activities/ process flow or are directed in the organization
Knowing and Understanding	Factors related to the awareness, knowledge and understanding of the members of the GOCC of the compliance and standards; also includes the culture, environment, perception and how these are translated into actions/ activities
Resources	Factors include budget, tools, systems and staff in implementing and operationalizing CG mechanisms; also consists of the description of the situation brought about by the identified factors or the status of the factors

5. Questions were formulated based on the themes. Research on related survey questionnaires was conducted as another basis/guide in formulating questions

Categories	
Survey Questionnaire on Wholesale Banks	Survey Questionnaire on Banks
Role and structure Strategy and planning Compliance monitoring Technology Support and challenge Personnel	Activities Governance Resources
Sample Questions	
Role and Structure <ul style="list-style-type: none"> - Are there changes in the board level representation for compliance? - Is the compliance unit positioned as an independent unit with the Head reporting to the CEO? 	Activities <ul style="list-style-type: none"> - Is the compliance a stand-alone function or is it embedded with other functions? - What is the most frequent involvement of the compliance function with regulatory projects: leader, participant or expert?
Strategy and Planning <ul style="list-style-type: none"> - Do boards and senior management committees have sufficient visibility and oversight of the longer-term goals and strategies of compliance functions, and their delivery? 	Governance <ul style="list-style-type: none"> - Does the group compliance officer have a direct reporting line to the CEO? - Does the group compliance officer have regular meeting with the independent board members?

<ul style="list-style-type: none"> - Is there an annual compliance plan and is this being used regularly as reference for planning initiatives? 	<ul style="list-style-type: none"> - How would you assess your organization's perception of compliance? - How is the compliance function mainly involved with the main regulators?
Compliance Monitoring <ul style="list-style-type: none"> - Are there changes in financial and human resources to enable broader, deeper and timelier monitoring? - Are there initiatives to enhance surveillance and/or monitoring capabilities? 	Resources <ul style="list-style-type: none"> - Has the compliance staff increased? - How do you consider the level of available resources assigned to the compliance? - How would you assess the qualitative adequacy of compliance resources? - Which competencies/skills could be improved? - Do you consider additional tools should be deployed?
Technology <ul style="list-style-type: none"> - Is the compliance function adequately engaged in the development of technology solutions across the firm? - Is new technology for surveillance and control processes prioritized? 	
Support and Challenge <ul style="list-style-type: none"> - Are compliance functions resourced appropriately, having regard to any changes in the mandate and operating model of compliance and the activities of the firm? - Is there a lack of engagement with other office units? 	
Personnel <ul style="list-style-type: none"> - Do the staff have sufficient experience? - Have the departments met the high demand for compliance staff? 	
Source: Financial Conduct Authority	Source: PricewaterhouseCoopers Assurance

Appendix E. Steps in Survey Questionnaire Development

Coding of transcript of in-depth interview with ICD corporate governance analysts

interview with corporate governance analysts	code
"Board of directors' perspective and acceptance on findings and recommendations"	board of directors' perspective
"for those who score well, most of them have CG champions in their board, the approach is from top to bottom"	CG champions in the board of directors
"in some dedicated CG team, the approach is from management to board (bottom-up), it would depend if they get the trust of the board"	dedicated CG team from the management
"either way, collaborative effort is the secret of companies to have a good CG performance"	collaborative effort
"we still face the same challenges in publicly listed companies and insurance companies, as ICD, we are thinking of some initiatives, but it's not easy since the final decisions is still the board's"	board of directors' final decision
"Some companies do not have designated persons and teams that work on their CG disclosures"	designated persons and team
"Other say they do not have the budget"	budget
"Sometimes, some companies do not have transitions in their CG/compliance team, so the new members are not familiar with the scorecard"	no transition, new members are not familiar
"it is easier for banks, so for GFIs to comply because of BSP; in other countries, SOEs are listed. If GOCCs will be listed, they will be pushed more to comply"	already compliant with requirements of other regulatory bodies
"comparing the situation of PLCs and GOCCs, for the GOCCs, the policy needs to have more 'teeth', maybe link it with other policies on incentives"	policy and incentive
"Officers in the GCG are the ones left to institutionalize reforms, change in administration would have change in the Governing Boards of GOCCs"	officers in the GCG to institutionalize reforms; change in GOCCs' Governing Boards

Coding of transcript of focus group interview with top GOCCs

interview with GOCCs	code
"incentives for directors, that is one driver that make the organization follow or comply"	incentives
"cooperation of units, in PNOC-EC, the approach is decentralized but with the compliance officer as the lead, it's like a task force that works with their respective contribution per unit, that's why we get to comply on time. It's a joint team since the data come from different units such as the HR, planning, finance and office of corporate secretary, there are point persons per unit"	cooperation of units; taskforce; team

“for us it’s the culture in Land Bank, as a bank, we are already used to these kinds of requirements especially because of BSP [<i>Bangko Sentral ng Pilipinas</i>]; it is not new to us, we just need to consolidate information from different units. It’s really our culture”	dedicated CG team from the management
“in National Power Corporation (NPC), it is really the CG champions, in our case, it started with our President, she wanted to professionalize the conduct of board meetings, etc. Eventually she became a fellow of ICD. The ICD and GCG has been working on this right?”	CG Champions; started with President
“another driver for us is the prestige, as there is no really monetary incentives, we really just wanted to be part of the top 10, as it’s always just the government financial institutions as expected; it is bragging rights for us, that maybe we will be the top for the energy sector. We always review where did we fail? Maybe next year, we try to improve on our practices”	prestige, bragging rights, top 10
it has become a culture for us, we have imbibed it, it is not just because we want to comply”	culture
“in PCIC, leaders is a big factor, our president’s foresight, at the start she asks us to prepare our annual report and fix our ISO certification, so when the GCG implemented the CGS, we are already with all our documents”	leaders; president’s foresight
“there should really be people or a group, but it is really the leader, the president who pushes us to comply”	there should be people or group president who pushes us
“for GSIS, it’s the award incentive, the bragging rights to be part of the top 10. For us in the institution, it being given recognition”	award incentive; bragging rights; recognition
“during the inception of the CGS, during the orientation, our leaders were still very open and receptive. The CGS has new items that we do not really do in terms of reporting, board assessment and schedule of meeting. The new leaders were not resistant to change”	leaders were not resistant to change
“there are already reportorial requirements being asked by the Transparency Seal”	already required by [Transparency Seal] policy
“we were able to establish a system on how to get data”	system how to get data
“benchmark of actual practices from international SOEs and proper examples during the orientation”	proper examples; orientation
“exit conference session really helps for us to be more clarified of the assessment results”	exit conference session
“in the past 2 years, there is no more awarding ceremony. In our institution, the awards are basis for monetary incentives for us employees who contributed”	awards
“inconsistencies, we observed that the assessment of the compliance was different from the previous year, in the previous year, it was assessed that we were able to comply, but suddenly this year we are not compliant or did not meet the requirement”	inconsistencies in assessment
“it didn’t help that recently there was no exit conference held where we can discuss considerations and clarifications”	no exit conference didn’t help
“there seems to be a disconnect with the standard itself and the current situation of the GOCC, it is unfair when we are assessed to be non-compliant on the standard on ‘scheduled meetings’, when our board really wants to meet”	disconnect with the standard and situation of GOCC

"we felt a change in the assessment, the validation from previous year is different"	change in assessment
"we have difficulty on meeting the standard on meetings, since our board is composed of <i>ex officio</i> board members, they have many assignments or meetings from their department, and that is not the fault of our GOCC. The department we are attached to is higher than us, so they really need to attend to meeting called by the department secretary"	board is composed of <i>ex officio</i> board members, unable to continue with meetings
"it is based on international standards, in other countries they are independent, there is not much state control, the government does not really have a representation but here we have in our GOCCs"	international standards, other countries is different, no government representation
"there was a change in our board composition, we also felt the same challenge, we used to not have <i>ex officio</i> board members, but with the change in the administration, we now have department secretaries and undersecretaries who cannot attend the board meetings. We can't continue with the meeting without them, so we have problems with complying with that standard"	<i>ex officio</i> members in the board, cannot continue with meetings without them
"we have problems with the Commission on Audit (COA), they are not able to release on time our audited financial statements"	delayed release of audited financial statements by the COA
"an obstacle for us is duplicate requirements from other regulations"	other regulations
"similar for Land Bank, can the standard be revised? Is it really about the scheduling or the actual meetings held? I think the rescheduling does not matter, but more of the held meeting. If the BSP accepts this but the GCG does not?"	can standard be revised
"changes in the policy, we were not informed by the GCG, like on the schedule of assessment, we were not advised"	GCG did not inform of policy changes
"there were GCG officers who were not approachable, communication is important to us who we can talk to"	GCG officer were not approachable
"we need to keep orientating our new leaders, like this administration, we had 3 changes of chairman"	orientation of new leaders
"in the past 2 years, there is no more awarding ceremony. In our institution, the awards are basis for monetary incentives for us employees who contributed"	awards

Coding of survey responses of all GOCCs

responses of GOCCs from the survey	code
Performance evaluation	regulation tool of GCG
PBB entitlement	incentive
Government regulation, policy issuances	regulations and policies
Organized preparation of documents for easy reference and submission	established systems
Adherence to existing laws and the guidelines thereof	adhering to requirements

Management and Board of Directors	management and board
Management Support in the attainment of Performance Targets.	support of management
Guidance from regulators	guidance of regulator
Compliance with regulatory requirements such as BSP, GCG, AMLA, SEC and other regulatory bodies	already complying to regulations of other oversight bodies
Online submission of compliance reports	means of complying
Cooperation of the units concerned	cooperation of all units
leadership of the Executive Committee, pursuit of excellence embodied in vision-mission and quality objectives	leadership and culture of excellence
Proactive management	proactive management
Employee cooperation	employee cooperation
Management directives and in pursuit of the principle of good governance	management directives and culture of good governance
complete orientation of all requirements from GCG and annual exit conference meeting	orientation and annual exit conference by GCG
(1) Doing things right - complying with the best corporate practices; (2) giving recognition to the good work of PNOC EC's personnel by getting a high rating in the CGS	habit of compliance to best practices and recognition
It is a GCG requirement for compliance	adhering to requirements
Consistent monitoring and supervision	consistent monitoring and supervision
Agency Strategic Plan, directives of oversight agencies, mandate	directives of oversight agencies
Quality of Service / Quality Management System	quality management system in place
For Compliance to GCG Requirements	adhering to GCG requirements
value adding impact to the organization	value-adding impact to GOCC
strict monitoring of compliance to regulatory requirements	strict monitoring of compliance
Compliance with the principle of transparency in the government service	compliance with transparency in government service
And ofcourse the persistent follow-ups of Corporate Governance Officers of GCG	persistent- follow ups of GCG officers
Close coordination and cooperation among functional groups/teams	close coordination and cooperation of functional groups
Supportive board and senior management	supportive board and senior management
The major driver that facilitates CG compliance is the Corporation's adherence with the law	adherence to law
Compliance to GCG policies and guidelines; desire to increase productivity and competence of the Authority	compliance to GCG policies
GOCC's adherence to corporate governance standards helps to identify the GOCC's' strengths and weaknesses compared to existing corporate governance provisions and their adherence to best practices	know the GOCC's strengths and weaknesses and ensure improvement in transparency

and international standards, thereby ensuring the improvement in the transparency of GOCCs on corporate governance initiatives and practices	
Board and Management support and commitment to good governance	Board and management commitment to good governance
Compliance with good corporate governance as condition precedent to PBB and PBI	for incentives PBB and PBI
Management instructions	Management instructions
and based on the expected contributions from a given unit or department	contributions of each unit
willingness of leaders; commitment to service excellence	willingness of leaders; commitment to excellence
Good leadership	good leadership
The system is already in place	system already in place
Board policies in place that supports and directs the agency's compliance with corporate governance practices	Board policies that support and direct GOCC's compliance
Corporate governance is important because it determines how SHFC operates, taking into account the interest of all its stakeholders. Good corporate governance leads to ethical business practices, which leads to financial viability	how it affects operations
Head of Agency's drive to comply	Head of agency's drive to comply
cooperative and competent members of Technical Working Group for the NFA-CGS	Cooperative and competent compliance team
organizational culture	organizational culture
leadership of top management	leadership of top management
Strict observance and adherence to the corporate governance rules and principles provided in the Code of Corporate Governance for GOCCs	GOCC's strict observance and compliance to CGS
reports re submitted through emails and GCG reminds us always of the schedule of submission	online submission and GCG always reminds of schedule
From a low score and ranking in the 2016 Corporate Governance Scorecard (58.50%), SB Corporation has improved its scores (79.50% in 2017, 93.00% in 2018, 97.27% in 2019 and 96.88% in 2020). The GCG Corporate Governance Scorecard (CGS) Orientation conducted last May 16, 2019 with detailed explanation and examples has contributed to a better understanding of the disclosure requirements of the CGS. Most of the disclosure requirements were found to be already in place while some needed improvement	detailed explanation and examples for better understanding of requirements
The Office of the Chief Compliance Officer (now Office of the Board Secretary and Chief Compliance Officer) has coordinated with the concerned units and consolidated all disclosure requirements. The same office has also coordinated with the GCG Corporate Standards Office in clarifying the CGS requirements to ensure that the same are met	coordinated with concerned units and consolidated all disclosure requirements
Transparency from Governing Board to the lowest rank in the organization	transparency from top to bottom in the organization
To be able to comply with the directives of GCG and to become a better and organised GOCC	to become a better and organized GOCC

Inquiries with the Person in Charge in GCG	inquiries with GCG personnel
strict monitoring by the GCG	strict monitoring of the GCG
If I may answer on behalf of our organization and based on the CG compliance, the underlying drive comes from the concept of good governance and one way of establishing that is to control and/or mitigate risk, maximize opportunities and ensure accountability, transparency, and integrity across the organization.	concept of good governance, establish through control and mitigate risk
commitment of employees	commitment of employees
no functional unit (with proper staff complement) that coordinates CG compliance of the institution	no functional unit and staff that coordinates CG compliance
Passive Employees	passive employees
The members of the Board of Directors have shorter terms	short term of board directors
overlapping duties and functions of different offices	overlapping duties and functions of offices
Lack of funds to properly implement all necessary reforms. Salary cap that hinders the procurement of key personnel to jumpstart workforce.	lack of funds; salary cap hinders hiring of key personnel
Difficult procedural rules	difficult procedural rules
Lack of manpower, implementation and familiarity with the different requirements of the GOCC since we are in the transition stage of being a GFI	lack of manpower
Reportorial generation from concerned offices in the corporation	generating reports from concerned offices
Inconsistent assessment, lack of an exit conference during the pandemic which would have been done virtually, some standards need review such as the 90% attendance of all Board members	inconsistent assessment, lack of exit conference
DAP as a unique GOCC has difficulty complying the requirements for the Board of Trustees	structure of the board
For PNOC EC, the transition from a non-ex officio chairperson to an ex officio chairperson was challenging, as the schedule and focus of the Board became dependent on the very busy schedule of the ex officio chairperson and his alternate (secretary and usec).	having ex officio members (govt representatives) in the GOCC Board
Also, there were some requirements in the CGS that are already being required under the Transparency Seal, and also the GCG Requirements under RA10149. The repetitiveness and redundancy sometimes is too taxing to PNOC EC's personnel who are already spread too thin, as it is	repetitiveness and redundancy of requirements is too taxing
The information being requested to be furnished comes from different divisions and departments, sometimes it is difficult to get the data within the prescribed period.	difficult to get data from concerned divisions within prescribed period
Diverse and amount of compliance requirements	diverse and amount of requirements
Limited Manpower	limited manpower
Lack of information, late submission of documents and inputs	lack of information and late submission
appointment of directors that are not entirely essentially qualified or does not even know the business of the corporation	appointment of directors that are not qualified and knowledgeable
voluminous work load with limited personnel to do the work	voluminous workload with limited personnel
Lack of training on how to comply with the compliance	lack of training

Lack of information regarding the schedule of compliance	lack of information on schedule
Deadlines and limited manpower	deadlines and limited manpower
communication gaps between JHMC and GCG	communication gap
low corporate cultural inertia and internal arrangements	low corporate cultural inertia
I would say that there are not much challenges except for the timely release of the GOCC's financial and annual reports. Being a GOCC with the given mandates nationwide, it is not quite easy to consolidate and prepare the financials.	timely release GOCC's FS and annual report; not easy to consolidate financials
COA AOM restricting training of Appointive Directors	Commission of Audit restrict training of appointive directors
Conflicting schedules of the ex-officio members of the Board	ex office board members
difficulty/lack of understanding on how to use GRI standard of reporting	lack of understanding of standard
- Need to improve the SHFC inter-department collaboration in terms of database management - Final and concrete table of organization	improve inter-department collaboration
Slow management intervention on issues affecting timely completion of targets	slow management intervention
adjustments in policy guidelines; dealing with difficult leaders	adjustment in policy guidelines, difficult leaders
added work load, setting different standard every now and then (it depends on the perception of the auditor)	added workload
The constant changes in the regulation	constant changes in the regulation
Insufficient circumstantial models of the best practices in corporate governance in the Philippine setting	insufficient models of best practices in the PH setting
Meeting with the deadline	meeting the deadline
Workload and under staff	workload and understaffed
Maybe some resistance of some units in the beginning	resistance of some units
Lack of briefing / training, our basis being the Memorandum Circular only, as well as additional research to understand the components of the CGS. Capacity-building is indeed important not only for the CGS-TWG members involved in our Agency, but also in regard to the concerned offices.	lack of training and capacity- building
gray area on appropriate person/office in regard to the responsibilities for the board	gray area on appropriate person
Short turn-around time provided by CSO-GCG to the GOCC and its Board for the CGS Assessment i.e. formal notice/letter from GCG re CGS Assessment was not transmitted/forwarded to the GOCC immediately but weeks be after its issue date.	short period provided by GCG
Lack of Compliance Personnel	lack of personnel
some offices need constant follow-ups	need follow-ups from other offices
Operations and System improvements were the focus and CG could not be the priority.	CG not the priority
The CGS items 24.c and 24.d have been a challenge for compliance. For 24.c (Did the Board of Directors meet on at least 75% on their scheduled meetings?), blocking the scheduled monthly board meeting is not	conflicting standard and situation of GOCCs;

always possible because of the other commitments of the directors. For 24.d (Has each of the directors/commissioners attended at least 90% of all the board meetings held during the year?), just one (1) absence will result to below 90% if the director had less than 12 applicable meetings for the year (e.g., exempted, newly appointed).	
We have no Compliance Department to do such tasks	no compliance department
Change in National administrations and in the appointments to the Governing Board	change in appointments of the board
delayed issuance/incomplete content of annual report	delayed release and incomplete annual report
lack of appreciation/deep understanding by the BOT	lack of appreciation/ deep understanding of the Board
The obstacles are not noteworthy of remark as these are the trivial concerns that normally happen in processing a corporate level compliance. This is to say that compliance from each office and/or department is properly undertaken.	compliance from each office
change in policies/change in composition of Board	change in policies/composition of the Board

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Title of Thesis: **A quantitative study into the drivers of tax compliance
among SME taxpayers: Evidence from Pursat Province, Cambodia**

Governance Program,
The Graduate School of Governance Studies

Name of Supervisor: **Professor HIDEAKI TANAKA**

Name of Author: **BUN SABOEURN**

G.S. Format 2

Research Title:

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July 2022

Abstract

A low level of tax compliance among taxpayers causes the low government's capacity to provide sufficient public goods. This low compliant level is influenced by large scale of the informal economy, cash basis business transactions, and high cost to comply with the tax system. This study aimed to identify the key factors influencing SME taxpayers' tax compliance in Pursat Province, Cambodia. Respond to the objective, a research question: "What are the drivers of tax compliance among small and medium taxpayers (SMEs) in the Pursat Tax Branch?", is answered. This study employed the Theory of Planned Behavior (TPB) as the theoretical framework where attitude towards tax compliance intention explained the intrinsic value of tax morale, fairness of the tax system, efficiency of government spending; and Subjective Norms explained social norms and taxpayer service. Perceived Behavioral Control explains the complexity of tax laws and procedures, tax knowledge, audits and sanctions. One hundred and two SME owner/representative participated in the survey. The Ordered Logistic Regression (OLR) was utilized to analyze the data. The result showed that tax morale had a statistically positive significant influence on tax compliance intention while tax knowledge and the complexity of tax laws and procedures had a negatively significant influence on tax compliance intention. In contrary, fairness of the tax system, efficiency of government spending, social norms, taxpayer service, audits and sanctions had statistically insignificant on tax compliance intention at the time of this study. The limitation of the study is the exclusion of demographic factor and economic factor that may influence the tax compliance behavior. Future research should consider to cover these factors. The study contributes practitioners, academicians, and policymakers' knowledge in aspects of improving the level of tax compliance behavior among SMEs.

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List of Acronyms

ADB	Asian Development Bank
ASEAN	Association of South East Asian Nations
AUS	Audits and Sanctions
CIT	Corporate Income Tax
CTL	Complexity of Tax Laws and Procedures
EAS	Estimated Assessment System/Official Assessment System (OAS)
EGS	Efficiency of Government Spending
EUR	European Euro
FDI	Foreign Direct Investment
FTS	Fairness of the Tax System
GCT	General Consumption Tax
GDP	Gross Domestic Product
GDT	General Department of Taxation
ICT	Information Communication Technology
IDR	Indonesian Rupiah
IMF	International Monetary Fund
JICA	Japanese International Cooperation Agency
KHR	Khmer Riel (Cambodian Currency)
KMO	Kaiser-Meyer-Olkin
MEF	Ministry of Economy and Finance
MISTI	Ministry of Industry, Science, Technology, and Innovation
NGO	Non-Government Organization
OECD	Organization of Economy Cooperation and Development
OLR	Ordered Logistic Regression
PFM	Public Financial Management
QIPs	Qualified Investment Projects
RGC	Royal Government of Cambodia
RMS	Revenue Mobilization Strategy
SAS	Self-Assessment System
SMEs	Small and Medium Enterprises/ Small and Medium taxpayers
SON	Social norms
SPSS	Statistic Package for Social Science
SSC	Social Security Contribution
TAK	Tax Knowledge
TAM	Tax Morale
TAS	Taxpayer Service
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UN	United Nations
USD	United States Dollar
VAT	Value Added Tax
VIF	Variance Inflation Factor

CHAPTER ONE: INTRODUCTION

1.1 Research background

Taxation is a significant source of the government funds needed to invest in providing public services and reducing poverty (IMF, OECD, UN, and World Bank, 2011). This report mentioned that “strengthening domestic resource mobilization is not just a question of raising revenue; it is also about designing a tax system that promotes inclusiveness, encourages good governance, matches society’s views on appropriate income and wealth inequalities, and promotes social justice.” Likewise, the Royal Government of Cambodia (RGC) aims to broaden the tax base to ensure fairness of the tax system and sustain tax revenue collection. Although the economic growth rate has remarkably increased by around 7% over the last two decades, the tax revenue collection is not sustainable. Moreover, Cambodia continues to work with ADB on strategic PFM and other action plans, including the Revenue Mobilization Strategy 2019-2023 (ADB, 2019). Under this strategy, the Ministry of Economy and Finance (MEF) has reformed fiscal policy on tax and non-tax revenue. Its vision is to transform the national revenue system to be modernized in response to the development needs and the changes in the socio-economic structure, technology, business environment, and taxpayer behaviors.

In order to achieve the government’s goal, the General Department of Taxation (GDT) has reformed its administration and tax policies and reviewed its capacities toward ensuring all taxpayers comply with the tax system. In 2014, GDT started to deeply reform tax administration by restructuring the tax system into core functions and support functions, introducing a new business registration system, and transforming the tax return filing from manual filling to electronic filling. In addition, GDT has requested international technical assistance to support the reforms process and sent potential officials to undertake the training and study tour abroad to modernize its tax system. Some support functions (human resource development and ICT system) have been improved. By the end of 2016, the Estimated Assessment System (EAS) was officially abolished, and all taxpayers were classified into three groups (small taxpayers, medium taxpayers, and large taxpayers) under a single Self-Assessment System (SAS). This classification allows

GDT issues policies directed toward each taxpayer group through risk assessment management.

All businesses established in Cambodia, including small and medium taxpayers (SMEs), are expected to contribute their fair share to the country's development. The Large Taxpayer Unit has strengthened the compliance level by various measures, including strengthening audits, improving taxpayer service, and introducing cross-checking system with third parties. For small and medium taxpayers (SMEs), several kinds of incentives and procedures have been applied to ensure they have enough capacity to comply with the tax system. The simplified accounting system has been introduced for SMEs, and a number of tax incentives are provided to those who voluntarily register with the tax system, such as income tax exemption for up to 5 years.

Unfortunately, the majority of SMEs posit in the informal economy, and some registered SMEs underreport their business income which affects tax revenue collection and prohibits the modernization of GDT, which aims to promote fairness and widen the level playing field for competition. Revenue collection is frequently characterized by unfairness and inequity, with especially weak compliance and enforcement among the rich and significant, though overlooked, formal and informal burdens on lower-income groups (Dom et al., 2022, p. 1). In addition, many works of literature provide evidence that administrative barriers stemming from existing legislation and regulations hinder the performance of the private sector, especially the performance of SMEs (Ravšelj & Aristovnik, 2018). Smaller businesses have higher compliance costs than larger businesses, so many countries have tax provisions designed to reduce compliance costs. However, micro or small businesses with very low turnover may regard the tax compliance burden of a simpler tax system as too costly, thus discouraging participation in the formal economy (OECD, 2015).

1.2 Research problem

Recently, the Cambodian tax revenue collection system has been much more improved; however, the taxpayers' behavior toward taxation remains low, and they are still at high risk of complying, particularly small and medium taxpayers, for

some reasons. First, there is a vast number of SMEs in the Cambodian economy. According to Ratana Phurik-Callebaut (2020), SMEs represent 99.8% of businesses which include Micro-SMEs 97% (non-registered 95%), and small and medium enterprises represent only 2% (non-registered 25%). With high non-registered business status, the government initiates many frameworks to support SMEs, including providing tax incentives to those who voluntarily register. However, business owners are still reluctant to engage in administration due to complicated procedures for receiving those incentives.

Second, business transactions mainly depend on cash, allowing taxpayers easy to evade taxes. Although having the improvement in the banking system in the recent decade, there is still little use of electronic payment for goods and services due to the lack of human resources in the financial field and a lack of confidence in the banking system, which means that the number of people who can use banks is limited (Aiba & Hidenobu, 2021). Therefore, mobilizing tax revenue is difficult in line with the applied self-assessment system (SAS), and those transactions cannot be tracked.

Third, SMEs have a high cost to comply with the tax system. Many distinguish government institutions develop policies to manage SMEs, decreasing coherence and increasing the cost for SMEs to operate formally. There are complicated regulations and procedures required to be registered. The main reason SMEs remain informal is the complex compliance procedures with existing regulations. Ratana Phurik-Callebaut (2020) claims that the laws needed to comply are not a problem; the implementation and interpretation matter. Therefore, registration for SMEs differs among government agencies which are inconsistent for identifying SMEs, taking time and increasing cost for this complicated procedure.

No research study about tax compliance focused on SME taxpayers has been done in Cambodia. Most studies focus on large taxpayers' compliance due to the complicated business transactions and a dominant share of its contribution to total tax revenue. In contrast, SMEs are also crucial sources of employment, innovation, and poverty reduction that are negligible to policymakers.

Therefore, identifying the drivers of tax compliance among SMEs allows policymakers to straightforwardly design the best policy options for SMEs and support them for inclusive growth. The research outcome can be a potential tool for other related ministries and developing countries' tax administration, policymakers, and academicians to review taxation fields and make decisions on the SME sector.

1.3 Research Objective and Question

The objective of this study is to identify the factors influencing SME taxpayers' tax compliance in Pursat Province, Cambodia.

In response to this research objective, a research question is established to be a guide in which the author aims to find out:

What are the drivers of tax compliance among SME taxpayers in the Pursat Tax Branch?

1.4 Research Methodology

This research study employed the Theory of Planned Behavior (TPB) as the theoretical framework. A quantitative survey approach was used since this study aim to assess the causal relationship between independent variables (Tax morale, fairness of the tax system, efficiency of government spending, social norms, taxpayer services, the complexity of tax laws and procedures, tax knowledge, and audits and sanctions) toward dependent variable (tax compliance intention). In addition, the ordered logistic regression model was applied by deploying SPSS version 25. Through this instrument, research questions and hypotheses have been tested and interpreted. A cross-sectional design was used to measure SME taxpayers' current attitudes and behavior and provide information quickly (Creswell, 2012); it is easy, fast, confidential, and reduces taxpayers' cost and time spent in response to the survey, particularly in the impactful situation of Covid-19. A purposive sampling strategy was used because it ensures that all SME taxpayers have an equal chance to participate in the study, and it is affordable since the population is not too big in Pursat Province. The primary data of 102 SME taxpayers was collected.

1.5 Significance of the research

Various existing studies about tax compliance and tax compliance intention have been conducted across the globe. Due to its significance in shaping the tax administrative task more efficiently and ensuring a better tax system for all taxpayers, the ongoing studies on this topic are more and more popular literature among researchers to fill the gap in taxation. Firstly, the study helps advance knowledge in taxation literature in the context of a rural province in Cambodia, which has never been done as they have been in a crowded city or province. Secondly, it also helps to enrich the understanding of factors influencing SME taxpayers' intention to comply with the tax regulations in the fast-changing business environment in Cambodia. Finally, it helps provide recommendations to policymakers for tailoring the way to tax SME taxpayers and appropriately support them for growth. In this digitalization framework, inclusive SME taxpayers are necessary for making digital tax work because of their dominant number in the Cambodian economy. The growth of supporting SMEs allows the Cambodian economy to grow faster.

1.6 Structure of the thesis

This study is structured into six chapters. Chapter 1 presents the study overview, which provides a problem statement, research objective, research question, methodology, and significance of the study. Chapter 2 states the detailed background of the study, including the existing regulations and implementation, the study's needs, and the overview of SMEs in Cambodia. Chapter 3 provides the literature reviews of the theoretical model and factors influencing tax compliance intention. Chapter 4 explains the detailed methodology of the study by demonstrating the employed method and the rationale for choosing the method. It also details the population, data collection procedure, and data analysis. Chapter 5 presents the research results of descriptive and inferential findings and also provides the discussion. Chapter 6, the final chapter, wraps up the study, concludes the findings, suggests further recommendations and offers policy implications.

CHAPTER TWO: BACKGROUND

2.1 Introduction

The chapter describes the critical role of tax revenue and SMEs in the Cambodian economy, accompanied by the challenges of raising tax revenue and SMEs. This chapter also outlines the related government regulations supporting SMEs' formalization. Finally, the chapter indicates the implementation issues of SME taxpayers' compliance behavior toward tax laws and regulations.

2.2 Critical Role of Tax Revenue

Government plays a vital role in allocating the countries' scarce resources to support socio-economic development in public service delivery, such as national defense and human resource development through improving education, health care, and infrastructure (Delgado-Rodríguez & Lucas-Santos, 2022). During recessions, governments use taxes to stimulate the economy and retrench during booms (Gupta et al., 2017, p. 1). Taxation provides fund to governments needed to invest in public services and reduce poverty (IMF, OECD, UN, and World Bank, 2011). This report stated that “strengthening domestic resource mobilization is not just a question of raising revenue: it is also about designing a tax system that promotes inclusiveness, encourages good governance, matches society’s views on appropriate income and wealth inequalities, and promotes social justice.” In addition, raising revenue to support government spending is very critically complicated for the government. Driving more citizens to engage in the government's planning, implementing, evaluating, and decision-making process is tricky. On the other hand, it is much more challenging when government strives to invite citizens to participate in the tax revenue collection process. Although tax revenue collection is complex, the government must be ready to tackle the challenges to experience another development stage.

2.3 Challenges of Raising Tax Revenue

Tax revenue is the primary source for almost all states funding government expenditure. However, Besley and Persson (2014) stated that some countries fail to raise tax revenue due to various factors such as economic structures, political factors (weak institutions, fragmented policies, lack of transparency), sociological and cultural factors (weak sense of national identity, poor norm for compliance). Some developing countries have increased the tax-to-GDP rate in recent decades, but the problem is whether the growth rate is sustainable and will keep growing. The tax-to-GDP ratio is critical in government finance, tax policy reform, and domestic resource mobilization. Its level is influenced by several factors such as economic factors, domestic factors, and geographical location (Domestic Revenue Mobilization, 2018). In developing countries, raising tax revenue has faced the challenges such as weak administration, low taxpayer morale and compliance, corruption and poor governance, a small tax base, and the missing reciprocal link between tax and public and social expenditure (OECD, 2016b). Thus, developing countries need to try double efforts to identify the issues and consider the best practical policy options to overcome those obstacles.

Cambodia's economic growth rate has increased by around 7% over the last two decades. This fruitful achievement stems from the deep reform of Public Financial Management (PFM), one of the long-term public sector management reform programs. Moreover, Cambodia continues to work with ADB on strategic PFM and other action plans, including the Revenue Mobilization Strategy 2019-2023 (ADB, 2019). Under the Revenue Mobilization Strategy 2019-2023 (RMS II), the Ministry of Economy and Finance (MEF) has reformed fiscal policy on tax and non-tax revenue. Its vision is to transform the national revenue system to be modernized in response to the development needs and the changes in the socio-economic structure, technology, business environment, and taxpayer behaviors. This strategy aims to (1) increase the total current revenue by at least 0.3 percentage points in addition to the ratio of current revenue to GDP annually and (2) improve the quality and productivity of service delivery for both tax revenue and non-tax revenue administration (Public Financial Management reform committee, 2019).

Cambodia has stepped into the enormous ambition regarding these initiatives and achievements. However, the tax-to-GDP rate (16.9% in 2017) remains lower if we compare to other countries in the region: Philippines (17.5% in 2017), Thailand (17.6% in 2017), and Viet Nam (18.7% in 2017) (Asian Development Bank, 2020, p. 6). Although the tax-to-GDP rate has increased year by year, GDP per capita (USD 1,643.12 in 2019) is still lower than neighboring countries such as Thailand, Vietnam, and Laos, which have about a GDP per capita in 2019 of USD 7,806.74, USD 2,715.28, and USD 2,534.90 respectively. According to the national strategic development plan, the RGC aims to become an upper-middle-income country by 2030 (GDP per capita around USD 4,000) and a developed country by 2050; the government needs to implement its action plan critically.

Ter-Minassian et al. (2008) explained that fiscal space could be increased for additional infrastructure investment within the government budget by 1) improving expenditure efficiency, 2) mobilizing more domestic revenue sources, 3) attracting additional grants and concessional finance, and 4) expanding sovereign borrowing. One pillar of ADB's strategic objectives is improving governance which focuses on improving transparency and accountability of public expenditure. Moreover, the World Bank (2019) reported that the RGC had tried to seek other revenue sources due to the decline of foreign grant aids from around 42% in 2002 to 25% in 2016. On the other hand, the government has no plan to issue treasury bonds. Therefore, the government can only respond to finance the expenditure by strengthening the tax administration and increasing tax revenue collection through improving taxpayers' registration and services, including the introduction of online tax payments and awareness campaigns.

Currently, the RGC has introduced **the Digital Economy and Society Policy Framework** to promote the interactions of the digital economy and society through (1)- supporting and promoting the ecosystems conducive to innovation and investment, (2)- enhancing trust in the digital system, and (3)- promoting the infrastructure development for connectivity, technology, network/data, and physical connectivity (The Supreme National Economic Council, 2021). This framework facilitates the General Department of Taxation (GDT) with a more

favorable space to interact with current and future taxpayers. Moreover, it is also the engine for GDT to strengthen its preparedness and implementation to achieve the realization goal.

Cambodian revenue administrative structure is separated between tax and custom organization under the Ministry of Economy and Finance (MEF) control. No Social Security Contribution (SSC) collection include in the tax revenue collection system. Therefore, the government budget mainly depends on tax and custom organizations to operate its collection efficiently. In addition, revenue collection on trade tax has been reduced since Cambodia join in the ASEAN Economic Community at the end of 2015. The revenue collection responsibility mainly depends on direct and domestic taxes for sustainable public spending.

2.4 Tax Compliance Challenges

Currently, many developing countries have achieved noticeable administrative and policy modernization and meaningful revenue mobilization. However, significant challenges remain. Revenue collection is frequently characterized by unfairness and inequity, with especially weak compliance and enforcement among the rich and significant, though overlooked, formal and informal burdens on lower-income groups (Dom et al., 2022, p. 1). In Cambodia, the tax compliance level among SMEs remains low regarding registration, tax return filling, and underreporting, although the tax compliance level for taxpayers generally has improved in recent years. Several factors influence this low compliance level; there is a large share of the informal economy; the business transactions mainly depend on cash; SMEs have high costs in complying with the tax system.

2.4.1 The Large Share of the Informal Economy

For over a decade, Baily (2008) has indicated that the number of registered enterprises is less than half of all Cambodian manufacturing SMEs. Due to barriers to registration and little perceived benefit of joining the formal sector, many of Cambodia's enterprises have remained informal. Similarly, Ratana Phurik-Callebaut (2020) mentions that a large majority of SMEs are not registered and do not pay tax either, so it narrows the level playing field and fair competition for the

other businesses, particularly the registered SMEs. The informality narrows the tax base and tax revenue collection depending on only registered SMEs. Therefore, the government lost a vast revenue. Recently, Mr. Chhea Layhy, Ministry of Industry and Handicraft's Department of SMEs director, claimed that various policies and mechanisms were introduced to boost SMEs, such as tax incentives, procedure simplification, and power transfer to sub-national levels. However, he estimated that only 5 percent of the Kingdom's SMEs had been properly registered, which is difficult to learn about the challenges and allow them to receive support from the government (Hin Pisei, 2019), especially during the Covid-19 crisis.

2.4.2 Complicated Business Transactions

From the perspective of tax authorities, larger and more growth-oriented firms are the most important targets: they offer significant revenue potential; they may be unfairly benefitting relative to formal firms; they may benefit from formalization. Even when identified and registered, SMEs may be difficult to tax. It can also be difficult to accurately estimate turnover and profit because of poor bookkeeping and a heavy reliance on cash transactions. In addition, research suggests that many such firms struggle to navigate formalizing and paying taxes because of their limited knowledge and the complexity of formal systems (As cited in Dom et al., 2022).

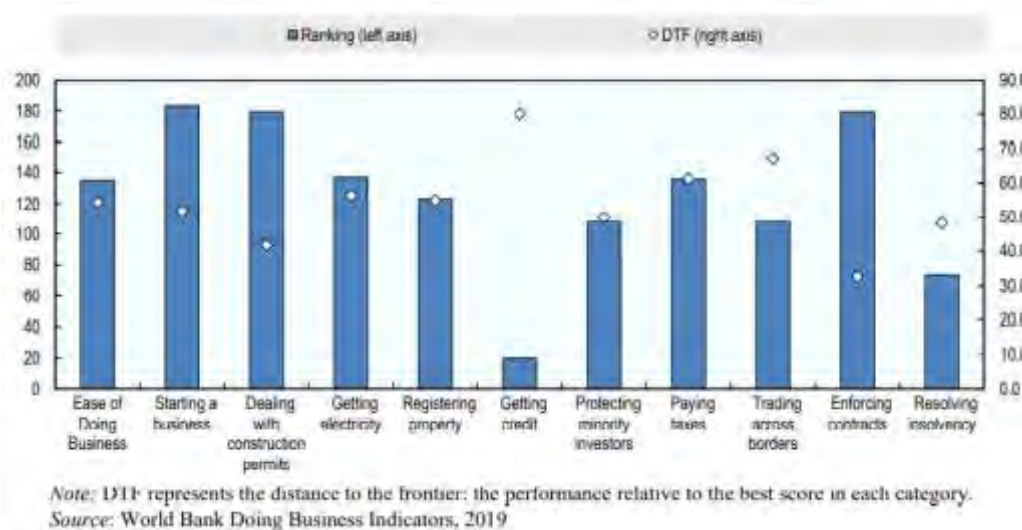
The overall revenue potential of SMEs is small and distributed unequally. Larger SMEs may have substantial tax liabilities, but there are risks of significant revenue losses when larger firms pretend to be small to avoid taxes. One example of this approach is exploiting taxpayers' ability to situate themselves just below a threshold in a tax regime to minimize their tax liability (Dom et al., 2022).

2.4.3 Related Compliance Costs

Small and Medium Enterprises have high costs to be registered. Many works of literature provide evidence that administrative barriers stemming from existing legislation and regulations hinder the performance of the private sector, especially the performance of SMEs (Ravšelj & Aristovnik, 2018). Smaller businesses have higher compliance costs than larger businesses, so many countries have tax provisions designed to reduce compliance costs. However, micro or small

businesses with very low turnover may regard the tax compliance burden of a simpler tax system as too costly, thus discouraging participation in the formal economy (OECD, 2015).

Cambodia's performance in many international rankings and a high informality rate suggest that it remains a difficult place to do business, particularly when registering a business. According to the World Bank's 2019 Doing Business, Cambodia ranks 138th out of 190 countries regarding overall ease of doing business. Although Cambodia has improved its performance year by year, it still lags far behind the best performers, as one would expect, given its level of development



(OECD, 2018a). The report also states that starting a business in Cambodia is relatively costly and lengthy.

Figure 1. Doing Business in Cambodia, 2018

The small tax base is a vast concern preventing the government from increasing domestic tax revenue. The IMF technical assistance report emphasized that improvement in tax administration may not provide the full level of required revenue mobilization; the Cambodian government will likely need to consider tax policy change (Adams et al., 2018). This report also indicated that many issues inhabit GDT's capacity to respond to the changing environment, such as a narrow tax base, the need to address non-compliance by going beyond the current reliance on audit, and limited access to taxpayers' data. It shows that even in the status quo, there is low compliance from taxpayers and how the situation would be if the

government imposed new taxes. Strengthening voluntary compliance is the proactive strategic planning to ensure revenue sustainability.

2.5 The Definitions of Tax Compliance

The definitions of tax compliance vary depending on the context and objective of researchers for their study. Tax compliance is defined as the willingness of taxpayers to act in accordance with tax laws and administrative procedures without any enforcement measure (James & Alley, 2002). In addition, (Kirchler et al., 2007) defines it as the taxpayers' willingness to pay their fair share without considering the possibility of avoiding or evading taxes. Later, OECD (2010) defines tax compliance as the behavior of taxpayers to comply with the tax obligations: registration, filling, reporting, payment, and any additional obligations. Conversely, Allingham and Sandmo (1972) view individual behavior to comply with the tax system as weighting the expected utility of the benefits from successful tax evasion with the uncertain prospect of detection and punishment. An individual pays taxes because he or she is afraid of getting caught.

On the other hand, Wenzel (2001) defines non-compliance as the unintended failure to meet tax obligations. Many more authors provide the definitions to measure tax compliance in their research's scope. This present study adopts the definition of OECD, namely the intention of taxpayers' behavior in fulfilling all their tax obligations as required by the tax authority.

2.6 Existing Rules and Regulations Related to Tax Compliance

2.6.1 Obligation and Rights of Taxpayers

- **Obligation of Taxpayers**

The Prakas of the Ministry of Economy and Finance (MEF) required all taxpayers who are registered under the Cambodian tax system fulfilling their obligations as follows:

- 1) register in the tax department for 15 days after starting economic activities or changing any related information such as address, business name, legal status, transfer or stop business activities, etc.
- 2) file tax returns and requisite documents on time according to regulation:

Taxpayers and withholding agents must file all tax returns on the due date and attach all supporting financial statement documents. Moreover, tax authorities can set the tax unilaterally toward any business that fails to prepare and file the tax returns or keep the accounting records according to tax regulations.

3) pay tax liability on the due date depending on each tax type deadline:

All registered taxpayers are required to calculate the tax payable by themselves and pay it at any place convenient to them, such as commercial banks, e-payment, or tax office, by the due date, as shown in Table 1. below.

Table 1. Due date of tax payment

Monthly tax		Annual tax (March 31st of the following year)
Manual filing (20th of the following month)	Online filling (25th of the following month)	
- Prepayment of income tax - Public Lighting Tax - Withholding Tax - Tax on Salary - Accommodation Tax - Value Added Tax - Specific Tax on Certain Merchandise and Service		- Patent Tax - Income tax

Source: Author

4) keep all related documents that are the evidence of receiving revenue, such as invoices, ledger, financial reports; and

5) pay additional tax, penalty, and interest as tax laws state.

- **Right of Taxpayers**

The taxpayers have an obligation to comply with the tax system and rights protected by law. All taxpayers' information is confidential, and they can receive tax services and assistance from the tax authority to understand the tax system and procedures better to fulfill their tax obligations. Moreover, they can also get an explanation or complain about the decisions made by the tax administration. The taxpayers are treated fairly and reasonably by the tax administration.

2.6.2 Taxpayers Classification

Before 2016, the Cambodian tax system was divided into the Estimated Tax Regime and the Self-Assessment Regime. However, the estimated tax system was abolished by 2016, and all registered taxpayers are under the same tax system, the self-assessment system (SAS). Since then, all taxpayers have been classified into three groups: small taxpayers, medium taxpayers, and large taxpayers according to the size of the enterprise, the level of annual turnover by sector, and legal entity registration. Based on the last amendment of the Ministry of Economy and Finance (2021), the classification is based on the annual turnover by the main sector: agriculture, merchandise, and service, and industry, as follows:

Small taxpayers:

- Annual turnover from KHR 250 million to KHR 1,000 million for the agricultural sector, service and merchandise; or
- annual turnover from KHR 250 million to KHR1,600 million for industry; or
- turnover KHR 60 million of consecutive of any three-months in the fiscal year; or
- participated in government contract bidding.

Medium taxpayers

- Annual turnover from the excess of KHR 1,000 million to KHR 4,000 million for the agricultural sector; or
- annual turnover from excess KHR 1,000 million to KHR 6,000 million for service and merchandise; or
- annual turnover from excess KHR 1,600 million to KHR 8,000 million for industry; or
- enterprises which registered as a legal entity or representative office; or
- government institutes or associations or NGOs; or
- embassy and international council or international organizations and intergovernmental assistant agencies.

Large taxpayers:

- Annual turnover excess of KHR 4,000 million for the agricultural sector; or
- annual turnover excess of KHR 6,000 million for service and merchandise; or annual turnover excess of KHR 8,000 million for industry; or
- foreign company branches; or
- Qualified Investment Projects (QIPs)

2.6.3 Taxpayers' compliance classification

In Cambodia, taxpayers' compliance has been classified into three types: Gold (Highly compliant), Silver (Moderately-compliant), and Bronze (Slightly compliant), depending on the total scores of the criteria as below:

Table 2. Criteria of taxpayers' compliance classification

No.	Criteria	Score
1.	Register the business with tax system and update information	1
2.	Inform tax authority about the change of registration information	1
3.	File all tax return forms on time	1
4.	Pay taxes on time as declared	1
5.	Occupy accounting report and other documents as required	2
6.	Issue the correct invoices of all transaction according to the Law of Taxation	2
7.	Not committing carelessness as stipulated in Article 125 of Taxation Law	2
8.	Not committing serious carelessness as stated in Article 126 of Taxation Law	2
9.	Pay taxes, additional tax, and other interest that set by the tax administration	2
10.	Not submit document reports with fake information	2
11.	Cooperate and allow tax administration to inspect accounting reports or other documents	2
12.	Not found to conduct the transfer pricing among relevant persons	2
Total		20

Taxpayers will have to be classified as **Gold, Silver, or Bronze** as below:

- **Gold:** for taxpayers who get total scores from **16 to 20**.
- **Silver:** for taxpayers who get total scores from **11 to 15**.
- **Bronze:** for taxpayers who get total scores from **1 to 10**.

- **Tax compliance certification**

The General Department of Taxation will automatically issue a tax compliance certificate to the gold status taxpayers, while the taxpayers who are identified as silver and bronze status require to apply for a certificate. The validation of the certificate is two years. During this period, the GDT has the right to rescind or do a re-evaluation on tax compliance if they have found that the taxpayer disobeys the criteria they received.

- **Benefits received by the level of compliance status**

All taxpayers who attain Gold Status will receive a tax compliance certificate, valid for two years. Gold taxpayers can request a VAT refund below the threshold of KHR 500 million (approx. USD 125,000) without undergoing a VAT audit. Moreover, they will be subject to only one Comprehensive Tax Audit during the valid date and can run their business without undergo a Limited or Desk Audit during the same period.

Taxpayers who receive Silver Status will receive a tax compliance certificate valid for two years. Silver taxpayers can request a VAT refund below KHR 200 million (approx. USD 50,000) without undergoing a VAT audit. They will be subject to only one Comprehensive Tax Audit every two years, a Limited Tax Audit every year, and no Desk Audit during the same period.

Bronze level taxpayers will receive a tax compliance certificate valid for two years.

2.7 Overview of Small and Medium Enterprises (SMEs)

2.7.1 Significance of SMEs

In developing countries, a massive number of SMEs play a crucial role in the economy in terms of employment, and the number is about 97-99% of total enterprises. However, only around 2% of SMEs are net small and medium

enterprises, while micro-enterprises accounted for about 85% to 99%. It shows a low share of the small and medium-sized enterprises, indicating a “missing middle.” The predominance of informal micro-enterprises seems to be associated with high regulation-related costs that encourage small firms to remain small and informal—and a dearth of medium-sized firms (OECD, 2018a).

Not different from other developing countries, the Cambodian economy is based on MSMEs, which counted for 97% of total enterprises (513, 759) in 2014 (National Institute of Statistics & JICA, 2013) and its contribution to the country, accounting for 71.7% of employment and 58% to GDP (OECD, 2018b). At the closing of the event *Enhancing Development of Small and Medium Enterprises and Handicraft and Industrial Sectors*, Mr. Heng Sokkong, the ministry’s secretary of state, announced that “SMEs were vital to achieving the government’s ambition to attain upper-middle-income status by 2030 and high-income by 2050” (Hin Pisei, 2019). According to Vichet Sam (2020), besides its significance in creating jobs, strengthening domestic products, and reducing imports from abroad, it could increase the linkage between domestic and export-oriented firms, which can attract more FDI in higher value-added and diversified exported products. Therefore, supporting SMEs to be formally registered contributes considerably to the Cambodian economy.

2.7.2 Definitions of SME

There is no single definition of an SME. It varies from country to country according to the policies of each country to manage and support SMEs. Some countries do not define micro-enterprise, while some have grouped the micro-enterprise. The European Commission classifies micro, small, and medium-sized enterprises based on the number of employees and either turnover or net assets by stating SMEs that “enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and an annual balance sheet total not exceeding EUR 43 million”. Moreover, Indonesia requires net assets worth less than IDR 200 million (EUR 13 250) and ownership by an Indonesian national as two of the five necessary criteria for SMEs (OECD, 2015, p. 18).

In Cambodia, two separate institutions have identified classes of enterprises, the Ministry of Industry, Science, Technology, and Innovation (MISTI) and the General Department of Taxation (GDT), as shown in table 2.3. Ministry of Industry, Science, Technology, and Innovation (MISTI) defines SMEs based on the number of employees and net assets value for the purpose of coordination and statistics. Nevertheless, for the General Department of Taxation (GDT), the definitions of SMEs are more focused on the level of annual turnover or the number of business assets if the first criteria cannot be recognized. The number of employees is only a supplement. This definition is constructed for tax collection purposes.

While various definitions of the term SMEs have been suggested, this paper will use the General Department of Taxation (GDT) definition based on annual turnover or net assets.

Table 3. Definitions of SMEs

Size Classification	Ministry of Industry and Handicrafts (MHI)		General Department of Taxation (GDT)				
	Indicator	Number	Indicator	Number	Sector		
					Agriculture	Service and Merchandize	Industry
Micro	Assets (excl. land)	USD 50,000	Annual Turnover (million KHR)	-	<250		
			Assets (excl. land), (million KHR)	-	<200		
	Employees	≤10	Employees	≤10	-		
Small	Assets (excl. land)	USD 50,000-250,000	Annual Turnover (million KHR)	-	250-1,000		250-1,600
			Assets (excl. land), (million KHR)	-	200-1,000		200- 2,000
	Employees	11-50	Employees	11-50	-		
Medium	Assets (excl. land)	USD 250,000-500,000	Annual Turnover (million KHR)	-	1,000-4,000	1,000-6,000	1,600-8,000
			Assets (excl. land), (million KHR)	-	1,000-2,000		2,000-4,000
	Employees	51-100	Employees	51-100	-		

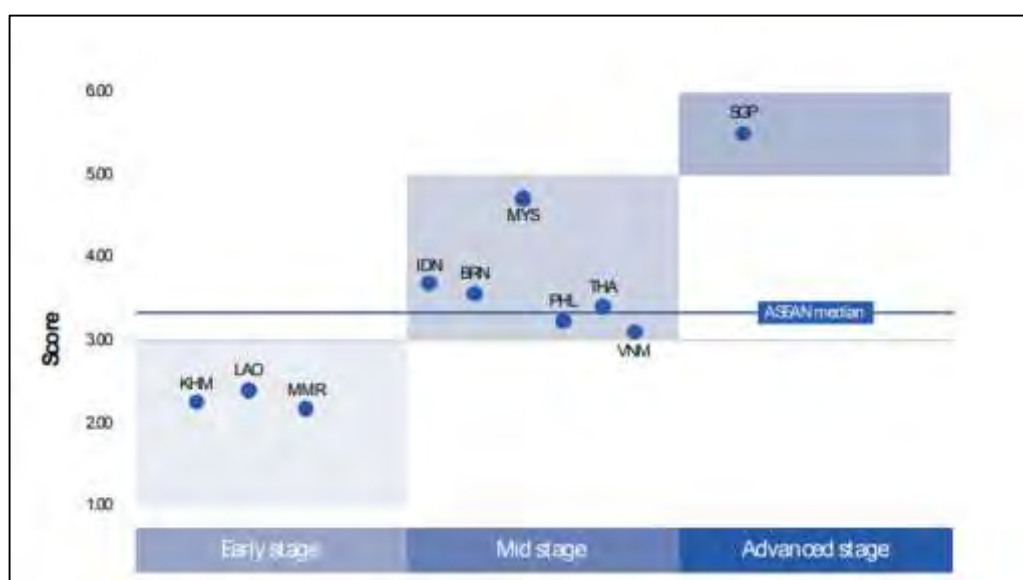
Source: author

2.7.3 Challenges of SMEs Toward Taxation

After successfully recovering from the civil war in 1998, the Royal Government of Cambodia (RGC) started to form a sub-committee and a framework for SME development in 2004 due to the recognition of the importance of SMEs for sustainable and equitable economic development. Since then, many following initiatives have been established to support SMEs, including the industrial development plan 2015-2025. Almost two decades after implementing the framework mentioned above, the number of registered SMEs is still low. Along with this growth in SMEs without formal registration, however, there is increasing concern over the capability of Cambodian SMEs to catch up with the opportunities to compete with other countries on the regional and international stage.

Increasing SME compliance and overall competitiveness is a top priority for the government (Ratana Phurik-Callebaut, 2020). According to the recommendation of a previous study by Vichet Sam (2020), regulations and governance are the most challenging among several other obstacles that hinder SMEs from formalizing and business startups. Informal SMEs limit themselves in their growth and development due to the difficulty of accessing formal financing to expand their business, absorb new technology, and export their product to international markets. In addition, a large majority of SMEs are not registered and do not pay tax either, so it narrows the level playing field and fair competition for the other businesses, particularly the registered SMEs. The informality narrows the tax base and tax revenue collection depending on only registered SMEs (Ratana Phurik-Callebaut, 2020). Therefore, the government lost a vast revenue. Recently, Mr. Chhea Layhy, Ministry of Industry and Handicraft's Department of SMEs director, mentioned that various policies and mechanisms were introduced to boost SMEs, such as tax incentives, procedure simplification, and power transfer to sub-national levels. However, he estimated that only 5 percent of the Kingdom's SMEs had been properly registered, which is difficult to learn about the challenges to allow them to receive support from the government (Hin Pisei, 2019), especially during the Covid-19 crisis.

Various challenges impact SMEs in the competitive environment. One of the most significant SMEs' barriers is higher compliance costs compared to large firms. With the rectangular strategy of the government, related government agencies have developed their own SME development policies and instruments, decreasing coherence and increasing compliance costs for SMEs. Among other compliant regulations, OECD (2016a) highlights that low tax compliance of SMEs in the fast technology changes are high cost in the compliant process. Those barriers can cause SMEs to perform below their efficiency. Therefore, the efforts to tackle those obstacles could accelerate a more flexible, resilient, competitive, and inclusive economy overall. According to the OECD (2018b) report, Cambodia is one of the other two countries, Lao and Myanmar, which are at an early stage of developing the policies and programs to support SMEs, as shown in figure 2. This report also mentions that it may reflect the overall institutional capacity challenges. More specifically, as stated in the legislation, regulation and tax dimension of the report, most member states have formed inter-ministerial committee to ensure the improvement in their Doing Business ranking to benefit all classes of enterprises, particularly SMEs by reforming the process of starting a business, simplifying tax filing procedures and introducing digital government services.



Source: OECD (2018)

Figure 2. Weighted scores for legislation, regulation, and tax

In May 2021, the Royal Government introduced the Digital Economic and Social Policy Framework 2021-2035, which stresses the more significant task of supporting SMEs in the digitalization era. In this framework, policy measures for digital business focus on (1) promoting enterprises, particularly SMEs, to adopt digital technology; (2) entrepreneurship and startups ecosystem; and (3) digital value chain undertaken by inter-institutions interventions aimed at digitalizing enterprises in all sectors and sizes, including SMEs and startups. Although Cambodia is in the early stage of SME development, the Royal Government always embeds this development in the newly issued policies for fostering SMEs in the formality. The RGC continues to promote and strengthen the implementation of small and medium development measures from the existing policy to study the adoption capacity, digital and industry 4.0 readiness, bottlenecks, and skill needs in adopting new digital technology and transformation of the SMEs and the industry. In the fiscal system aspect, the Royal Government has already set the relevant laws and regulations to build trust for E-commerce services under the taxation regime law in force. Unlike other business sectors under the Cambodian tax system, legal entities providing E-commerce services shall apply for tax registration before applying for an E-commerce license. This policy shows that SMEs are increasingly important in all perspectives of the government's priority policies, especially in taxation. SME growth means that Cambodian society's economy and social welfare will be better through improving a fairer tax system and mobilizing more tax revenue.

With all the challenges mentioned above, each institution is responsible for reviewing its policies and providing support to SMEs for inclusive growth by increasing the level of formality, reducing compliance costs, and improving fair competition through the inclusion of E-commerce businesses. Prior research has been conducted by identifying the overall barriers and some studies detail only the accessibility of SMEs' finance while the tax compliance behavior of those SMEs is left behind. This study aims to contribute to taxation field of research by exploring the driving factors of tax compliance behavior among SMEs.

CHAPTER THREE: LITERATURE REVIEW

3.1 Introduction

The chapter reviews previous literature related to debatable tax compliance issues in various parts of the world. The theoretical model is also briefly explained to understand the whole framework of this thesis. In addition, the concepts and findings of many factors that may influence the tax compliance intention are also indicated. Finally, the lacuna of the study is presented.

3.2 Related Literature of Tax Compliance

Tax revenue is an important revenue source for every country; therefore, the government in both developed and developing countries prioritizes addressing taxation issues. Tax compliance is the main taxation challenge that requires practical policy settings and implementation. The first function of tax administration is to assist taxpayers in complying voluntarily with all their tax obligations. The level of tax compliance in each country differs according to the capacity of the tax administration to influence taxpayers' behavior. Alm et al. (1992) mentioned that individuals exhibit a remarkable diversity in behavior. They also added that individuals sometimes appear to overweight low probabilities, sometimes appear to be risk-seeking, are on occasion cooperative, and at other times they are free-riders (Alm et al., 1992, p. 36).

According to OECD (2017, p. 33), “influencing taxpayer behavior is not a new concept in tax administration; extensive ongoing research was undertaken to understand better what motivates tax compliance to allow administrations to develop the systems and establish more effective compliance strategies.” Developing a new strategy allows the tax administration to be more confident that the proper tax is being paid by reducing the tax administration’s burden. Many works of literature, including Gangl et al. (2014), concludes that close supervision of newly created high-risk firms offers no overall positive effect on tax compliance. Alternative service or trust in government measurement is recommended.

More interestingly, tax administrations in some countries use behavioral insight to shape voluntary compliance while others improve the taxpayer services and tax education in the complicated tax system. On the other hand, compliance

risk management is preferred by most tax administrations, particularly in developing countries, which focus on the specific taxpayer groups and risk assessment management for non-compliance taxpayers. However, the combination of voluntary compliance and enforcement measures is still considerable for each country's situation. According to Kirchler et al. (2007), two main tax climates, antagonistic and synergistic tax climates, are proposed in the slippery slope framework regarding tax compliance. Taxpayers will try to maximize their expected utility and comply only in the enforced atmosphere in the antagonistic tax climate. Conversely, in a synergistic climate, when the authorities communicate a "service and clients" attitude, taxpayers will act based on the perceived fairness of the system and comply voluntarily. The "cops and robbers" – approach is costly and of doubtful effect, and it also raises the question of how to "guard the guards".

Moreover, this approach might effectively limit illegal tax evasion, but it is undoubtedly inadequate in limiting legal tax avoidance, which is a more significant problem. Audits and fines may encourage taxpayers to resist when they believe that monitoring is imperfect and that they can get away with evasion. The "service and client" – approach motivates taxpayers utilizing trust to comply voluntarily, with a decreased need for cost-intensive audits. This study also states that factors contributing to trust are subjective tax knowledge, participation, positive attitudes towards taxes, favorable social and national norms, perceived fairness in distributional, procedural, and retributive terms, and considerate use of power. In addition, the empirical evidence from Indonesia conducted by Inasius (2019) supports the slippery slope framework only the trust in tax authority that is a significant factor in voluntary compliance. The study suggests that further enhancement in compliance is possible by improving taxpayers' attitudes toward the tax system, primarily through building taxpayers' trust in the tax authorities.

Various kinds of complexity have moved tax compliance literature between punishment and persuasion, especially in the cash economy, the compliance has become more challenging (Braithwaite & Braithwaite, 2001). It is even true that developing countries have a large-scale informal economy, and most business transactions depend on a cash basis. Notwithstanding this study, Besley and

Persson (2014) explain that the incomes of the informal firms and their owners are difficult to measure for tax purposes, and taxing their transactions is largely impossible in the absence of proper record keeping. Thus, an increase in formality is a crucial part of how taxation increases with development. To take advantage of the growth and economic development requires the government to invest in improvements in the tax system. This step requires changing a government policy and a determination to ensure compliance.

Numerous pieces of literature on drivers of tax compliance behavior exist in various parts of the world. A study conducted in Turkey consisting of 320 SME owners as participants confirmed that social norms, tax fairness perception, and procedural fairness are statistically significant to tax compliance intention (Aydemir et al., 2017). On the other hand, a research of 361 self-employed respondents in Ghana undertook exploratory factor analysis and confirmatory factor analysis found that economic drivers, individual drivers, and social factors have a significant influence on tax compliance behavior, and institutional drivers have no significant influence on tax compliance behavior (Mbilla et al., 2018). In addition, another empirical study in Mekelle City, Ethiopia, on factors influencing taxpayers' compliance with the tax system indicates that tax compliance was influenced by the probability of being audited, financial constraints, and changes in current government policy. Other variables such as perception of government spending, equity and fairness, penalties, roles of the tax authority, and tax knowledge were not significantly correlated with tax compliance. Inasius (2018) conducts a study on Indonesian SMEs using multiple regression tests and stepwise multiple regressions. The result shows that referral groups, probability of audit, tax knowledge, and the perception of equity and fairness influence tax compliance. Moreover, among other variables, accounting practices were found as the most influencing factor of SME tax compliance in Viet Nam (LE et al., 2020).

This review indicates that a need to understand the various perceptions of tax compliance behavior among small and medium taxpayers (SMEs) has become a critical tool to tailor government policies to support them for inclusive growth.

3.3 Theoretical Reviews

Many theories have been employed to predict tax compliance. However, different perspectives produce different results as well. For example, economists raise the significant economic factors on tax compliance, whereas psychologists stress attitude and behavior as the drivers of compliant determinants. The development of main compliant factors, both economic and non-economic factors, is based on the context and behavior of taxpayers. According to the slippery slope framework, Kirchler et al. (2007) detail their work from economic to psychological factors to be a new combination between power and trust that each government can consider for best practice. However, it is still difficult to predict and does not offer a comprehensive result. Therefore, the author decided to adopt a psychological theory to predict the intention of taxpayers to comply with the tax system in this study. The economic-based theory was briefly reviewed to understand the psychological theory better.

3.3.1 Economic Based Theory

Tax compliance study started to be an interesting topic since Allingham and Sandmo (1972) extended the study of the economics of crime activity by Becker (1968) and by Tulkens and Jacquemin (1971). Using economic deterrence, they state that a taxpayer considers declaring the actual income depending on risk aversion in an uncertain situation. The taxpayer will declare less than his actual income if the expected tax payment on undeclared income is less than the regular rate. The tendency to evasion is the tax rate and the expenditure of the probability of being detected. Alm et al. (1993) use data from Jamaica to test the empirical evidence for estimation of the determinants of individual audit selection and tax evasion behavior by treating the tax agency and the taxpayers as the strategic players in the compliance game. This study provides strong evidence that the tax authority systematically uses information reported by taxpayers to select returns for audit. In addition, the result of this study also proves that economic factors play a prominent role in an individual's compliance decision. Another research study by Graetz and Wilde (1985) reveals that the tax compliance problem would disappear

if the tax rates are lower. This study also recommends shifting from income tax to consumption tax because of the complicated income tax system.

Although Allingham and Sandmo's model is defined as the classic model by many researchers who extended their model, this model has been found to have a limitation. Economic models alone may not predict taxpayer reporting decisions due to individual attitudes and biases, so integration of the model may be the most critical if research contributes to the understanding of actual taxpayer behavior. Therefore, a research study by Batrancea, et al. (2012), which aims to emphasize the need for incorporating both economic and behavioral model for a tax compliance model, shows that the model such as the slippery slope framework is the most suitable to consider among sociological and psychological factors which shape compliance. However, the model does not offer a comprehensive perspective.

Due to the failure of this classic model in predicting the empirical result, researchers developed the behavioral model based on two reasons 1) taxpayers were assumed as fully rational utility maximizers whose behavior is interpreted as a reaction to different financial benefits and losses, and 2) a group of empirical studies invalidates the prediction of economics models. Therefore, the researchers have considered examining taxpayers' motivations, beliefs, perceptions, and attitudes to predict taxpayers' behavior accurately.

3.3.2 Theory of Reasoned Action

Besides the economic-based theory, which was extended by Allingham and Sandmo (1972), the psychological theory has also been applied for tax compliance. Theory of Reasoned Action (TRA) is a theory that posits that information and beliefs have influenced the behavioral intentions that lead to performing a particular behavior (Madden et al., 1992). It means that information and beliefs affect intention and subsequent behavior through an individual's attitudes and/or through subjective norms. Attitude is a function of the salient (behavioral) beliefs about the perceived consequences of performing the behavior and the person's (outcome) evaluation of these consequences. Another component, subjective norms, consists of an actor's perceptions of what important specific referent individuals or groups think he or she should do. Subjective norms are an individual's beliefs about what

others think about what she or he does, and they are also the motivation to comply with these referents (Vallerand et al., 1992). This study's results show that attitude and subjective norms are the direct determinants of behavioral intention, but attitude is a more important predictor of behavioral intention than subjective norms.

3.3.3 Theory of Planned Behavior

A well-known psychological theory, the theory of Planned Behavior (TPB), has been accepted by researchers that it is well supported by empirical evidence to predict human behaviors. This theory extends the theory of Reasoned Action by Ajzen and Fishbein (1980), which fails to predict the actual behavior. TPB differs from TRA by adding the additional factor, perceived behavior control, to the existing TRA. Madden et al. (1992) show that adding perceived behavioral control as a predictor of target behavior significantly increased the explained variation in behavior compared to TRA. TPB included the beliefs regarding the possession of requisite resources and opportunities to perform a given behavior. Thus, it is also to separate these beliefs and treat them as partly independent determinant behaviors and perceived behavioral control. Therefore, TPB postulates three independent determinants of intention:

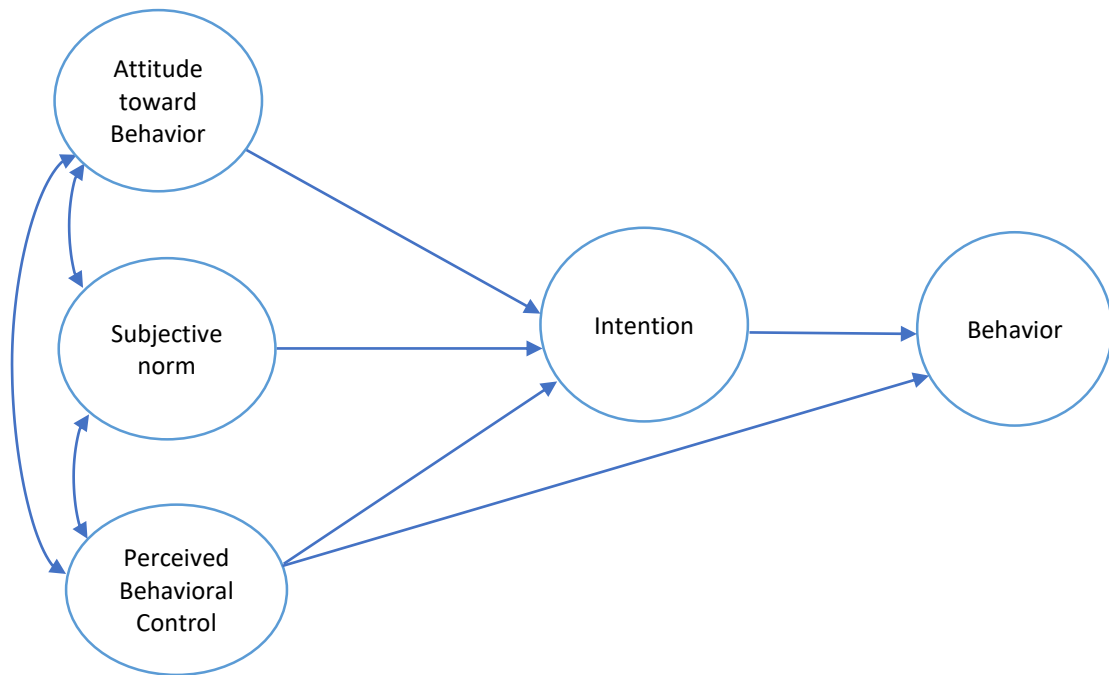
- **Attitude toward a behavior** is the degree to which a person has a favorable or unfavorable evaluation of the behavior in question.

- **Subjective norm** is perceived social pressure to perform or not perform the behavior.

- **Degree of perceived behavioral control** means the feeling of difficulty in performing the behavior that may result from the past experience or anticipated obstacles and deterrents.

TPB proposes a direct relationship between intention and behavior. The intention is a vital component of tax compliance as it is only through the willing participation of taxpayers that revenue is collected. Thus predicting taxpayer intention to comply is as important as predicting the actual compliance behavior (Langham & Paulsen, 2012). This study concludes that the intention to comply is not always a strong predictor of compliance behavior. However, it can allow investigators to understand the behavior trend since the actual behavior is not easy

to measure, and it will also change according to time and other factors. Therefore, the Theory of Planned Behavior is still applicable to measure tax compliance, although its determinant factors have changed over time.



Source: Ajzen (1991)

Figure 3. The Framework of TPB

3.4 Tax Compliance Drivers

3.4.1 Tax Morale

Individuals' tax morale displays through their decisions to comply with tax laws. Studying the individual's behavior is necessary to understand their morality. Alm and Torgler (2011, p. 638) suggested that an "individual will comply as long as she believes that compliance is the right thing to do." The study also concludes that, among other variables, there is much evidence that individuals are influenced by the ethical dimensions of their decisions, which explains why people pay taxes. Torgler (2005) also found a significant correlation between tax morale and the size of the shadow economy. The tax burden, lacking honesty, and corruption has been seen as the reasons for tax evasion, at the same time impacting taxpayers' morale. An individual taxpayer is strongly influenced by the behavior of others (Frey & Torgler, 2007). Tax morale has been found to be impacted by voice and

accountability, political stability and absence of violence, government effectiveness, regulatory quality, the rule of law, and control of corruption. In addition, Kirchler et al. (2007) state that if a taxpayer has a positive attitude toward tax evasion, she is expected to be less compliant than a taxpayer with a negative attitude. In general, tax attitudes depend on the perception of using the revenue collected and therefore are connected to knowledge.

Another study mentioned that firms are subject to the same tax morale considerations that individuals face when dealing with their personal taxes. This study found that “firms with higher tax morale, and thus believe evading taxes is wrong, evade less than firms with lower tax morale” (Alm & McClellan, 2012, p. 15).

According to the above literature review that has been mentioned so far, it may suppose that tax morale is an essential factor in the psychological literature on tax compliance.

3.4.2 Fairness of the Tax System

Fairness of the tax system can be viewed as the root of building trust in tax authorities and the entire government. It is the starting point of government activities to transform tax revenue into public services. Fairness of the tax system may affect taxpayers' compliance decisions. Fairness, one of the other variables influencing tax compliance reviewed by Jackson and Milliron (1986), was recognized as a potentially critical factor (Richardson & Sawyer, 2001). Due to the multi-dimensional nature of fairness as the compliance variable, it is challenging to draw consensus conclusions about the overall effect of fairness on taxpayer compliance. However, most studies found that fairness perception positively correlates with tax compliance. In many tax administrations, fairness has been set as their vision for ensuring fair competition and collecting tax revenue. Distributive justice, one category of fairness that is the most crucial in designing a fair tax system, refers to the fairness of allocating the tax burden to all citizens. Distributive fairness can be viewed by horizontal equity, vertical equity, and exchange equity (Thimmesch, 2015). Regulators are advised to commit to implementing the principle of procedural justice and fairness in their compliance strategies (Murphy,

2004). If tax authorities and officers treat taxpayers equally, respectfully, and responsibly, and trust in the government, then voluntary tax compliance will likely increase (Kirchler et al., 2007).

Overall, these studies highlight the need for maintaining or obtaining fairness in raising trust and tax compliance.

3.4.3 The efficiency of Government Spending

Citizens are the country's owners. Government plays a role in satisfying citizens. The government collects taxes from citizens to build a favorable place for citizens. Therefore, encouraging more efficient spending of public resources has wider consequences and increases citizens' propensity to pay taxes (Barone & Mocetti, 2011). Teng and Wu (2005) mentions that the level of tax compliance would be higher in a country with a higher degree of evaluation of the government expenditure. The Shadow economy negatively reduces the state's tax collection, affecting government revenue to provide public goods and build trustworthy institutions. Through empirical findings, trust in government and the legal system positively affects tax morale. Such institutions are transparent regarding government spending of the tax revenue and help build the tax system respecting taxpayers' preferences (Torgler, 2004).

Similarly, Cagala et al. (2017) found that improving governance increases tax compliance among high tax morale individuals in Germany. However, Inasius (2018) found that government spending has no significant relationship to tax compliance in the context of the Indonesian perspective. In addition, Taing and Chang (2021) also argued that there is no significant effect of trust on the government to tax compliance intention among individual citizens in Phnom Penh capital city, Cambodia.

Because of all that has been mentioned so far, the efficiency of government spending may be supposed to influence tax compliance intention positively.

3.4.4 Social Norms

Many published studies describe social norms' role in tax compliance. Even though tax compliance is the individuals' obligation regarding tax laws and regulations, individuals' decision-making might be deliberately or unintentionally

influenced by others in their community or society. To confirm the theoretical analysis, Wenzel (2004) indicated that social norms could certainly influence people's taxpaying behaviors. Their study tested the effect of Social Norms and Personal Norms on tax compliance separately by controlling background variables. The result showed that Social Norms had no significant effect. However, when social norms are used as a mediator by controlling Personal Norms, the results confirmed that social norms could influence the behaviors of those who identify strongly with the group of people to whom the norms are attributed. Furthermore, conversely, it found that social norms would not affect the tax compliance levels of those who did not identify with the group.

Another study done by Bobek et al. (2007) extended the work of Wenzel (2004) to be a more comprehensive set of social norms in three different countries: Australia, Singapore, and the U.S. In addition, this new extension considered taxpayers' compliance intentions rather than actual compliance done by Wenzel (2004), which is problematic as subjects are sensitive and unethical. They also reported that behavioral intention, which is highly correlated to the actual behavior (Ajzen, 1991), enables to explain more than three times the tax compliance variance of Wenzel (2004). This study concludes that the combination of personal and social norms is essential in explaining compliance behavior. More clearly, the personal/subjective norms of the Australian subjects were much more favorable toward cheating than were the subjects' norms in the other two countries. Finally, due to some limitations of the study, the authors recommended determining factors influencing norms directly and the effect of social norms regarding tax compliance, such as complexity of tax laws, fairness of tax system, and efficiency of government spending.

Later, further extending work on social norms was undertaken by Bobek et al. (2013), which drew on Cialdini and Trost's (1998) taxonomy of social norms, aiming to explore the role of social norms in more detail on tax compliance. This study tests whether social norms directly or indirectly influence tax compliance by participating 174 experienced taxpayers. The final result displayed that both personal and subjective norms directly influence tax compliance decisions while

other forms of social norms (injunctive and descriptive norms) have only an indirect influence. Therefore, social norms, directly and indirectly, affect tax compliance behavior to clarify the finding of Bobek et al. (2013). The result also showed that other attitudinal variables (fairness, risk preference) are related to social norms, and enforcement variables are directly related to tax compliance intentions and social norms. If taxpayers believe non-compliance is widespread and approved behavior in their reference group, they are likely to be non-compliant (Kirchler et al., 2007).

Collectively, these studies outline a critical role of social norms on tax compliance that may affect SME taxpayers' behavior.

3.4.5 Taxpayer Service

More attention has focused on the provision of taxpayer service. More and more tax administrations across the globe have initiated a well-designed service flow due to its effective outcomes of taxpayers' satisfaction and increased tax compliance voluntarily. Al-Taffi and Abdul-Jabbar (2016) provide an in-depth analysis in an empirical study of 330 SME owners in Yemen that in order to improve the level of Yemeni taxpayers' compliance behavior, tax authorities have to improve the quality of tax services quality and take practical steps to achieve high quality of tax services. However, this study uses the overall service quality as a hypothesis; taxpayers may perceive different dimensions of services differently. In addition, a famous tax compliance research study by Kirchler et al. (2007) highlights the need to increase trust by providing good service, which can motivate the posture of taxpayers' commitment, although both power and trust are necessary for different tax climates. While the "cops and robbers" approach is a costly and doubtful effect, trust can be viewed as a proactive action to create a more favorable posture by treating taxpayers as clients and providing quality services. Despite the enforcement role, tax administration plays a crucial role as a facilitator and provider of services (Alm et al., 2010). An individual's decision to file a tax return and report is based on the quality of the information provided.

More interestingly, Small (2016) examines the effect of the provision of taxpayer services on the corporate income tax (CIT)'s and general consumption tax (GCT)'s filling and payment of large taxpayers in Jamaica. This study uses an

empirical strategy to test the confidential tax return data of large taxpayers in Jamaica to estimate the causal effect of large taxpayer offices on filing and payment compliance. Surprisingly, the result shows that taxpayer service provision did not significantly improve filing or payment compliance for the CIT but generally had positive compliance effects along both margins for the GCT. It still questions whether the provision of taxpayer services affects tax compliance or whether other factors affect compliance more.

In contrast, there is an argument from Muehlbacher et al. (2013), who claim that the perceived service orientation of authorities is positively related to the judgment of their trustworthiness which is crucial for taxpayers' compliance intentions. Despite mediating trust, perceived service orientation still directly influences tax compliance. Moreover, the perceived service orientation on compliance intention still prevails, although an array of variables known to affect taxpayers' behavior is controlled.

Similarly, the Asian Development Bank (2018) demonstrates that most tax administrations provide a comprehensive, well-targeted, and accessible range of services for taxpayers due to the complexity of tax laws and frequent changes in tax policy and administrative requirements, affecting taxpayers' obligations.

In sum, there is some evidence to indicate that taxpayer service has a strong impact on tax compliance intention, particularly in the fast-changing technological development.

3.4.6 The Complexity of Tax Laws and Procedures

The complexity has been identified as an extreme obstacle that prevents taxpayers from complying with the tax laws and regulations, although they intend to do so (Langham & Paulsen, 2012). As stated in the OECD (2015), several factors, including the complexity of tax laws and regulations, influence tax compliance costs (costs of external tax service providers, internal staff, or owner time spent complying), particularly SMEs. The report also discusses how to reduce taxpayers' burden in complying with the tax system, especially for SMEs. Many OECD member countries have tax provisions tailored to reduce SME compliance costs by simplifying various provisions and procedures, allowing micro and small

businesses to participate in the formal economy. Coupled with this OECD report, Ravšelj and Aristovnik (2018) stated that compliance with all relevant legislations among SMEs, particularly legislations of tax compliance and financial and accounting reporting, is becoming increasingly complex. As cited in Richardson and Sawyer (2001), many researchers support the identification of complexity dimensions by Long and Swingen (1988). These dimensions are:

1. ambiguity (complexity arising from more than one defensible position);
2. computations (complexity arising from the need for frequent or complex computations);
3. change (complexity arising from frequent changes in the tax laws);
4. detail (complexity arising from numerous rules and exceptions to rules);
5. record-keeping (complexity arising from onerous record-keeping requirements); and
6. forms (complexity arising from confusing taxpayer forms and instructions).

This study provides evidence that tax complexity negatively impacts compliance behavior even though several conflicting this relationship remains. The evidence presented in this part suggests that the tax system's complexity is burdensome for taxpayers to comply with, especially among SMEs.

3.4.7 Tax Knowledge

Over the past decade, most research in tax compliance has emphasized using tax knowledge as a continuous strategic implementation to increase the taxpayers' capacity to fulfill their tax obligations. According to Bird (2013), the development of taxation in the last half century has been recognized. The first stage is the introduction of a comprehensive progressive personal income tax. The second stage is the increasing tax knowledge combined with the post-1970s theoretical and empirical taxation studies; currently, each developing country must develop sustainable reforms of political, economic, and administrative dimensions of the tax system. It emphasized more essentially that tax knowledge is the core element for reforming the tax system in sophisticated taxation issues. Many studies appeared to confirm this assumption as a qualitative study through the face-to-face interview with SME operators and tax consultants in Zimbabwe, Maseko (2014) reported that

most SMEs have difficulties understanding income tax and the mechanics of VAT. Moreover, tax fairness, taxpayer service quality, and government spending have been identified as affecting their tax compliance decision. According to Saad (2014), a telephone interview with thirty participants and analyses using thematic analysis shows that tax knowledge and tax complexity are contributing factors toward non-compliance behavior among taxpayers.

Recent research studies strive to clarify how it affects tax compliance in various contexts. Among others, Sawitri et al. (2017) claim that tax knowledge influences tax compliance directly and indirectly through raising taxpayer awareness, which means a higher tax knowledge level will become higher tax compliance. The research results of Rachmawan et al. (2020) show that procedural justice perception affects the trust towards the authority and voluntary tax compliance, the trust towards the authority also mediates the effect of procedural justice perception toward voluntary tax compliance, but tax knowledge is not proven of strengthening procedural justice perception towards the trust on the authority and voluntary tax compliance. Twum et al. (2020) found that tax knowledge of responsibilities and rights, knowledge about employment income, and awareness of sanctions have a significant positive relationship with tax compliance among SMEs in Ghana.

Loo et al. (2009) illustrated that taxpayers' tax knowledge could affect their tax affairs, which would affect their compliance behavior. Any lack of tax knowledge on the understanding of calculating income and expense would lead to unintentional non-compliance or over compliance.

Because tax laws are often criticized for being too complex to be fully understood, increasing taxpayers' literacy by simplification of the tax laws, training and education, and by increasing taxpayer service will increase trust in authorities and will, therefore, lead to increased voluntary tax compliance (Kirchler et al., 2007).

Thus far, the studies provide evidence that tax knowledge is the right way to keep going in the more complicated changing world.

3.4.8 Audits and Sanctions

Many researchers have reported that enforcement is the best way to deter tax evasion by showing the strong power of authority in raising tax revenue. Recent studies have indicated that the classical deterrent model has a lower than predicted level of tax compliance. However, Thimmesch (2015) claimed that the classic economic model is much more predictive than a basic application of the model. The study also stresses that increasing audit activities may increase tax compliance by those who become aware of others being audited, while increasing enforcement actions may lower levels of compliance. Similarly, Alm et al. (2020) insist that the average response taxpayers increase tax compliance when audit rates increase, but if studied in more detail, only 2/3 respond to higher audit rates by increasing their compliance, which means some individuals actually decrease their compliance when audit rates increase. However, another study, Kirchler et al. (2007) mentioned that objective audit probabilities have little effect on compliance, and subjective audit probabilities may be mediated via psychological variables. In bringing tax compliance, regulators need to move beyond enforcement strategies by reducing the negative emotional reactions from taxpayers toward tax authorities (Murphy, 2004). In contrast, too low fines could be identified as authorities are weak and unable to control the wrongdoers, reducing trust among honest taxpayers (Kirchler et al., 2007).

Using the framework of the theory of planned behavior to find the factors influencing the intentions of 369 taxpayers in Turkey, legal sanctions were found to have a statistically significant relationship with tax compliance intentions (Benk et al., 2011).

These studies provide important insights into the enforcement activities (audits and sanctions). Most researchers view enforcement as discouraging taxpayers from complying with the tax system. It seems true that the taxpayers' behavior is always opposed to tax authorities. If tax authorities inappropriately design the tax policies and procedures, taxpayers may have disappointed and act conversely to the regulations.

After reviewing prior studies, the SME taxpayer group is burdensome in many challenges. It indicates that a need to understand the various perceptions of tax compliance behavior among small and medium taxpayers (SMEs) has become a critical tool to tailor government policies to support them for inclusive growth. In addition, previous literature has found several distinguishing factors as drivers of compliance behavior among taxpayers. However, debatable scenarios are still present, and many researchers remain skeptical about each factor in different contexts. Moreover, a number of literatures have been conducted on SMEs in Cambodia on only general constraints, access to finance, internationalization capacity, and compliance with general government regulations. However, there is no study on the specific tax compliance literature of SME taxpayers in Cambodia. Therefore, the author strives to understand the drivers of tax compliance among small and medium taxpayers (SMEs) in the case of a rural province, the Pursat province of Cambodia.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 Introduction

Several existing regulations have been applied in the Cambodian tax system to improve tax compliance; however, this tax compliance level remains low, particularly among SMEs. This low level is caused by the large scale of the informal economy, cash-based business transactions, and the high cost of complying with regulations. This chapter utilized the Theory of Planned Behavior (TPB) as the theoretical model due to its compatibility in the current business environment as the psychological theory to understand the behavior of taxpayers in complying with the tax system.

4.2 Research Objective and Research Question

According to the literature review and the theoretical model stated in the previous chapter, this research identifies the main question of the taxpayers' perception regarding tax compliance in the Pursat Tax Branch.

Research Objective: To identify the key factors influencing tax compliance intention among small and medium taxpayers (SMEs) in Pursat province, Cambodia.

Research Question: What are the drivers of tax compliance among SMEs in the Pursat Tax Branch?

4.3 Hypothesis Development

Based on the Theory of Planned Behavior (TPB), three components (attitudes toward behavior, subjective norms, and perceived behavioral control) influence tax compliance intention.

Attitudes toward behavior: Attitude indicates “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). In the tax compliance context, attitude is associated with tax morale, which refers to the intrinsic motivation to pay taxes arising from the morale obligation to contribute to society. Moreover, the perceived fairness of the tax system and efficiency of government spending frame the taxpayer's attitudes to comply. It means that taxpayers expect their taxes paid to contribute to the national

development efficiently and effectively. The following three variables can be employed as the factors that positively impact tax compliance intention.

H1: Tax morale positively influences tax compliance intention

H2: Fairness of tax system positively influences tax compliance intention

H3: Efficiency of government spending positively influences tax compliance intention

Subjective norms: A subjective norm is “the perceived social pressure to perform or not perform the behavior” (Ajzen, 1991, p. 188). In the tax compliance context, social pressure relates to the degree of social norms of other taxpayers in their community and the quality of taxpayer service served by the tax authority. For instance, for taxpayers who perceive that the taxing authority treats them less fairly than others, their non-compliance behavior would be expected to increase. Meanwhile, if taxpayers perceive that the taxing authority is accountable and transparent for all taxpayers, it affects their level of trust and then shifts to a compliant attitude. Thus, the author hypothesized these variables as the factors influencing tax compliance intention under the subjective norms component of TPB.

H4: Social norms positively influence tax compliance intention

H5: Taxpayer service positively influences tax compliance intention

Perceived behavioral control: Perceived behavioral control denotes “the perceived ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles” (Ajzen, 1991, p. 188). As noted, opportunities and resource availability, including time, money, information, and ability, are constraints that control the behavior to be performed. In the tax compliance context, the complexity of tax laws and procedures, tax knowledge, and audits and sanctions might be constraints to controlling taxpayer behavior. Therefore, these factors are hypothesized.

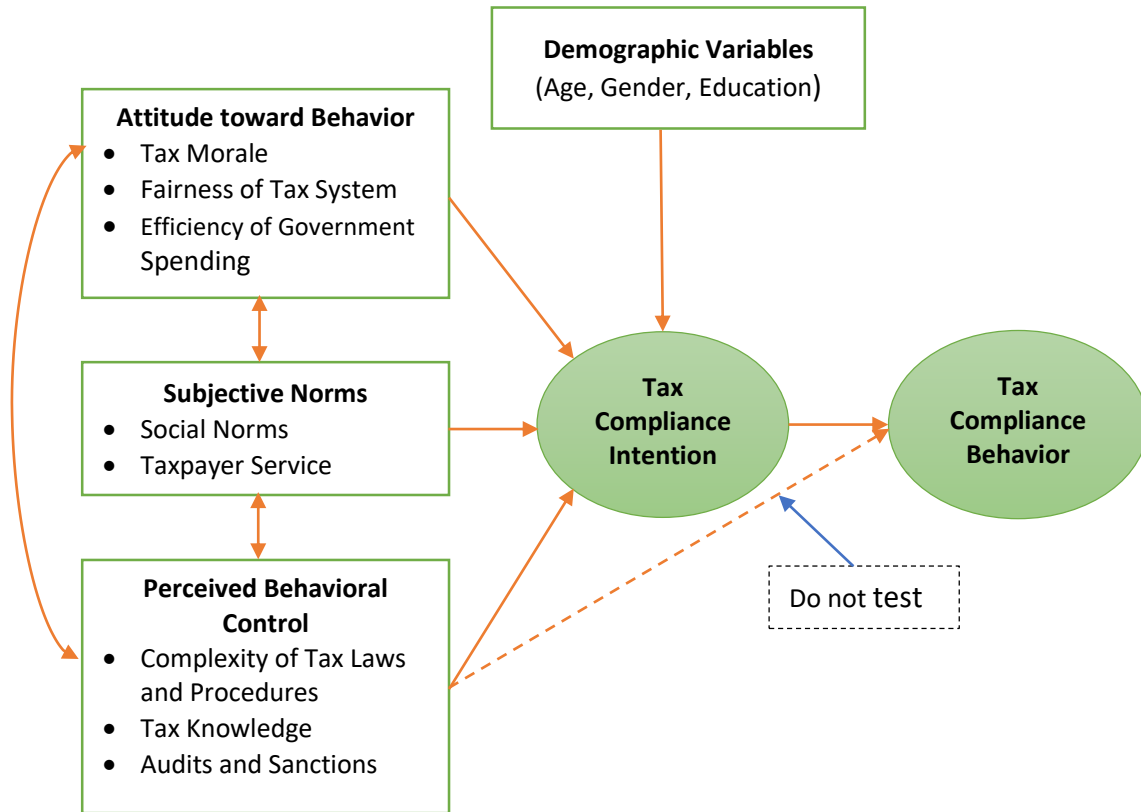
H6: Complexity of tax laws and procedures negatively influence tax compliance intention

H7: Tax knowledge of taxpayers negatively influences tax compliance intention

H8: Audits and Sanctions negatively influence tax compliance intention

Therefore, the author hypothesized that tax morale, fairness of the tax system, the efficiency of government spending, social norms, and taxpayer service positively influence tax compliance intention. In contrast, the complexity of tax laws and procedures, tax knowledge, and audits and sanctions influence negatively.

4.4 Conceptual Framework



Source: Constructed by Author

Figure 4. Conceptual Framework

4.5 Research Framework

Depending on the discussion of the study's background and the gap in existing literature, the figure below outlines the process of the research in order to reach the identified objective.

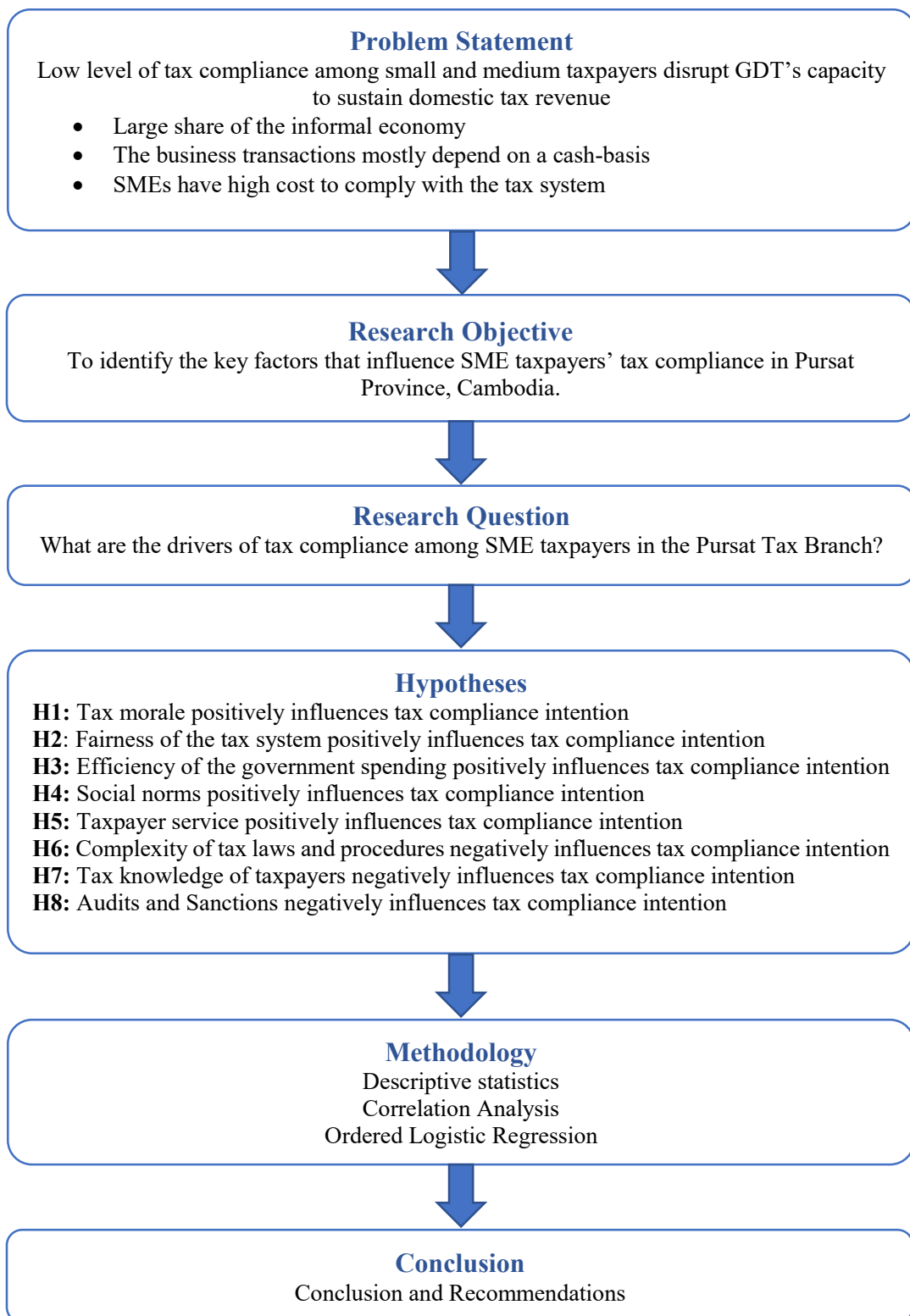


Figure 5. Analytical Framework of Research Study

4.5 Population

The General Department of Taxation (GDT) has reformed its organization by rearranging the specialized responsibilities of its headquarter into 11 departments since 2018 for more efficient performance. Moreover, there are 24 existing provincial tax branches for each province and nine khan tax branches in Phnom Penh capital city. Every tax branch is responsible for collecting taxes from Small and Medium taxpayers (SMEs), whereas large taxpayers are governed by the Large Taxpayer Department of GDT's headquarter.

This study focuses on the tax compliance behaviors of Small and Medium taxpayers (SMEs) in Pursat tax branch. Pursat Tax Branch is one of the provincial tax branches located in Pursat Province and lies 174 kilometers North West of Phnom Penh by road and 106 kilometers southeast of Battambang Province. The region is accessible by National Highway N0.5, by boat, rail, and numerous smaller roads. According to the Economic Census of Cambodia 2011 (National Institute of Statistics & JICA, 2013), Pursat Province is the fourth largest province of Cambodia in terms of area, and it ranks only 14th in population (397,161 persons, about 3% of the total population based on the results of the 2008 Population Census). In addition, it ranks 14th in terms of the number of establishments. It has 12,075 of the total number of 505,134 establishments (2.4%). Furthermore, it ranks 15th regarding the number of persons engaged, accounting for 26,617 out of 1,673,390 persons (1.6%). It means that the Pursat province stands in around the middle rank among the 24 provinces of the Kingdom of Cambodia.

Furthermore, the annual sales in Pursat province presented 124 million US dollars (1.0% of the total annual sales), while the annual expenses in the province indicated 89 million US dollars. Depending on this figure, the degree of concentration on the province is less in the economic activities covered in the economic census than in the population. On the other hand, the Pursat tax branch is the 16th in ranking in terms of tax revenue collection among 24 provinces except for the capital city (based on the GDT's targeted revenue of 2021). Thus, Pursat province is selected due to the middle ranking based on the population, its economic activities, and tax revenue collection position. The outcomes of this research study

would be a potential tool for policymakers to generalize the tax compliance behavior of SME taxpayers outside the capital city.

This study is significant since it is the first to explore the drivers of tax compliance among SME taxpayers in Cambodia, contributing to both the academicians and policymakers. Tax administration must be aware of the driving factors of tax compliance intention among SMEs since this taxpayer group plays various roles in the Cambodian economy, employment, entrepreneurship, and innovation. Simultaneously, provide support, raise fairness, increase tax revenue, and reduce poverty and income inequality.



Source: <https://www.nationsonline.org/oneworld/map/cambodia-administrative-map.htm>

Figure 6. Study area, Pursat province, Cambodia

4.6 Data Collection

4.6.1 Pilot Study

The author conducted the pilot survey with forty (40) respondents to ensure the questionnaires were reliable. After the pilot survey, the author made some modifications to the questionnaires to avoid misunderstandings by respondents. For instance, respondents mostly select the answer (others), so the author asked them to

specify their answers to avoid misunderstanding. The author revised the consent letter by adding more clearly the objective of the research study and guaranteeing that all respondents' information would be kept confidential. Therefore, by conducting the pilot survey, the author can increase the reliability of the questionnaire, and the author can feel more confident in performing the actual survey.

4.6.2 Survey Instrument

The quantitative survey was conducted both face-to-face and online. Only a few medium and small taxpayers come to file and pay taxes at the tax office. This research instrument is considered the most appropriate technique for studying a large population and generating the generalization from the sample. A questionnaire was used to survey the owners or representatives of small and medium enterprises (SMEs) registered as taxpayers in the Pursat Tax Branch. A cross-sectional design was used to measure SME taxpayers' current attitudes and behavior and provide information quickly (Creswell, 2012). It is easy, fast, confidential, and reduces taxpayers' cost and time spent in response to the survey, particularly in the impactful situation of Covid-19. The author utilized an online survey for taxpayers who file tax returns and pay tax online, and for those who directly contact tax officials for their tax affairs, the author used face-to-face surveys. The author used the questionnaires in the Khmer language. Therefore, translation and proofreading for the translation needed to be double-checked to avoid any mistranslation.

4.6.3 Participants and Sampling

A small number of registered taxpayers in Pursat Tax Branch after the Estimated Assessment System (EAS) was abolished at the end of 2016. In this study, the purposive sampling technique was adopted to collect the data because all individuals in the population are considered representative of the population since they meet certain criteria for the study. Those participants are able to contribute to understanding the tax-compliant aspect. Based on the taxpayer registration list of the Pursat tax branch, among 842 registered taxpayers, only 539 taxpayers declared monthly tax returns in April 2022. Two hundred and fifty (250) questionnaires were distributed to the respondents, and the author could attain only one hundred and

eight (108) respondents due to the Covid-19 situation (some taxpayers declared inactive business). In addition, only one hundred and two (102) questionnaires are useable. There are three parts mentioned in the questionnaire.

Part 1: Demographic information covers personal and business information, including gender, age, education level, status, taxpayer type, business location, number of employees, and business sector.

Part 2: The questionnaires measure respondents' understanding of the Cambodian tax system, mainly measuring respondents' tax compliance intention.

Part 3: Questionnaires measure the independent variables: tax morale factor, fairness of the tax system factor, the efficiency of government spending, social norms factor, taxpayer service factor, the complexity of tax laws and procedures factor, tax knowledge factor, and audits and sanction factor.

4.7 Variable Coding

4.7.1 Demographic Factors

In this research, the author did not study the influence of demographics on tax compliance intention. However, the descriptive statistics have shown the demographic information, including gender, age, education level, status, registered taxpayer type, business location, number of employees, and business sector. The respondents choose the option according to their actual information. Gender, education levels, and occupations are coded as dummy variables. Male coded as 1 and female coded as 0 (male=1, female=0). The age was classified into four options, from 18 to 30 years old (code=1), from 31 to 40 years old (code=2), from 41 to 50 years old (code=3), and over 50 years old (code=4). The education level is divided into five categories, under high school degree (code=1), high school degree (code=2), bachelor degree (code=3), master degree (code=4), and Ph.D. degree (code=5). Four kinds of occupations were selected by the respondents, business owner (code=1), company's accountant (code=2), tax agent (code=3), and representative (code=4). There are two types of business registration in Pursat Tax Branch, small taxpayers (code=1) and medium taxpayers (code=2). Business location was divided in 7 towns /districts as Pursat town (code=1), Bakan (code=2),

Krokor (code=3), Kondieng (code=4), Krovanh (code=5), Veal Veng (code=6), and Talor Senchey (code=7). Business operation duration was classified into three categories such as less than five years (code=1), from 5 to 10 years (code=2), and over ten years (code=3). The number of employees was also classified into three categories, less than 11 employees (code=1), from 11 to 50 employees (code=2), and from 51 to 100 employees (code=3). Finally, the business sector was classified into 6 categories: production (code=1), merchandise (code=2), service (code=3), import and export (code=4), NPO/NGO (code=5), and others (code=6).

4.7.2 Dependent Variable

The ordered logistic regression model was used to test between one dependent variable and eight independent variables. The author uses five questions to measure the tax compliance intention of small and medium taxpayers (SMEs), which was modified from Verboon and Goslinga (2009), **can you imagine circumstances in which you as a business owner would:** a) not keep your accounts/ books according to the regulations? b) keep cash payments out of the records? c) enter too much or non-existent deduction in your tax return? d) not report all income in your tax return? e) employ people without paying the proper taxes? These questions were used to measure the dependent variable. There are five answers for the respondent to choose from, and the response selected by the respondents can measure their level of tax compliance intention into five different levels: (1) definitely not, (2) probably not, (3) possibly, (4), probably will, and (5) definitely will. The items were combined to form a scale (Cronbach's $\alpha = .848$). The scale was recorded in which a higher score implies a stronger intention to comply with the tax system.

4.7.3 Independent Variables

The questionnaire was modified and adopted from the previous studies for tax compliance intention. The five-point Likert scales (strongly disagree, disagree, neutral, agree, and strongly agree) are used. Five items in the complexity of tax laws and procedures were adopted from the previous researcher (Bobek et al., 2007). Moreover, four items of fairness of the tax system are adopted from Abdul (2017). In addition, items in taxpayer service and tax knowledge are adopted from Sawitri et al. (2017). The efficiency of government spending, tax morale, and social norms

items are adopted from Taing and Chang (2021). The last independent variable, audits and sanctions items, were adopted from Benk et al. (2011). Each predictive factor was a set of questions, and the respondents were asked to select one answer from the five-point Likert scale. There are five answers for each item, as mentioned above. However, except two questions in audits and sanctions used a different scale. For the question “How likely would the tax administration find out if you do not report the additional business income in your tax return?” Those five answers are (1) Very unlikely, (2) Unlikely, (3) Neutral, (4) Likely, and (5) Very likely. Finally, the question, “How serious would the punishment be if the tax administration found out that you did not report some or all of the additional income from your part-time business?” Those five answers are: (1) Very mild, (2) Mild, (3) Moderate, (4) Serious, and (5) Very serious.

The data collection process started from May 1st, 2022 to May 25th, 2022. There is no pressure on respondents to answer the questionnaire.

To conduct this study, the author proceeded with the following:

1. Constructed the questionnaire and got the approval from the supervisor
2. Proposed request letter to Branch Manager of Pursat Tax Branch
3. Submitted the questionnaire to two representatives as the administrators in data collection, one official is from the small tax office and another is from the medium tax office. In addition, the link of online questionnaire was sent to the group telegram channel of Pursat Tax branch and also follow up to individual telegram account of respondents.

4.8 Data analysis and Research Method

The author focused on small and medium taxpayers in Pursat Tax Branch in this study. For analyzing data, the author uses the SPSS program (Statistic Package for Social Science) version 25 by transforming the information from the questionnaires, encoding them into numbers, and processing those numbers into the program for statistical analysis. Ordered Logistic Regression (OLR) is used to assess the impact of a set of predictors on a dependent variable because multiple regression is unsuitable when the dependent variables are measured through the

Likert scale type. The predictor variables can be either categorical, continuous, or a mix of both in this model.

1. The descriptive statistic, frequency, and percentage were analyzed for the demographic information.
2. The author uses ordered logistic regression to analyze the predictive factors influencing the levels of tax compliance from the small and medium taxpayers' perspectives.

Research Model

The dependent variable in this research was identified as Y=Tax Compliance Intention, and each independent variable may influence each level of the dependent variable equally.

The general model: $\text{logit}(P(Y \leq j)) = \alpha_j - \sum \beta_i X_i$

Therefore, the model for this research could state the following expression:

$$\text{logit}(P(Y \leq j)) = \alpha_j - \beta_1 \text{TAM} - \beta_2 \text{FTS} - \beta_3 \text{EGS} - \beta_4 \text{SON} - \beta_5 \text{TAS} - \beta_6 \text{CTL} - \beta_7 \text{TAK} - \beta_8 \text{AUS}$$

Where $j = 1, \dots, j-1$ (j : number of categories of dependent variable);

$\beta = 1, \dots, M$ (number of independent variables);

P=Probability;

TAM=Tax Morale;

FTS= Fairness of Tax System;

EGS=Efficiency of Government Spending;

SON=Social Norms;

TAS=Taxpayer Service;

CTL=Complexity of Tax Laws and Procedures;

TAK=Tax Knowledge; and

AUS=Audits and Sanctions.

CHAPTER FIVE: DATA ANALYSIS AND FINDINGS

5.1 Introduction

This chapter illustrates the descriptive analysis of all variables and tests the reliability and validity of all items. Correlation and Ordered Logistic Regression are also analyzed based on the study objective. At the end of the chapter, the research findings, discussion, and limitations have been provided.

5.2 Data Analysis

5.2.1 Descriptive Analysis

The research was conducted to explore the drivers of the tax compliance intention of small and medium taxpayers (SMEs) in Pursat Tax Branch, Pursat province, Cambodia. The author constructed a set of questionnaires to collect data from the owners or representatives of small and medium taxpayers during their monthly tax returns filing. The quantitative data were collected using face-to-face and an online survey. The author used the SPSS program (Statistic Package for Social Science) version 25 to process the data analysis of 102 samples, which included the descriptive statistics as in appendix A and data analysis of variables as follows:

1. Tax Compliance Intention
2. Tax Morale
3. Fairness of the Tax System
4. Efficiency of Government Spending
5. Social Norms
6. Taxpayer Service
7. Complexity of Tax Laws and Procedures
8. Tax Knowledge
9. Audits and Sanctions.

5.2.2 Demographic Information

As shown in Table 4, there are 102 respondents in the survey data. Depending on the result, the number of female participants is higher than male participants. The number of female participants is 56 (54.9%), and male respondents are 46, accounting for 45.1%. The dominant shares of the respondents are between the ages

of 31-40 years old. The participants whose age range from 18 to 30 is 26 (25.5%), from 31 to 40 is 48 (47.1%), from 41 to 50 is 16 (15.7%), and over 60 years old is 12 (11.8%). The respondents with the education level under high school are only 10 (9.8%), with high school degrees 29 (28.4%); however, the respondents who hold bachelor's degrees numbered higher than other degrees, the respondent with a bachelor's degree 54 (52.9%). Lastly, the respondents who hold a master's degree are 9 (8.8%), and no respondent who participated in this study holds a Ph.D. degree. The majority of respondents who participated in answering the questionnaire survey were the business owners who accounted for 58 (56.9%), followed by representatives 35 (34.3%), accountants 9 (8.8%), and there no tax agent. In Pursat province, the businesses are mostly family businesses. Besides business owners, representatives can also represent the owners in tax affairs. Most representatives are relatives, friends, or housekeepers.

Separately, business information was detailed, as can be seen in the same table. It shows that 63 businesses (61.8%) are small taxpayers, and 39 (38.2%) are medium taxpayers. For the location, businesses are dominantly located in Pursat town, and only a few are located in the other six districts of the province. The registered businesses in this province are mostly owned by people who close a business without informing the authorities and open the new one. The market's rate of entering and quitting is high due to market failure. Therefore, the number of newly established businesses is similar to the old ones. The number of those in business aged less than five years, between 5 to 10 years, and more than ten years were 32 (31.4%), 36 (35.3%), and 34 (33.3%), respectively. The majority of business sizes are smaller (less than 11 employees), which are selected by respondents 71 (69.6%). The business size between 11 to 50 employees and between 51 to 100 employees are 25 (24.5%) and 6 (5.9%), respectively. The types of businesses are production 10 (9.8%), merchandise 28 (27.5%), and services 40 (39.2%). The service industry included construction, hotel, restaurant, pawn shop, and so on. In addition, we can see respondents from import/export and NGO/NPO are 7 (6.9%) equally. Besides, respondents selected others, referring to business

types rather than those mentioned above, for instance, small-scale agricultural farms.

Table 4. Demographic Information (n=102)

Socio-demographic	N	%
Gender		
Female	56	54.9
Male	46	45.1
Age		
18-30 years old	26	25.5
31-40 years old	48	47.1
41-50 years old	16	15.7
>50 years old	12	11.8
Education		
Under High School	10	9.8
High School	29	28.4
Bachelor	54	52.9
Master	9	8.8
Ph.D.	0	0
Position		
Owner	58	56.9
Accountant	9	8.8
Tax Agent	-	-
Representative	35	34.3
Business Type		
Small	63	61.8
Medium	39	38.2
Location		
Pursat Town	77	75.5
Bakan District	3	2.9
Krokor District	8	7.8
Kondieng District	7	6.9
Kravanh District	4	3.9
Veal Veng District	2	2
Talor Senchey District	1	1
Business Age		
Less than 5 years	32	31.4
From 5 to 10 years	36	35.3
More than 10 years	34	33.3
Number of Employees		
Less than 11	71	69.6
From 11 to 50	25	24.5
From 12 to 100	6	5.9
Business Sector		
Production	10	9.8
Merchandise	28	27.5
Service	40	39.2
Import/Export	7	6.9
NPO/NGO	7	6.9
Others	10	9.8

5.2.3 Tax Compliance Intention

Figure 7 illustrates the tax compliance intention of small and medium taxpayers in the Pursat tax branch. The respondents were asked to select the answer from the five questions reflecting their intention to comply with the tax system. A higher score among these five questions means they have a higher intention to comply. There are five answers to each question, as shown in the figure. The majority of respondents who chose the answer (4) probably will and (5) definitely will, were more than 50%. Therefore, the result can be concluded that most of the small and medium taxpayers in Pursat tax branch are more likely to have tax compliance intentions.

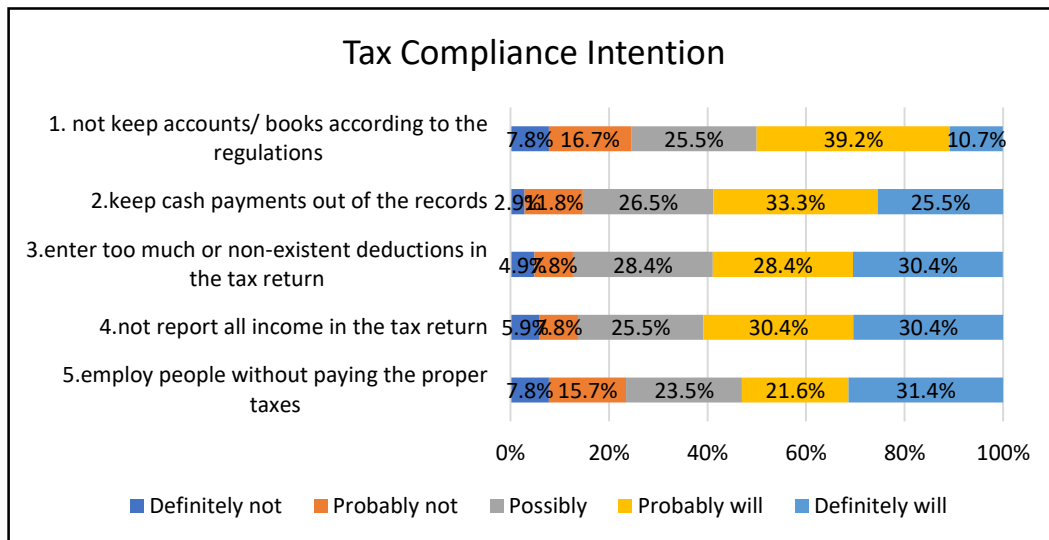


Figure 7. Tax Compliance Intention

5.2.4 Tax Morale

There are five items for measuring tax morale. As seen in figure 8, most respondents agreed that they have the morality to pay tax even though they have the chance to avoid it. The figure showed that 67.6% of respondents would declare all their tax liability honestly and will not evade paying tax even if they have the chance to do so, while 55.9% agree that taxpayers should not underreport tax liability. In addition, 75.5% agreed that paying tax is their obligation. Overall, 65.7% of all respondents think that evading tax is wrong. The results imply that

taxpayers have their own tax morale in complying with the tax regulations as the implicit ethics which may be influenced by other factors.

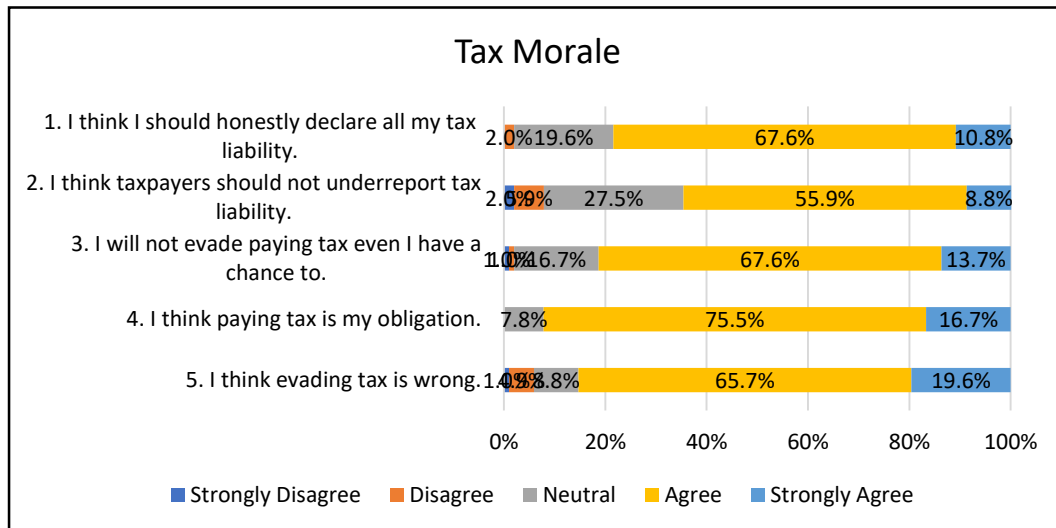


Figure 8. Tax Morale

5.2.5 Fairness of the Tax System

The author employed four items to measure the fairness of the tax system. Although a higher number of respondents chose the answer that they agree that the tax system is fair, a similar number of respondents seemed to hesitate to decide whether the tax system is fair or not by selecting the neutral. As shown in figure 9, 48% of respondents agree that the tax office's decisions are usually fair and the rules applied by the tax office treat all taxpayers equally; respectively, 37.3% and 34.3% reported they are unsure. Moreover, 44.1% of respondents agree that the tax office would evaluate their information objectively and fairly in case a dispute existed, and 35.3% showed they had difficulty deciding. Lastly, a similar proportion of respondents (46.1% and 40.2%) responded that they agree and are neutral respectively to the statement "dispute resolution mechanisms take place by the tax office are fair." This statistic indicated that the small and medium taxpayers in

Pursat province view the tax system as not fair enough for them. Therefore, the government should consider increasing the fairness of the tax system.

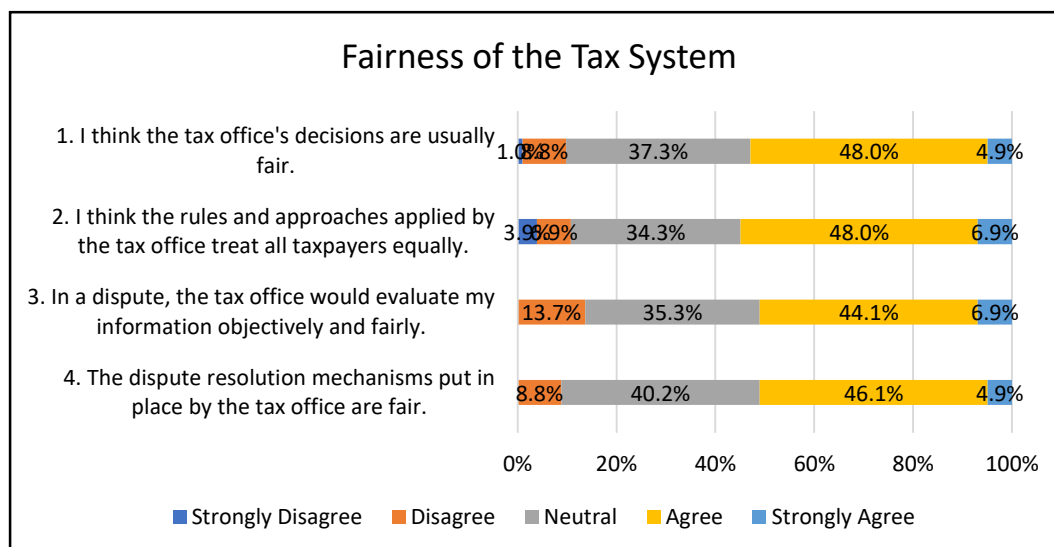


Figure 9. Fairness of the Tax System

5.2.6 The efficiency of Government Spending

In this study, three questions are used to represent the efficiency of government spending. Figure 10 displays that most respondents satisfy with the government spending program. However, a vast number of respondents remain neutral since a few of them disagree that government spends the national budget efficiently. 46.1% among them believe that the government utilizes the country's revenue properly, while a noticeable number of the respondent (33.3%) cannot decide. In addition, 48% of all respondents agree that the tax authority and tax officials are transparent; respectively, 33.3% and 35.3 % remain neutral to the statement. It is specified that taxpayers view government spending as quite efficient since many of them remain hesitant. The government should review and strengthen its spending at the national and subnational levels to be more efficient.

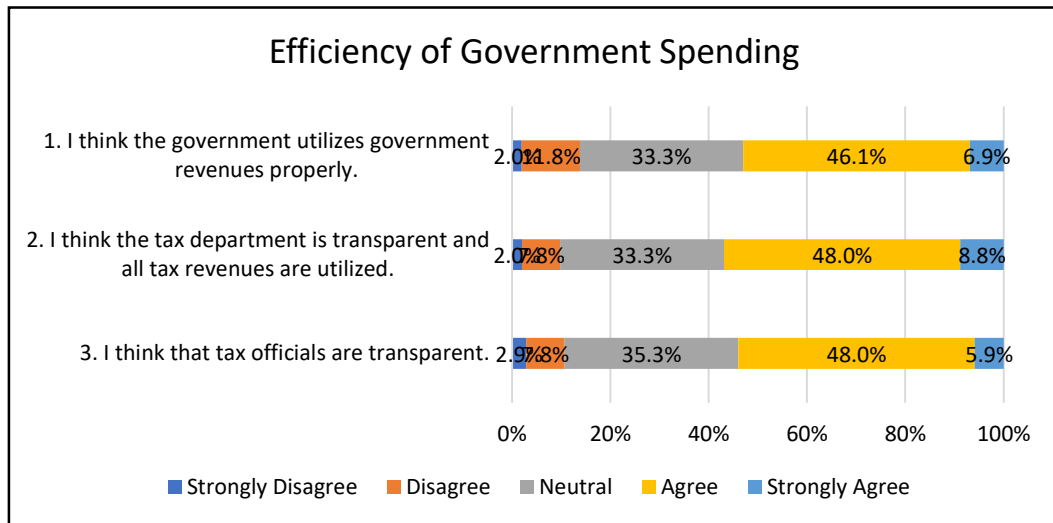


Figure 10. The efficiency of Government Spending

5.2.7 Social Norms

Five questions are combined to measure the social norms in this paper. Surprisingly, respondents viewed differently between tax avoidance activities and the perception of cheating behavior among the people they know or heard about. As shown in figure 11 below, the dominant share of respondents kept neutral for engaging in tax cheating behavior (52.9%) and avoiding activities of paying taxes (45.1%). More interestingly, respondents agreed that it is morally wrong to engage in cheating behavior with any amount (53.9%); it was wrong if their friends knew (45.1%), and it was also wrong from the perception of the important persons to them (43.1%). This result concludes that small and medium taxpayers in Pursat province believe that engaging in cheating is wrong but are not pretty sure of the actual activities to avoid taxes or cheating. Therefore, other factors might hinder their actual activities from complying with the tax system, such as too complex a tax system or a low level of tax knowledge.

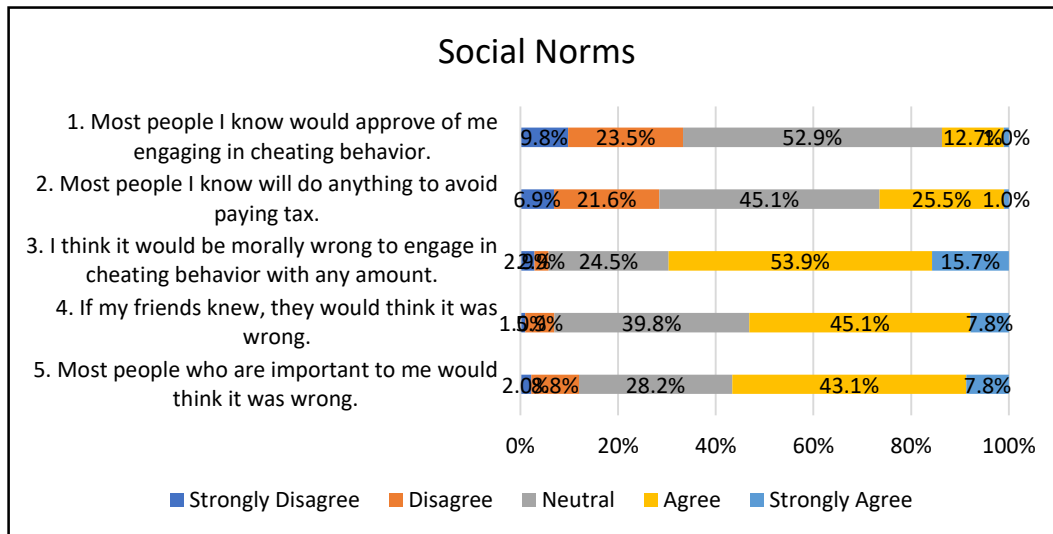


Figure 11. Social Norms

5.2.8 Taxpayer Service

Taxpayer service plays an essential role in the modern tax system, particularly in the Self-Assessment System (SAS), for ensuring taxpayers report their taxes properly and correctly. The author adopted five potential questions for measuring taxpayer service in this study. The majority of taxpayers expressed satisfaction with the service quality provided by the tax administration. Figure 12 shows that around 60% of respondents agree that they received good service from tax officials and other facilitations equipped by tax administration and around 10% of them showed that they were strongly satisfied. Besides, the rest of the respondents chose neutral (about 20%), and only about 5% to 10% showed dissatisfaction with the quality of the taxpayer service. This reflects that the GDT is on the right way in its tax administration reform in these recent years. Continuing these efforts to provide better service can reach the royal government's goal earlier.

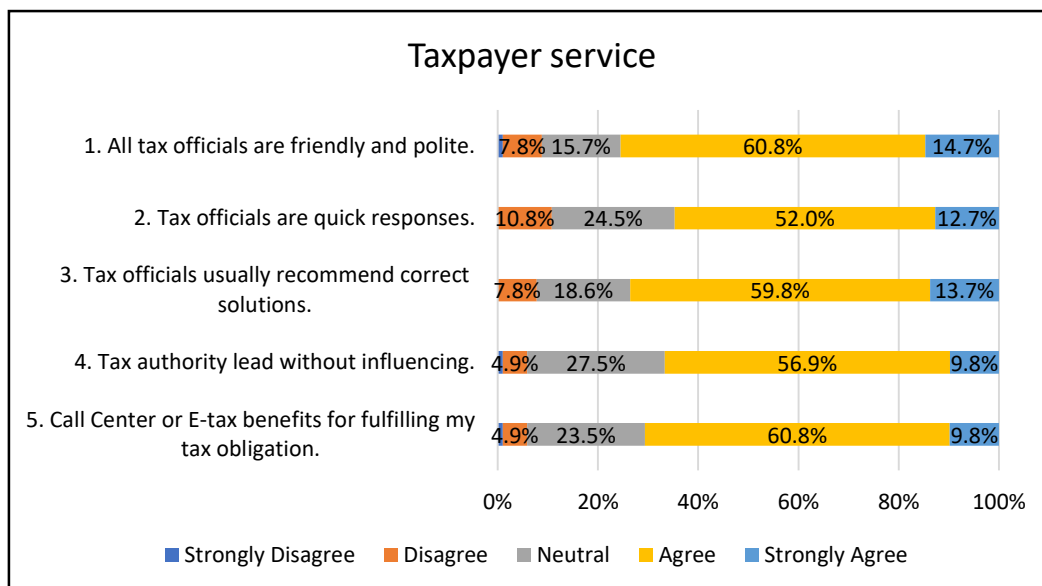


Figure 12. Taxpayer Service

5.2.9 The Complexity of Tax Laws and Procedures

Generally, tax system complexity has disrupted the intention of taxpayers to comply. Consistently, the overall answers to five questions regarding the complexity of tax laws and procedures mostly concurred that it is complicated. Looking at figure 13, respondents around 50% agree and strongly agree that the content of the tax return form is difficult to understand, while about 60% of them reported that it is difficult to calculate the proper tax payable. More importantly, 58% of respondents stressed that filing the tax returns and paying taxes is complicated, while 48% claimed they spent much time paying taxes. Overall, many of them indicated that the tax system in Cambodia is complicated. However, only a small number of all respondents (around 20%) showed it is less complicated. Besides, about 20% on average are not sure. Therefore, the tax system's complexity should be reduced to help taxpayers, especially small and medium taxpayers, fulfill their tax obligations, come in formalization and attain a fair tax system among all taxpayer types.

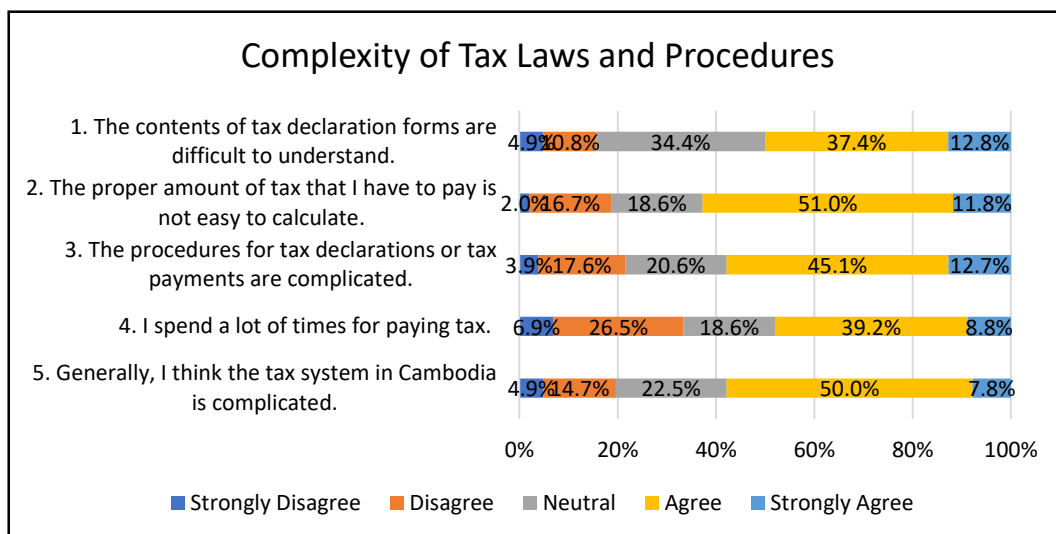


Figure 13. The Complexity of Tax Laws and Procedures

5.2.10 Tax Knowledge

Human resource quality is a main indicator in the economic development sector. Likewise, tax knowledge is vital in complying with the tax system, particularly in the complex tax system. Without knowledge related to tax, a high level of compliance cannot be reached. However, as seen in figure 14, the dominant share of the respondents hesitated to agree that they have enough knowledge to understand the functions and benefits of taxes (52%), and calculate taxes and file the tax return (51%). In contrast, the majority of respondents agree that they can receive the tax information easily (63.7%), and they know the administration's fines and imprisonment (48%). It is illustrated that the level of small and medium taxpayers' knowledge in this province remains limited by most of them having the ability to understand the tax information and regulations. However, they have limited technical skills required to comply with the tax system in the practical fulfillment of their obligations.

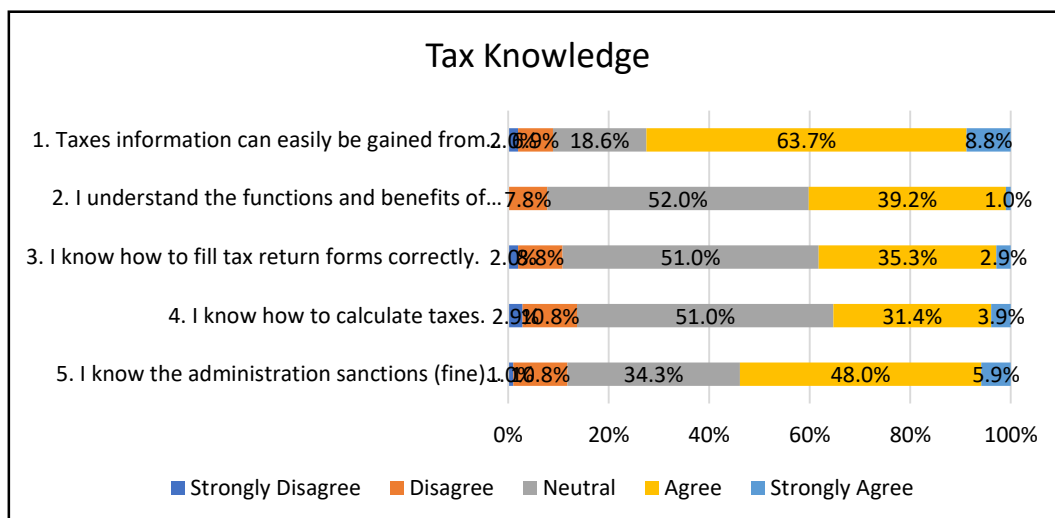


Figure 14. Tax Knowledge

5.2.11 Audits and Sanctions

Four questions were recruited to frame the audits and sanctions in this study. Figure 15 demonstrates the respondent's opinion toward tax enforcement in Cambodia. It showed a similar proportional number of respondents who selected between agree and neutral answers. However, if we combine the answers "agree" and "strongly agree" to those questions, it certainly clarifies that most respondents believed that the level of detection and sanctions are serious and severe. Around 52% of respondents agree that the tax administration would likely find out the unreported additional income and severely punish them if they reduced the reporting income in order to receive a larger tax refund. In addition, around 60% among them concurred that they would be find out if they do not report the additional income in their tax return in this digital era, and the level of punishment is also serious when the unreported income can be found. Notwithstanding, there is a huge number of neutral responses from respondents (about 40%) regarding those questions. It perhaps because some respondents (small taxpayers) are exempted from the audit program. Therefore, they cannot provide their perspectives on this situation.

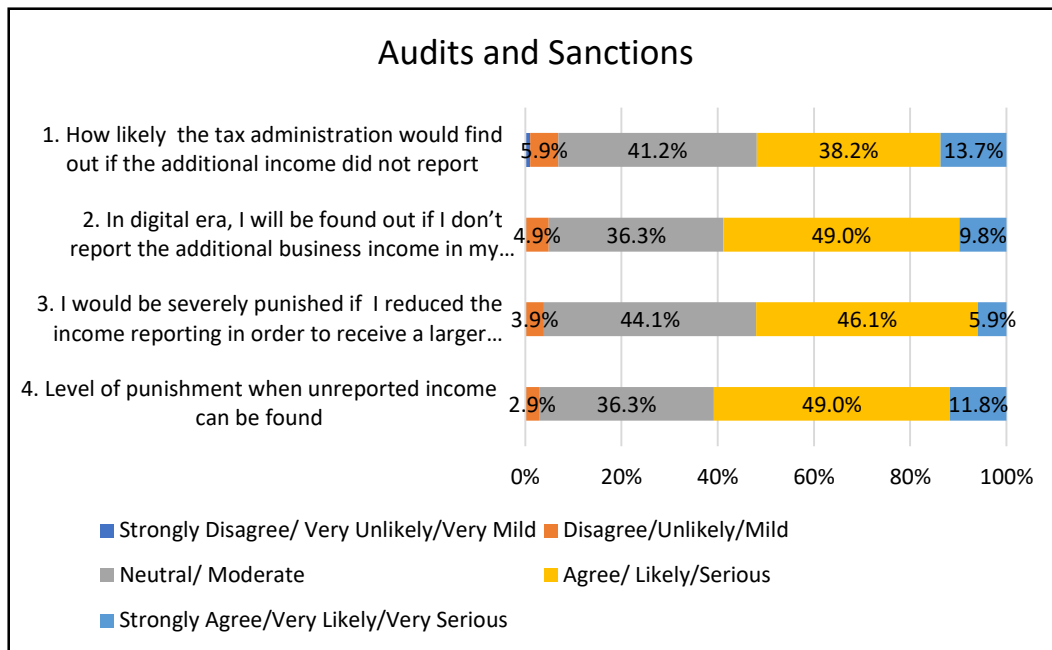


Figure 15. Audits and Sanctions

5.3 Reliability and Validity

5.3.1 Reliability

The reliability of the whole set of questionnaires has been tested to ensure that there is a reliable instrument. Cronbach's alpha is a tool used to measure the items' consistency when using Likert-type scales. As cited in Islam Jony et al. (2019), George and Mallery (2003) provide the following rules of thumb: “ $\alpha > .9$ – Excellent, $\alpha > .8$ – Good, $\alpha > .7$ – Acceptable, $\alpha > .6$ – Questionable, $\alpha > .5$ – Poor, and $\alpha < .5$ – Unacceptable” (p. 231). They also notice that an alpha of .8 is probably a reasonable goal. However, in social science, Cronbach's alpha=.6 is acceptable. After testing, Cronbach's alpha score of each variable is shown in table 5 below.

Table 5. Cronbach's alpha score

Variables	Number of Items	Cronbach's Alpha
Tax compliance intention	5	0.848
Tax morale	5	0.785
Fairness of the tax system	4	0.832
The efficiency of government spending	3	0.898
Social norms	5	0.621
Taxpayer service	5	0.834
The complexity of tax laws and procedures	5	0.873
Tax knowledge	5	0.852
Audits and sanctions	4	0.728

5.3.2 Validity

Many tools were used to ensure the appropriate dataset for this research. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy test (KMO) has a score of 0.736, which is higher than the standard value of 0.6, and reliability have been tested (Cronbach's alpha=.874) is above 0.7. To test the divergent validity of questionnaires, the exploratory factor analysis was used to determine how 41 items are related to each factor by limiting factors based on the eight factors of three elements of TPB. These eight factors explained 67.81% of the total variance. Some uncorrelated items were reduced when the Varimax rotation method was applied.

5.3.3 Factor Analysis

The rotation of the Varimax factor shows that the Complexity of tax laws and procedures is represented by factor 1 with five items. Tax knowledge is represented by factor 2, consisting of five items. Taxpayer service is represented by factor 4 with four items. The efficiency of government spending is represented by factor 4 with three items. Tax morale is represented by factor 5 with four items. The social norm is represented by factor 6 with three items. The efficiency of government spending is represented by factor 7 with three items. Lastly, the audits and sanctions are represented by factor 8 with three items. Table 6 illustrates the correlations of the factor rotation indicated by the Varimax factor rotation method.

Table 6. Factor Rotation

Rotated Component Matrix^a								
	Component							
	1	2	3	4	5	6	7	8
CTL1	.811							
CTL2	.796							
CTL3	.891							
CTL4	.703							
CTL5	.858							
FTS1			.680					
FTS2			.779					
FTS3			.822					
FTS4			.767					
EGS1							.779	
EGS2							.665	
EGS3							.746	
SON3						.718		
SON4						.855		
SON5						.874		
TAS1				.719				
TAS2				.890				
TAS3				.646				
TAS4				.661				
TAK1		.775						
TAK2		.585						
TAK3		.732						
TAK4		.735						
TAK5		.877						
TAM1					.792			
TAM3					.731			
TAM4					.740			
TAM5					.600			
AUS1								.824
AUS2								.728
AUS3								.668

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.

5.4 Findings for research question

5.4.1 Correlation Analysis

Correlation analysis and variance inflation factor (VIF) were used before running the ordered logistic regression to test the threat of multicollinearity. In this study, the highest score of VIF is 2.017. Thus, this study has no problem with multicollinearity since it is smaller than 10 ($VIF < 10$).

Table 7. The Correlation Matrix

	Complexity	Fairness	Efficiency	Norms	Service	Knowledge	Morale	Audits
Complexity	1							
Fairness	.054	1						
Efficiency	.117	.554**	1					
Norms	.086	.192	.335**	1				
Service	.083	.483**	.599**	.296**	1			
Knowledge	-.045	.332**	.412**	.199*	.499**	1		
Morale	-.076	.284**	.260**	.402**	.292**	.380**	1	
Audits	.085	.310**	.359**	.276**	.198*	.322**	.485**	1

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

* . Correlation is significant at the 0.05 level (2-tailed).

5.4.2 Ordered Logistic Regression Results

The result of ordered logistic regression, as shown in Table 8 below, revealed that three variables have statistically influenced the tax compliance intention of SME taxpayers at 95% levels of degree of confidence. Those variables are tax morale, the complexity of the tax system, and tax knowledge. Besides, fairness of the tax system, efficiency of government spending, social norms, taxpayer service, and audits and sanctions have no statistically significant influence on tax compliance intention for this study.

Tax morale has positively influenced the SME taxpayers' tax compliance intention. The result for tax morale ($e^{\beta} = 3.458$, $p < .05$) can be interpreted that with a one-unit increase in tax morale, there is a predicted increase of 3.458 in the log odds of falling at a higher level on tax compliance intention. More generally, this

outcome indicates an increased probability of falling at a greater level of tax compliance intention as the value rises on tax morale.

The complexity of tax laws and procedures is a variable of the perceived behavioral control component, which negatively influence the tax compliance intention ($e^{\beta} = -0.526$, $p < .05$). It means that with a one-unit increase in the complexity of tax laws and procedures, there is a predicted decrease of 0.526 in the log odds of being in a higher level on the tax compliance intention. The finding illustrates that, as the values of the complexity of tax laws and procedures increase, there is a decreased probability of falling at a higher level on the tax compliance intention.

As expected, tax knowledge has negatively influenced tax compliance intention among SME taxpayers in Pursat province, and it is an essential factor that drives taxpayers' tax compliance behavior based on prior research. The result for tax knowledge ($e^{\beta} = -3.799$, $p < .05$) indicates that with a one-unit increase in constraint of tax knowledge, there is a predicted decrease of 3.799 in the log odds of being in a higher level on the tax compliance intention. This result means that, as the values of tax knowledge obstacle increase, there is a decreased probability of falling at a higher level on the tax compliance intention.

Table 8. Ordered Logistic Regression Results

Tax compliance intention					
	Effect	DF	Wald Chi-Square	Pr>ChiSq	
		8	13.612	.092	
Paramater	DF	Estimates	Standard Error	Wald Chi-Square	P-value
Attitudes toward behavior					
Tax morale	1	3.458	1.603	4.655	.031
Fairness of tax system	1	-0.266	.335	.631	.427
Efficiency of government spending	1	.477	.319	2.230	.135
Subjective norms					
Social Norms	1	.366	.268	1.860	.173
Taxpayer service	1	-.184	.361	.260	.610
Perceived behavioral control					
Complexity of tax laws and procedures	1	-.526	.217	5.864	.015
Tax knowledge	1	-3.799	1.774	4.587	.032
Audits and sanctions	1	0.374	.321	1.353	.245

Link function: Logit.

5.5 Discussion

Although this study's findings have been found, the results may differ from previous research. The primary objective of this study is to identify the driving factors of tax compliance intention among SMEs in Pursat province, Cambodia. In response to the research objective, a research question is generated: *What are the drivers of tax compliance among SMEs in the Pursat Tax Branch?*

Based on the Theory of Planned Behavior (TPB), the result demonstrates that attitudes toward behavior (tax morale) have positively influenced tax compliance intention among SME taxpayers in Pursat Province. This result is consistent with Verboon and van Dijke (2007), who found that personal tax norms had a substantial and significant effect on compliance in the context of high distributive justice. However, the fairness of the tax system and efficiency of government spending has been found to have no statistically significant influence on tax compliance intention in this study context. On the contrary, Wenzel (2005) argues that misperception of

the effect of social norms on taxpaying behavior could lead to a vicious cycle of people adapting their ethics and behavior to these perceived norms and thus contributing to the invidious culture. Meanwhile, tax morale is the core intrinsic value of individuals in viewing their behavior to comply with the tax system. This finding is consistent with present study's outcomes which reveals that subjective norms component of TPB have no significant influence on tax compliance intention of SME taxpayers. Several research studies provided much evidence that individual are influenced by the ethical dimensions of their decisions (Alm & Torgler, 2011), and a high level of ethics can strengthen compliance with the tax laws, as taxpayers may feel guilty and ashamed (Aliev et al., 2021). Improvement in tax morale contributes to increasing voluntary compliance, the desired goal of every tax administration, and specifically, GDT, which aims to strengthen compliance by reducing reliance on audits.

Perceived behavioral control of TPB (the complexity of tax laws and procedures and tax knowledge) has a negatively statistical significant influence on tax compliance intention. The result of the complexity of tax laws and procedures is in line with Saad (2014) and Taing and Chang (2021). Saad (2014) also indicates that perceived behavioral control among taxpayers motivated them to constantly not to comply with their tax obligations. More specifically, the complexity of the tax system compelled taxpayers to not comply, either intentionally and unintentionally. In addition, the outcome of Lignier and Evans (2012) 's research study suggests that the problem has become worse for small business sector in recent decades due to various complex concessions, for example, tax incentive claims. The study also suggests that the regressivity of tax compliance costs has become even more pronounced and that many of the policy measures specifically introduced to attempt to alleviate the compliance burden do little, particularly for small businesses.

This study found that tax knowledge negatively influences SMEs' tax compliance intention. This result is consistent with studies conducted by Loo et al. (2009), Maseko (2014), and Peprah et al. (2020). Using ordered logistic regression to analyze the data of 200 respondents, Peprah et al. (2020) assert that tax education

affects compliance with income tax administration among MSMEs in Nkwanta South District, Ghana. Depending on the large scale of the informal economy, the Cambodian government uses soft measures on SMEs for almost all fields, including taxes and regulations. Taxpayers with limited tax knowledge seem challenged to comply with the tax system. On the other hand, Ayuba et al. (2020) stated that tax knowledge is operationalized as the ability of the taxpayer to understand the tax laws and compute his or her tax liability. However, that work found no significant direct relationship between tax knowledge and taxpayer's compliance. In contrast, Saad (2014) clarifies that tax knowledge and tax complexity are viewed as contributing factors toward non-compliance behavior among taxpayers. Therefore, this present study support the previous literature discovered by Saad (2014). The author also notices that the possibility of tax knowledge shortfall could lead to unintentional non-compliance behavior among taxpayers.

5.6 Limitation

Although this study releases the significant results, many shortcomings exist. First, due to the small number of samples, the result may not generalize the whole population of small and medium taxpayers in the entire country. It is difficult to obtain large number of respondents due to Covid-19 pandemic. Many business owners reported no business transaction and loss, while some reacted non-cooperated with tax authority during this Covid-19 situation. Second, only the psychological theory was used, other factors including economic factors might also impact tax compliance. Third, the author did not study in-depth demographic factors because many previous studies have found a significant impact on tax compliance. For instance, Mbilla et al. (2018) proves that gender has significant relationship on tax compliance while the level of education, business sector, and age were found to be insignificant with tax compliance behavior among self-employed in Ghana.

Even though this study has some limitations, its findings confirmed the result of previous literatures and may suggest practical recommendations for policymakers. The characteristics of taxpayers are similar across the country and

under the uniform of the tax system, the finding factors may be applicable to various rural tax branches and also in other developing countries.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter provides the research conclusion by responding to the problem statement, research objective, research question, and methodology. Finally, the chapter provides recommendations to inform policymakers about the factors that may influence the tax compliance behavior among SMEs and also suggests some implications for the whole study.

6.2 Conclusion

In this study, the main problem is the low level of tax compliance among small and medium taxpayers (SMEs) in Pursat province, Cambodia, which is influenced by the large scale of the informal economy, the cash basis business transaction, and the higher costs to perform as the registered business in the formal system. This study assumes that several factors can influence the taxpayer compliance to be higher level. Therefore, this research aims to identify the drivers of tax compliance intention among small and medium taxpayers registered in the Pursat Tax Branch, Pursat Province, Cambodia.

The study employed the TPB as the theoretical framework in response to the research question. This TPB comprises three components: attitudes toward behavior, subjective norms, and perceived behavioral control, which may influence tax compliance intention. Based on the theory, the author developed eight hypotheses under these three components to test the theory, attitudes toward behavior (tax morale, fairness of the tax system, efficiency of government spending), subjective norm (social norms and taxpayer service), and perceived behavioral control (the complexity of tax laws and procedures, tax knowledge, and audits and sanctions). The ordered logistic model was employed to analyze the data received from 102 small and medium taxpayers (SMEs) using a purposive sampling questionnaire survey. The findings contribute to the literature on tax compliance by confirming the factors influencing the tax compliance intention of SMEs more specifically.

The results of ordered logistic regression show that attitude toward behavior and perceived behavioral control components of TPB have significantly influenced

tax compliance intention among small and medium taxpayers in Pursat province, Cambodia. In contrast, the subjective norms component has been found as a statistically insignificant influence on tax compliance intention in this study. These results confirmed the TPB theory as the applicable psychological or behavioral study theory. In addition, the findings of this study are consistent with previous research studies in many other contexts and taxpayer types.

The findings of this study clarify that tax morale strongly influence the intention to comply with the tax system among SMEs. In contrast, the complexity has a weak impact on SME taxpayers' intention to comply since many previous studies and SMEs themselves claim it is the main constraint preventing them from complying. More interestingly, the most impactful constraint is the tax knowledge that hinders SMEs from complying with tax laws and regulations. Therefore, tax authorities should consider equipping SME taxpayers to understand better every single piece of laws, regulations, and procedures.

In conclusion, tax morale, the complexity of tax laws and regulations, and tax knowledge are the essential drivers of tax compliance intention among SME taxpayers in Pursat province, Cambodia. With these findings, tax authorities should try to simplify tax laws, procedures, and regulations as much as possible and improve the public relations among related parties, for instance, private associations and tax agents other than SMEs. In addition, strengthening the roles and managing the tax agent to be more efficient may also be a lesson learned to support SMEs with the quality of taxpayer service since the limited resources of tax administration remain. Moreover, strengthening the tax education and widening the tax information may be the best instrument to ease the level of doing business in accordance with reducing the cost of compliance.

6.3 Recommendations

The findings of this study appear to prove that raising the level of tax morale and simplifying the tax laws and procedures for SMEs are the priority policy agenda settings to invite them to engage in the formal economy and allow them to experience the government supports both administrative and technical assistances. Since tax knowledge is the biggest obstacle for SMEs regarding tax compliance,

tax education serves as the fundamental initiative to improve voluntary compliance. Based on the results, the study suggests some practical recommendations to raise the compliance level among SMEs.

A strong impact of tax morale on SMEs' tax compliance intention reflects the need to improve SMEs' intrinsic value and perception to shape their attitude regarding taxes. Therefore, the tax authority and the whole government should consider introducing policies and measures to increase tax morale to assist voluntary compliance through building trust in the government and raising accountability and transparency. Although taxpayer service has been found to have an insignificant influence directly on tax compliance intention in this study, its impact may be mediated in the relationship. Thus, facilitating the SME taxpayers with good quality of taxpayer service might be a viable option to help them reduce the cost of complying with the tax system and increase tax policies' effectiveness. Inviting taxpayers to register as formal businesses take time, and many measures are needed to apply for good results; however, it will gradually move on through cooperation from both horizontal and vertical governmental agencies to provide good quality public services and participation from citizens as a sense of national identity.

Tax laws are some of the most dynamic, subject to change more frequently in recent decades. The complexity of the tax laws leads to misunderstandings among related parties, taxpayers, tax agents, and tax authorities. Many taxpayers with higher tax knowledge can understand only tax-paying procedures and regulations, but they still need support from tax agents for technical tax. The tax administration should consider simplifying the tax laws and procedures. Tax laws should be understandable and readable, ensuring uniform implementation across the country. The procedures for claiming a tax refund, tax incentives, or dispute resolution should have clear guidelines and step-by-step instructions. Simplifying the accounting process should be considered, which may reduce SMEs' cost to comply. Finally, shortfalls of decentralization may also impact if there is not a clear identified authorized among related governmental authorities, leading to an

increased burden in complying. Therefore, the tax administration should be cautious in assigning them responsibility.

Tax knowledge is a significant constraint that disrupts taxpayers' compliance with the tax system among SMEs. Tax authority should provide up-to-date information about the amendment of tax laws, tax credits, allowance, and procedures to apply for tax incentives and tax exemption through social media, printed media, press releases, tax fairs, seminars/workshops to improve personal tax knowledge of taxpayers' right and obligations. Tax technical training should be comprehensively provided for all taxpayers, especially SMEs, through training, co-ordinate taxpayer education programs with industry association forums, tax advocates/certified accountants forums, and among community organizations. In addition, tax administration should also consider embedding tax education into the curriculum education system from primary school because students can cause incremental changes in their parents' behavior, and they will become taxpayers in the future.

Simultaneously, tax administration should design a systematic toolkit to reduce the opportunity to avoid tax among taxpayers by utilizing the ICT system to track the business transactions, closely communicate with private associations, and strengthen cross-checking information with third parties. Maintaining a credible and stable financial and capital market can reduce the uncertain business environment for both domestic and foreign investment. Thus, it can attract more savings and investment in the banking system and mobilize more resources to the market, leading to a low-interest rate. Then, taxpayers can reduce their business costs and comply with the tax system. More importantly, strengthening public relations with related governmental agencies and exchanging information with international jurisdictions and tax administrations can be practical tools to prevent tax avoidance.

6.4 Future research

In this study, the quantitative methodology is employed by adopting the Theory of Planned Behavior (TPB). The ordered logistic regression model was applied. However, qualitative research such as interviews with a specific industry, private associations, or tax agents who work closely with SMEs should be conducted. Therefore, future research may have a chance to explore in-depth the driving factors of SMEs' tax compliance behavior. In addition, this study was done in only one location, future research should be studied in two or more locations in other provinces to compare the level of tax compliance, and perhaps it will allow the author to identify essential influencing factors. Moreover, developing a new comprehensive tax compliance model by combining the psychological and economic theories should also be considered since this kind of study is still rare and not comprehensively identified. Shortly, if Cambodia successfully introduces a comprehensive personal income tax, individual taxpayers can be the target group.

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Appendix A

Descriptive Statistics (N=102)		Mean	Std. Dev.	Min.	Max
Dependent variables					
ACC	Can you imagine circumstances in which you as the business owner would not keep your accounts/ books according to the regulations?	3.28	1.111	1	5
CAS	Can you imagine circumstances in which you as the business owner would keep cash payments out of the records?	3.67	1.075	1	5
DED	Can you imagine circumstances in which you as the business owner would enter too much or non-existent deductions in your tax return?	3.72	1.129	1	5
INC	Can you imagine circumstances in which you as the business owner would not report all income in your tax return?	3.72	1.155	1	5
WPA	Can you imagine circumstances in which you as the business owner would employ people without paying the proper taxes?	3.53	1.295	1	5
Attitudes toward behavior					
Tax morale					
TAM1	I think I should honestly declare all my tax liability.	3.87	.608	2	5
TAM2	I think taxpayers should not underreport tax liability.	3.64	.806	1	5
TAM3	I will not evade paying tax even I have a chance to.	3.92	.655	1	5
TAM4	I think paying tax is my obligation.	4.09	.490	3	5
TAM5	I think evading tax is wrong.	3.98	.758	1	5
Fairness of the tax system					
FTS1	I think the tax office's decisions are usually fair.	3.47	.767	1	5
FTS2	I think the rules and approaches applied by the tax office treat all taxpayers equally.	3.47	.875	1	5
FTS3	In a dispute, the tax office would evaluate my information objectively and fairly.	3.44	.815	2	5
FTS4	The dispute resolution mechanisms put in place by the tax office are fair.	3.47	.727	2	5
The efficiency of government spending					
EGS1	I think the government utilizes government revenues properly.	3.44	.863	1	5
EGS2	I think the tax department is transparent and all tax revenues are utilized.	3.54	.840	1	5
EGS3	I think that tax officials are transparent.	3.46	.840	1	5
Subjective Norms					
Social norms					
SON1	Most people I know would approve of me engaging in cheating behavior.	2.72	.849	1	5
SON2	Most people I know will do anything to avoid paying tax.	2.92	.886	1	5
SON3	I think it would be morally wrong to engage in cheating behavior with any amount.	3.76	.858	1	5
SON4	If my friends knew, they would think it was wrong.	3.53	.767	1	5
SON5	Most people who are important to me would think it was wrong.	3.46	.840	1	5

Taxpayer service					
TAS1	All tax officials are friendly and polite.	3.80	.821	1	5
TAS2	Tax officials are quick responses.	3.67	.836	2	5
TAS3	Tax officials usually recommend correct solutions.	3.79	.775	2	5
TAS4	Tax authority lead without influencing.	3.70	.755	1	5
TAS5	Call Center or E-tax benefits for fulfilling my tax obligation.	3.74	.744	1	5
Perceived Behavioral Control					
The complexity of tax laws and procedures					
CTL1	The contents of tax declaration forms are difficult to understand.	3.42	1.009	1	5
CTL2	The proper amount of tax that I have to pay is not easy to calculate.	3.54	.972	1	5
CTL3	The procedures for tax declarations or tax payments are complicated.	3.45	1.050	1	5
CTL4	I spend a lot of times for paying tax.	3.17	1.126	1	5
CTL5	Generally, I think the tax system in Cambodia is complicated.	3.41	.999	1	5
Tax knowledge					
TAK1	Taxes information can easily be gained from the mass media.	3.71	.803	1	5
TAK2	I understand the functions and benefits of used taxes.	3.33	.635	2	5
TAK3	I know how to fill tax return forms correctly.	3.28	.750	1	5
TAK4	I know how to calculate taxes.	3.23	.807	1	5
TAK5	I know the administration sanctions (fine) and legal sanctions (imprisonment).	3.47	.805	1	5
Audits and sanctions					
AUS1	How likely would the tax administration find out if you don't report the additional business income in your tax return?	3.58	.838	1	5
AUS2	In this digitalization era, the tax administration will find out if I don't report the additional business income in my tax return.	3.64	.728	2	5
AUS3	The tax administration would severely punish me if they found out that I did not report some or all of the additional business income in my tax return in order to receive a larger tax refund.	3.54	.670	2	5
AUS4	How serious would the punishment be if the tax administration found out that you did not report some or all of the additional income from your part-time business?	3.70	.715	2	5
Demographic Information					
GEN	Gender	.45	.500	0	1
AGE	Age	2.14	.934	1	4
EDU	Education level	2.61	.785	1	4
POS	Position	2.12	1.395	1	4
TYP	Business Type	1.38	.488	1	2
LOC	Business Location	1.71	1.397	1	7
DUR	Duration of operation	2.02	.808	1	3
EMP	Number of employees	1.36	.594	1	3
SEC	Business Sector	3.03	1.382	1	6

Appendix B



Graduate School of Government Studies Consent to Participate in Research Project

Research title: **‘A quantitative study into the drivers of tax compliance intention among SME taxpayers: Evidence from Pursat Province, Cambodia’**

Self-introduction: my name is BUN SABOEURN, a graduate student in the Graduate School of Governance Studies, Meiji University, Japan. To fulfill my degree requirement, I need to conduct a research study on the factors influencing tax compliance intention among Small and Medium taxpayers in Pursat Province. I would like to request your participation in this research study because you are one of the stakeholders who registered as taxpayer in Pursat Tax Branch.

About the survey and duration: Should you agree to take part in this survey, I will ask you about your opinion toward the factors affect tax compliance intention. Besides, this questionnaire set will last only around 10 minutes. To be specific, allow me to raise an example of the survey question, “Do you agree with the statement: *I think the government utilizes government revenues properly?*” by selecting from **1: Strongly Disagree, 2: Disagree,**

3: Neutral, 4: Agree, 5: Strongly Agree.

Benefits and Risks: I would like to let you know in advance that participating in this research study will not provide you with any direct benefits. However, your valuable participation will contribute to provide necessary inputs which could influence government policy with regard to SMEs and improve our better tax system as well as provide the insight recommendations for future researchers in the field of public policy and tax compliance. More importantly, I would like to guarantee that participating in this research will not cause any troubles to you at all.

Confidentiality and privacy: After collecting the data from the survey, I as the researcher of this project will maintain the materials in a confidential way. I hereby claim that no information of your personal opinion will become public by any chance. In addition, should you require a copy of research finding, please feel free

to let me know at my personal contact. With this, I would feel appreciated to fulfill your demand.

Voluntary participation: In this research study, I would like to ask for your voluntary participation. Be informed that you still have right to participate in or quit from the survey at your convenience. After reading the statements above, do you agree to participate in this survey?

☐. Yes

☐. No

Questions: If you have any questions about this project, please contact me through my Telegram Account number: 061 245 555 or email address: bunsaboeurn55@gmail.com.

You may also refer to my advisor:

Please refer to the precisely stated statements for your information.

Should you approve to participate in this interview, please sign in the provided lines below.

Your signature:

Your full name:

Date:

QUESTIONNAIRE SURVEY

SECTION I: DEMOGRAPHIC INFORMATION

(Please select the appropriate answer)

A. Personal Information

1. Please select your gender

☐. Male

☐. Female

☐. Others

2. Please tell about your age

☐. 18-30 years

☐. 31-40 years

☐. 41-50 years

☐. Over 50 years

3. What is your highest level of education qualification?

☐. Under High School

☐. High School Graduate

☐. Bachelor's Degree

☐. Master's Degree

☐. Doctor's Degree

4. What is your status in Business/Company?

☐. Business Owner

☐. Company's Accountant

☐. Tax Agent

☐. Representative

B. Business Information

5. What type is your business registration?
☐. Small taxpayer ☐. Medium taxpayer
6. Where is your business location?
☐. Pursat Town
☐. Bakan District
☐. Krokor District
☐. Kondieng District
☐. Kravanh District
☐. Veal Veng District
☐. Talor Senchey District
7. How long has your business been operated?
☐. Less than 5 years ☐. 5 to 10 years ☐. Over than 10 years
8. How many employees are there in your business?
☐. Less than 11 employees ☐. From 11 to 50 employees
☐. From 51 to 100 employees
9. What sector is your business in?
☐. Manufacture (Production) ☐. Merchandise (Wholesale, retail)
☐. Service (Restaurant, Hotel, ...) ☐. Import/Export
☐. NGO/NPO ☐. Others (Please specify)

C. Can you imagine circumstances in which you as business owner would:

10. not keep your accounts/ books according to the regulations?
☐. Definitely not ☐. Probably not ☐. Possibly ☐. Probably will
☐. Definitely will
11. keep cash payments out of the records?
☐. Definitely not ☐. Probably not ☐. Possibly ☐. Probably will
☐. Definitely will
12. enter too much or non-existent deductions in your tax return?
☐. Definitely not ☐. Probably not ☐. Possibly ☐. Probably will
☐. Definitely will
13. not report all income in your tax return?
☐. Definitely not ☐. Probably not ☐. Possibly ☐. Probably will
☐. Definitely will
14. employ people without paying the proper taxes?
☐. Definitely not ☐. Probably not ☐. Possibly ☐. Probably will
☐. Definitely will

SECTION II: FACTOR INFLUENCING TAX COMPLIANCE INTENTION

(Please select the appropriate answer)

(1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree)

Statement		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
A. Complexity of Tax laws and procedures						
15.	The contents of tax declaration forms are difficult to understand.					
16.	The proper amount of tax that I have to pay is not easy to calculate.					
17.	The procedures for tax declarations or tax payments are complicated.					
18.	I spend a lot of times for paying tax.					
19.	Generally, I think the tax system in Cambodia is complicated.					
B. Fairness of Tax System						
20.	I think the tax office's decisions are usually fair.					
21.	I think the rules and approaches applied by the tax office treat all taxpayers equally.					
22.	In a dispute, the tax office would evaluate my information objectively and fairly.					
23.	The dispute resolution mechanisms put in place by the tax office are fair.					
C. Efficiency of Government's Spending						
24.	I think the government utilizes government revenues properly.					
25.	I think the tax department is transparent and all tax revenues are utilized.					
26.	I think that tax officials are transparent.					
D. Social Norms						
27.	Most people I know would approve of me engaging in cheating behavior.					

28.	Most people I know will do anything to avoid paying tax.					
29.	I think it would be morally wrong to engage in cheating behavior with any amount.					
30.	If my friends knew, they would think it was wrong.					
31.	Most people who are important to me would think it was wrong.					
E. Taxpayer Service						
32.	All tax officials are friendly and polite.					
33.	Tax officials are quick responses.					
34.	Tax officials usually recommend correct solutions.					
35.	Tax authority lead without influencing.					
36.	Call Center or E-tax benefits for fulfilling my tax obligation.					
F. Tax knowledge						
37.	Taxes information can easily be gained from the mass media.					
38.	I understand the functions and benefits of used taxes.					
39.	I know how to fill tax return forms correctly.					
40.	I know how to calculate taxes.					
41.	I know the administration sanctions (fine) and legal sanctions (imprisonment).					
G. Tax morale						
42.	I think I should honestly declare all my tax liability.					
43.	I think taxpayers should not underreport tax liability.					
44.	I will not evade paying tax even I have a chance to.					
45.	I think paying tax is my obligation.					
46.	I think evading tax is wrong.					
H. Audit and Sanctions (Please circle the appropriate answer number)						
	Perceived audit probability					

47.	How likely would the tax administration find out if you don't report the additional business income in your tax return?	1.Very unlikely	2.Unlikely	3.Neutral	4.Likely	5.Very likely
48.	In this digitalization era, the tax administration will find out if I don't report the additional business income in my tax return.	1.Strongly Disagree	2.Disagree	3.Neutral	4.Agree	5.Strongly Agree
	Perceived severity of fines					
49.	The tax administration would severely punish me if they found out that I did not report some or all of the additional business income in my tax return in order to receive a larger tax refund.	1.Strongly Disagree	2.Disagree	3.Neutral	4.Agree	5.Strongly Agree
50.	How serious would the punishment be if the tax administration found out that you did not report some or all of the additional income from your part-time business?	1.Very mild	2.Mild	3.Moderate	4.Serious	5.Very serious

Thank you for cooperation.

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Office of the Professional Graduate School

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Meiji University, Japan
2022

Title of Thesis: Strengthening the creative question-based summative
assessment system of Secondary and Higher Secondary
education levels in Bangladesh.

Governance Program,
The Graduate School of Governance Studies

Name of Supervisor: Prof. JUNRO NISHIDE

Name of Author: KAZI MD RUKAN UDDIN

G.S. Format 2

Research Title: Strengthening the creative question-based summative assessment system of Secondary and Higher Secondary education levels in Bangladesh.

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Abstract

The creative question-based assessment method based on Bloom's taxonomy was launched in Bangladesh at secondary and higher secondary to eliminate memorization-based learning and make the generation more skilled and creative with applied learnings. After continuing for one decade, it's now facing various controversial critiques from different levels, especially in designing creative questions by the teacher. In this regard, this study firstly tied to determine the factors associated with the strength of designed creative questions by the teacher and analyze their relationship with a quantitative survey of 316 teachers. Besides question designs, what other issues need to be considered and the causal relationship of different factors are explored through 9 qualitative interviews. Based on the training manual of the creative question preparation, examination reformation guidelines, academic supervision report 2019, and some other literature, the quantitative analysis found that monitoring, teacher's competence, training, willingness, time, and experience significantly influence the strength of designed creative question by the teacher. The interview analysis also explored that answer script evaluation, innovative teaching method, diversified question patterns, discouraging result-based competition, stopping open publication of internal results, applied textbook contents, increased honorarium, and logistics support also should be addressed in addition to the above six factors. This study is the first attempt to measure precisely the strength of designed creative questions by the teacher and the different significant factors' impact on it. This research will strengthen the summative assessment policy of Bangladesh by analyzing various issues from a holistic viewpoint for the first time.

Research Title:

Strengthening the creative question-based summative assessment system of
Secondary and Higher Secondary education levels in Bangladesh.

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July 2022

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LIST OF ACRONYMS

BEDU – Bangledsh Examination Development Unit

DSHE – Directorate of Secondary and Higher Education

HSC- Higher Secondary Certificate

IMED- Implementation Monitoring and Evaluation Division

JSC – Junior School Certificate

MCQ – Multiple Choice Question

NAEM – National Academy for Educational Management

NCTB – National Curriculum and Textbook Board

NTRCA - Non-Government Teachers' Registration and Certification Authority

PECE – Primary Education Certificate Examination

SESDP- Secondary Education Sector Development Program

SESIP – Secondary Education Sector Investment Program

SSC – Secondary School Certificate

CHAPTER ONE

INTRODUCTION

Summary

This first chapter depicts the background of this study with a brief overview of the creative question-based assessment system in Bangladesh, followed by the research problem for which solution this study has proceeded. Firstly, this study aims to assess and analyze the factors associated with the teacher's strength of designed creative questions. Then, in addition to question design, what other issues need to be addressed are explored. The academicians and policymakers will truly be benefitted from the holistic findings of this study to strengthen the summative assessment policy of Bangladesh.

1.1 Background

The Education structure of Bangladesh is divided into 3(three) levels up to twelve classes or before starting the graduation level. Primary Education consists of Grade I-V, Secondary Education Consists of Grade VI-X, and Higher Secondary Education consists of Grade XI-XII (Khan, 2012).

Up to 2021, 4 Public examinations within these three levels of education have been practiced; Primary Education Certificate Examination (PECE) in Grade V, Junior School Certificate Examination (JSC) in Grade VIII, Secondary School Certificate Examination (SSC) in Grade X, and Higher Secondary Certificate Examination (HSC) in Grade XII (Asad, 2009). Passing each public examination is compulsory to get admission into the following levels of education. There is also a minimum of two Internal examinations named half-yearly and annual examinations in each Class or Grade. Passing each Grade's annual examination is also compulsory to enter the next Grade (Begum & Farooqui, 2008). According to the New Proposed National Curriculum Framework of 2020, the PECE and JSC examinations will be omitted from 2022 (Mustaque, 2020).

Currently, in the above public examinations, 100% of marks are evaluated based on the summative assessment method (Begum & Farooqui, 2008). By 2023, According to the revised new curriculum by NCTB¹, 50% of marks will be covered by ²Formative or Classroom assessment, and the Summative Assessment system will assess 50% of marks as an annual examination at SSC Level. At the HSC level, 30% of marks will be covered by Formative or Classroom assessment, and 70% of marks will be covered through Summative Assessment System in the form of an Annual Examination (NCTB, 2020).

Before 2010, a general question-answer-based "Question Structure" was practiced in the examination. The question pattern was "What, why, how, whom" type questions. In most cases, with this question pattern, students tried to answer by recollecting some information or knowledge from their memory that they memorized or learned by heart. Sometimes, without understanding the applicability of this knowledge, they could answer quickly and easily from their memory (Riyad, 2016; Billah, 2017). After 2010, a creative question-based "Question Structure" was introduced at the Secondary (SSC) level. In 2012, it was also started to practice at the higher secondary level (HSC). It was a great revolutionary change in the history of the Bangladesh Education Sector. The Creative Question is prepared based on Bloom's Taxonomy (Yasmin et al., 2020; Labeeba Hafiz, 2019). Therefore, even after implementing the new curriculum in 2023, the Question pattern of the Summative assessment part of SSC and HSC levels will be in the Creative Question Format.

Bloom's taxonomy is a widely used common language in the assessment field. According to the Revised Bloom's Taxonomy, there are six levels of the cognitive domain named Remembering, Understanding, Applying, Analyzing,

1 National Curriculum and Textbook Board (NCTB) is the sole government authority to develop and approve syllabus, curriculum, and textbook in primary, secondary, and higher secondary education in Bangladesh. NCTB is going to implement a revised curriculum from 2023.

2 Formative Assessment takes place during the course of teaching. It is essentially used to provide feedback in order to support the teaching/learning process (Hortigüela Alcalá et al., 2018; Broadfoot et al., 1999). Some Formats are Quizzes, Games, Projects, Presentations, Group activities, etc.

Evaluating, and Creating (Anderson et al., 2001). The Creative question is designed to assess students' these six(6) cognitive skills with four(4) levels of the question. These are Knowledge level, Comprehension level, Application level, and Higher-order skill level questions. In a set of Creative Questions, at first, a case, clue, is given as a stem³. Considering this stem as a stimulus, students need to answer these four levels of Questions in a set of creative questions that appear in difficulty chronology.

Knowledge level: This is the lowest level of Cognitive skill. At this level, a Question is set up to assess the ability to remember something from his previous gained knowledge.

Comprehension level: This level of question is designed to assess the skill of comprehension capability of the meaning of any topic. It could be understanding any information, rules, law, formula method, process, etc.

Application Level: It means the skill of applying any previously learned knowledge in a new situation. In a unique case, it could be using any formerly known rules, theory, formula, method, or process.

Higher-Order skill level: This is the skill of analyzing, Synthesis, and Evaluating any facts. This level of question is designed to assess the ability to analyze, make decisions, and evaluate any points based on his previously learned information, theory, knowledge, etc. (SESIP, 2014; Labeeba Hafiz, 2019)

There are two parts in a set of 100 marks creative question papers: essay type and multiple choice question parts.

There is a detailed guideline for Preparing a 100 marks Creative Question paper named "Examination System Reformation Guideline" formulated by the Secondary Education Sector Development Program (SESIP)⁴ in 2008 and a training manual

3 Stems is a new scenario described at the beginning of any creative question set as a clue to answer the subsequent four levels of the question. It should be unique, attractive, and brief. It would be described based on any fact, feature relevant to the textbook, or curriculum, but not directly copying from the textbook. (SESIP, 2014)

4 Secondary Education Sector Development Program-SESDP (2006-2014) was initiated by the government of Bangladesh with the support of ADB to improve the quality of secondary education by revising curricula, supporting reforms of national examinations, strengthening student assessment, strengthening the school management committee, reviewing stipend program, decentralizing education management information system, etc. (ADB, 2015).

on creative question preparation, moderation by the Secondary Education Sector Investment Program, 2014⁵.

1.2 Statement of the Problem

The main objective of introducing this creative question system was to make the generation more creative and teach them the applied part of any knowledge so that they can bring any knowledge from head to heart to hand. That means, instead of the tendency to learn by heart or memorization, emphasis should be given to developing students' creativity (Yasmin et al., 2020). For the teacher, this desired outcome was to prepare that type of creative question with which students will be evaluated on the capacity to bring any knowledge from head to heart to hand or in an applied way. After continuing this assessment system for almost the last ten years, it is now rethinking whether the creative Question initiative has achieved its objectives or not (Billah, 2017)?

According to the 'Academic Supervision Report' conducted by the Directorate of Secondary of Higher Education (DSHE)⁶ in 2019, only 58.26 percent of teachers have acquired skills in designing creative Questions. The remaining 41.83 percent of teachers cannot prepare creative questions on their subjects. Another report on the Secondary Education Sector Development Program (SESDP) conducted by the IME Division⁷ of the planning ministry says that Sixty percent of students don't understand it. Or they are not answering based on their creativity instead of learning

5 Secondary Education Sector Investment Program (SESIP) was initiated in 2014 for ten years as a continuation of SESDP to improve the overall curricula, support teacher training, popularize science education at the secondary level, improvement of examination and evaluation methods, reduce the dropout rate, extended use of ICT, providing stipends to needy students and to improve the overall quality of education the at secondary, higher secondary level (SESIP, 2014).

6 Directorate of Secondary and Higher Education(DSHE) is the main controlling authority to implement education policy at the secondary and higher secondary level. The Evaluation and Monitoring wing of DSHE publish different evaluation report on secondary and higher secondary education (DSHE, 2021). <http://www.dshe.gov.bd/>

7 The implementation, Monitoring, and Evaluation Division (IMED) of the Planning ministry is the highest authority of Bangladesh to evaluate any projects or programs. It effectively supports the country's socio-economic development by monitoring project implementation activities and evaluating completed projects with transparency, efficiency, and accountability. <http://www.imed.gov.bd/>.

by heart. Most teachers cannot make that type of expected level's creative question from their thinking, which is needed to bring out students' creativity (Billah, 2017).

But the government launched this assessment system with a grand vision of making the generation more creative and converting the existing traditional education system into a skill-oriented one.

In this context, some educational experts opine that the initiative of launching the Creative Question-based assessment has failed to achieve its objectives and omits this Creative Question-based assessment system (Mohammad Mahbubur Rahman Litu, 2019)

On the contrary, some other experts and educationalists involved in launching this system opined that the problem is not of this system. This is an excellent system to assess students' gained knowledge properly and make them more skillful and creative. The fact is that teachers cannot prepare that type of good qualitative question, and students are not getting proper support to become accustomed to this type of Creative Question method (Iqbal M. J, 2016; Sayed, 2021).

Therefore, the Government is trying to make this "Creative Question Structure" of summative assessment part more effective by finding the appropriate gap and providing adequate logistic support to teachers and students.

In this regard, though some studies are already done, there is no research on identifying and analyzing the associated factors with the strength of designing Creative Question in a quantitative approach.

This research tries to assess and determine the interrelation of different factors with the strength of designing Creative Question by collecting opinions directly from teachers. Besides, what other issues should be considered to strengthen the Creative Question-based Assessment system would also be investigated.

1.3 Research Objectives

The main objective is to strengthen the Creative Question-based assessment system. In this regard, the various factors associated with the strength of designing Creative Question will be analyzed through a quantitative survey.

The causal relationship of this factor's diversified nature will also be investigated. In addition to question design, what other issues need to be considered will also be explored.

1.4 Research Question

Q 1. What are the **various factors associated with the strength of designing creative questions, and how are they interrelated?**

Sub-Question-

S.Q 1.1 What is the teacher's **overall strength level** of the designed creative questions?

S.Q 1.2 What is the **strength level in the different parts** of the creative question designed by the teacher?

S.Q 1.3 How are **the different factors interrelated** with the **strength of designing creative questions?**

S.Q 1.4 What are the **Causal Explanations** of those relationships?

Q 2. Besides the question design, what **other issues** should be considered **to strengthen the Creative Question-Based summative Assessment system?**

1.5 Research Methodology

The research is conducted with a **mixed** methodology of **quantitative and qualitative** approaches. The relationship of various factors associated with the strength of designing creative questions by the teacher will be analyzed quantitatively through a Survey Questionnaire.

Here, Dependent Variable is the teacher's Strength in Designing Creative Questions. **Independent Variables** are Training, Teacher's Competence, Self-willingness, Monitoring, Time given by the teacher, Experience, Section of Teaching, Educational Institution Location, Board of Education/Region, and Types of Educational Institution (Govt./Private). (Details explained in Variable Setting Part). A regression model is developed based on the analysis and relationship of these variables. At the time of measuring the strength of the designed creative question by the teacher, some other exploratory analyses are conducted.

In the Qualitative Part, there will be interviews with Senior Teachers, Trainers of teachers, and senior Educational administrators. Their comments and feedback will be used to analyze the causal relationship of various factors associated with the teacher's strength of the designed creative question. Besides, what other issues should be considered to strengthen the Creative Question-based method will also be investigated.

1.6 Significance of Study

From the result of this study, the Government of Bangladesh will be benefitted from the multidimensional viewpoints to review its policy on strengthening the assessment system at secondary and higher secondary education levels.

- This study depicts **an authentic empirical field-level, data-oriented** picture of the **teacher's strength level** in designing creative questions.
- Among the **different parts of the creative question** like Essay Type, Stem creation, and MCQ, the propensity of the faced problems by the teachers is precisely measured in this research. This result will be **very helpful in designing the following training curricula for teachers on creative question design.**
- The **factors associated with the strength of designing creative questions** are assessed and analyzed those internal relationships quantitatively with empirical field-level data. With these findings, govt. Could be proceeded with some measurable initiatives **to address those measured factors.**
- The **qualitative causal explanation** of those factors' diversified nature will depict an **in-depth story** of the creative question-based assessment system's implementation problem.
- Finally, **in addition to the factors** associated with **the strength of designing creative questions**, what **other issues** need to be addressed to strengthen creative question-based assessment policy are critically explored in this study.

From these combined quantitative and qualitative findings, Government will get the field-level **ins and out story**, which couldn't be reached at the policy formulation level and or still not addressed through any other previous studies. Based on the recommendations followed by these specific findings, it would be easier for policymakers to initiate practical actions to strengthen the creative question-based summative assessment policy of secondary and higher secondary education levels.

1.7 Organization of the thesis

The whole thesis will follow the following six parts.

Chapter I: The introduction describes a brief overview of the background, problem, research objective, question, methodology, and significance of the study.

Chapter II: Literature Review depicts the creative question assessment method's historical background, present scenario, and previous research on this issue. Based on these facts, the research gap is specifically mentioned here.

Chapter III: Methodology describes the training manual, creative question preparation guideline, and other related documents as an analytical framework and explains the variables and their source.

Chapter IV: Data analysis and Findings will show the quantitative and qualitative data analysis and the interpretation of the results.

Chapter V: The discussion will depict the analysis results to answer all the research questions.

Chapter VI: Conclusion and Recommendations will conclude the discussion and illustrates limitations, future research suggestions, and final policy recommendations based on the findings of this study.

CHAPTER TWO

LITERATURE REVIEW

Summary

This chapter, at first, briefly overviews the assessment system practiced in Bangladesh's secondary and higher education. Then it illustrates how the creative questions-based summative assessment system is evolved and what the various problems are emerging in this method based on various previous literature. Though some literature mentions that the main problem is related to the teacher's designing of creative questions, most of them did not specifically measure the factors associated with the strength of designing creative questions and the underlying issues with the diversified nature of those factors.

2.1 Assessment in Education

Assessment in education is gathering and discussing information from multiple and diverse sources to evaluate what students know, understand, and apply with their gained knowledge based on their prior educational experiences. This process becomes highest effective when the results of the assessment are used to improve subsequent learning (Huba & Freed, 1999). In the same perspective, Iaquinta & Impedovo (2013) and Djoub (2016) opined that educational assessment is a mixed approach of qualitative and quantitative processes for documenting students' gained knowledge, skills, and attitudes in measurable terms. Allen (2004) also expressed that empirical data on student learning is used to refine education programs and improve student learning outcomes in educational assessment. Therefore, it can be concluded that assessment is the systematic process of documenting and using empirical data to measure students' knowledge, skills, attitudes, and beliefs. The ultimate goal is to quantify and report how much a student knows. By taking the assessment, teachers try to improve the student's path toward learning.

According to Schrader & Erwin (1992), assessment is the systematic basis for making decisions about students' learning and development. Palomba & Trudy W. Banta & Associates (1999) and Djoub (2016) also stated in the same way that

assessment is a systematic process of collecting, reviewing, and using of information about educational programs initiated to improve student learning and development and evaluate educational needs. In this way, Educational Assessment seeks to determine how well students learn and consider an integral part of improving education.

Assessment in education could focus on the individual learner, the learning community (class, workshop, or other organized groups of learners), the institution, or the whole educational industry (Djoub, 2016). Therefore, it provides feedback not only to students but also to parents, policymakers, educators, and the public regarding the effectiveness of educational services (Pellegrino & Chudowsky, 2003).

At the beginning of thinking about 'educational assessments, the maiden image that floats in our minds is students writing exams. But, the term 'educational assessments' are not necessarily exams or tests. They have a much broader concept. An educational test examines a student's knowledge of something to determine what they know or have learned. The testing objective is to measure the skill level or knowledge level of a student that has been acquired. On the contrary, assessment is a whole process of documenting knowledge, skills, attitudes, and beliefs, usually in measurable terms. An educational assessment aims to sharpen the current teaching method for teachers and the students' learning process to ensure continuous better results (Mishra, 2015).

The two commonly used assessment types practiced in schools, media, and the educational policy are **summative** and **formative** assessment. These two are sometimes referred to as assessment **of** learning and assessment **for** learning, respectively (Bentley, 2021). In the later part, it is discussed from Bangladesh's Perspective.

2.2 Summative Assessment vs. Formative Assessment

Summative assessment is a course evaluation conducted **at the end of an** instructional period, i.e., at the end of the course, semester, program, or school year. A student's performance or outcome is evaluated based on a **predefined**

standardized benchmark relative to the learning aims and the relevant national standards. (Sabot, 2013). Summative assessment is used to measure to provide information on what students have learned and how well a course has worked. Besides, it is used to determine learning progress and achievement for making course-placement decisions. One of the most common summative assessment examples is semester-ending or year-ending examinations of colleges. In these examinations, teachers select questions on different course curriculum topics, and Students are asked to answer these questions within a specific period (Broadfoot et al., 1999).

Formative assessment occurs **during teaching or within the course or semester**. It is essentially used to **provide feedback to support** the teaching/learning process so that ongoing teaching and learning systems can be adjusted to improve students' achievement of expected instructional outcomes (Alcalá et al., 2019; Broadfoot et al., 1999; Popham, 2009). Some Formats of formative assessments are Quizzes, Games, Projects, Presentations, Group activities, etc. Therefore it can be said; Formative assessment considers a wide variety of methods used by the teachers to conduct in-course evaluations of student comprehension, learning needs, and academic progress during a lesson, unit, or course. It helps teachers identify concepts that students struggle to understand, the difficulty facing to achieve skills, or learning standards they have not succeeded yet in adjusting to lessons, instructional techniques, and academic support (Popham, 2009).

Some distinctive features can be summarised based on these Summative and Formative assessment features. A summative assessment is conducted after finishing **the academic period** or course, while a formative assessment is performed **during the course as a continuous assessment**. The **goal of summative evaluation** is to grade a student's performance with a performance marker against a defined benchmark used **to determine whether the student gets a promotion**, passes a course, or **moves to the next level of learning**.

On the Contrary, formative assessment is done **to improve the teaching and learning process** based on student feedback. In Formative Assessment, **feedback**

is given to enhance student performance, and teachers need to act on it. But in summative assessment, feedback gets little importance and is sometimes given as a report card (Formplus, 2022).

Though, in Bangladesh, from Grade VI-IX, formative assessment is practiced in the form of School-Based Assessment (SBA) programs (Begum & Farooqui, 2008); at present, the two main public examination-Secondary School Certificate and Higher Secondary School Certificate Examination, are conducted based on 100% summative assessment system (Hossain, 2015). According to the National Curriculum Framework of 2020⁸, from 2023, the revised curriculum will have 50% summative assessment in SSC and 70% at the HSC level (Mustaque, 2020).

2.3 Transition in the Formative vs. Summative Assessment System in Bangladesh

Historically, in the secondary and Higher Secondary level education of Bangladesh, Summative assessment was used, where questions were taken directly from textbooks without considering the applicability of the gained knowledge. It leads to an overemphasis on rote learning. Only the result of these summative assessments was used to promote a student to the next Grade. In 1999, Govt. took initiatives with the support of ADB to incorporate formative assessment with the existing summative assessment named School-Based Assessment(SBA) systems as a part of the SESIP project (ADB, 2015).

In this regard, Govt. sent some Assessment Specialists from NCTB to attend an International Training Course in 2003 at the University of Melbourne, Australia. They developed and proposed an approach to piloting the School-Based Assessment(SBA) System based on International advice and evidence. In 2005 Government plans to implement it in Grade 6-9. In 2006, NCTB released a details guideline for teachers regarding SBA to assess students' coursework and personal development as formative assessments with the existing end-year/semester examination or Summative Assessments. NCTB also recommended that at the

⁸ National Curriculum Framework 2020 is designed for the revised curriculum of Garde I-XII, which will be implemented from 2023. <http://www.nctb.gov.bd/site/page/2d4a5fec-c328-4314-8992-bdde78bc44c6/->

Secondary level, 30% of marks will be on students' coursework based on SBA or formative assessment types and 70% on final SSC Examinations or Summative assessment types (Begum & Farooqui, 2008).

Meanwhile, this SBA Guideline was made public for opinion. But, it received a widespread opposite view from teachers, students, and parents that the proposed subjective nature of school-based assessment would lead the teacher to manipulate results for their financial/professional interests or to bias the evaluation by being coerced by influential parents

Considering these issues, the Government refrained from implementing this SBA or formative assessment along with the existing summative assessment part at the SSC level from 2006 to 2008. Only decisions were made to include SBA in the JSC examination in 2014. But that decision is still pending implementation. These SBA or formative assessments are implemented only in the annual examination (Begum & Farooqui, 2008). Still, only Summative Assessments are implemented in the three public examinations: JSC, SSC, and HSC of Secondary and Higher Secondary (Hossain, 2015).

2.4 Question Structure at SSC and HSC level before 2008

Before inaugurating the creative questions in 2008, the question structure was followed in the SSC, and HSC examination levels were ancient and backdated. Students try to get by heart or memorize information from guide books and notes (Asad, 2009). They endeavored to reproduce it in examination papers by recalling it from memory. The **question pattern was a direct recalling type** where the student's higher-order skills like analytical thinking, problem-solving or critical thinking were not evaluated and emphasized in the rote learning process (ADB, 2015). With these types of questions, the main motive of the students was to memorize answers and recall these answers on the exam sheet to obtain a good mark (Khan, 2012). Most of the time, what, why, and how-type questions were asked. The students can answer these questions if they recall the information from their memory with minimal critical thinking skills and almost without applying any

creativity or the students who have only good memorization capacity. An example of a traditional Question Structure-based SSC Examination Question Paper is -

Subject Code	2	9	3
Model Question of HSC Examination 2015 (English Version) Subject : Finance Banking and Insurance 2nd Paper Time : 3 Hours Full Marks—100			
<u>Broad questions (6 ×10 = 60)</u> [Answer atleast 3 from part-A and 2 from part-B and total 6 questions]			
<u>Part-A</u>			
1. Define banking. Discuss the importance of banking business.	3+7=10		
2. What do you mean by central bank ? Explain the functions of central bank as a governments agent.	3+7=10		
3. “Commercial bank creates loan deposits” Explain.	10		
4. Show the methods of foreign exchange.	10		
5. Define cheque. Discuss about the related parties of a cheque.	3+7=10		
<u>Part - B</u>			
6. Explain the principles of insurance business.	10		
7. Show the process of formation of life insurance.	10		
8. What is marine loss ? Discuss the classification of marine loss.	3+7=10		
9. What are the essential elements of fire insurance ? Explain	10		
<u>Short questions (8 ×5 = 40)</u> [Answer atleast 4 from part-C and 3 from part-D and total 8 questions]			
<u>Part-C</u>			
10. What is bank rate ?	5		
11. Distinguish between unit bank and branch bank.	5		
12. Define bank note.	5		
13. What is endorsement of cheque ?	5		
14. Briefly discuss about the security of a bank loan.	5		
15. What is electronic banking ?	5		
16. Define letter of credit.	5		
<u>Part - D</u>			
17. What is annuity ?	5		
18. Define marine peril.	5		
19. What is whole life policy ?	5		
20. Define surrender value.	5		
21. Shortly discuss about the car insurance.	5		

Figure 1: An example of a traditional Question Structure-based SSC Examination Question Paper

Source: <https://teachingbd24.com/eng-version-finance-banking-bima-suggestion-question-patterns-hsc-examination-2015-3-2/>

Here, it is shown that almost all the questions are memorization-based. Students can easily answer these questions by recalling from memory without applying analytical/critical thinking skills or creativity.

2.5 Creative Question-Based Examination Reformation

To overcome the problem of the rote learning process or memorization and to sharpen the examination administration procedures of BISEs⁹ in 1999, Govt. took the initiative with the support of the Asian Development Bank to reform the Public Examination Policy as a part of the SESIP project. The main objectives were to create modern scientific examination techniques that would replace direct recalling questions with new question patterns that could assess students' higher-order competencies like analytical/critical thinking, evaluation, and problem-solving capabilities (Riyad, 2016). As part of this examination reformation procedure, a new unit under BISE named the Bangladesh Examination Development Unit (BEDU) was established to develop new examination techniques and improve the examination administration's capacity. In this regard, some BEDU officers attended a 6-month training program on assessment and measurement at the University of Melbourne, Australia. They provided a detailed proposal for public examination reformation named **"Structured Question" Based Assessment system**. The main goal of this proposal was to improve the examination procedure based on the curriculum objectives mentioned for all subjects by NCTB and to sharpen the reliability of marking and uniformity of Public examination results (ADB, 2015).

The proposed reform reduced the proportion of multiple-choice questions and introduced alternative question styles (structured questions) to replace the narrative or essay-type questions in the SSC examinations. The new question structure was designed based on Bloom's Taxonomy to measure six higher-order cognitive skills: Remembering, Understanding, applying, analyzing, evaluating, and creating

⁹ BISE-Board of intermediate and Secondary Education is mainly responsible for conducting and managing all the public examinations, like JSC, SSC, and HSC. There are a total of ten (10) education boards or BISEs in the different regions of Bangladesh. <http://www.educationboard.gov.bd/>

(Riyad, 2016). **This structure was intended to test students' learning outcomes more effectively based on all types of learning outcomes mentioned in the curriculum and reduce the excessive emphasis on recalling any issues from textbooks.** The new question structure model was tested on a pilot basis in 49 schools in SSC Examinations. The results showed that the students could cope with this structure, and the teacher student's response was positive. Then MOE issued a notification to introduce this question structure in SSC Examination. Many teachers were trained as master trainers, and a detailed guideline on this Revised Question Structure was issued in 2005. This guideline provided some sample patterns of Structured questions and examination script in addition to model answers and marking criteria. The master trainers trained other General teachers as Questions-Setters, Moderators, and Markers on this newly "Structured Question-Based Examination System. But the protest from the guardian level that students will face difficulty adapting to this new model and government changes delayed the implementation of this Structured Question-based assessment system (ADB, 2015). In 2008, the Government formed an advisory committee comprising eminent educationalists and policy elites, including Dr. Abdullah Abu Sayed, who is the leader of a popular non-profit organization named "Bisho Shahitto Kendro," to provide and support guidelines for the implementation of the new "Structured Question" based Public Examination reformation. Based on this advisory committee's recommendations, especially considering the opinion of Dr. Abdullah Abu Sayed, the **"Structured Question Method"** was renamed as **"Creative Question Method."** The main motive for renaming the method was to make it more public appealing and more relevant to the messaging framework of this reformation. The style and Content of the Structured Question Method remained the same as the Creative Question method (Hossain, 2015; Riyad, 2016). In the National Education Policy-2010, the full-scale implementation and institutionalization of this creative question method in all public examinations were outlined. At first, in 2010, it was implemented at SSC on two subjects, Bangla and Religious studies. Then, phase by phase, in 2016, it was supposed to implement for all subjects of the Public examination. Implementing the Creative Question-based Examination System is

considered a revolutionary Educational Reform in the History of the Bangladesh Education System (Labeeba Hafiz, 2019).

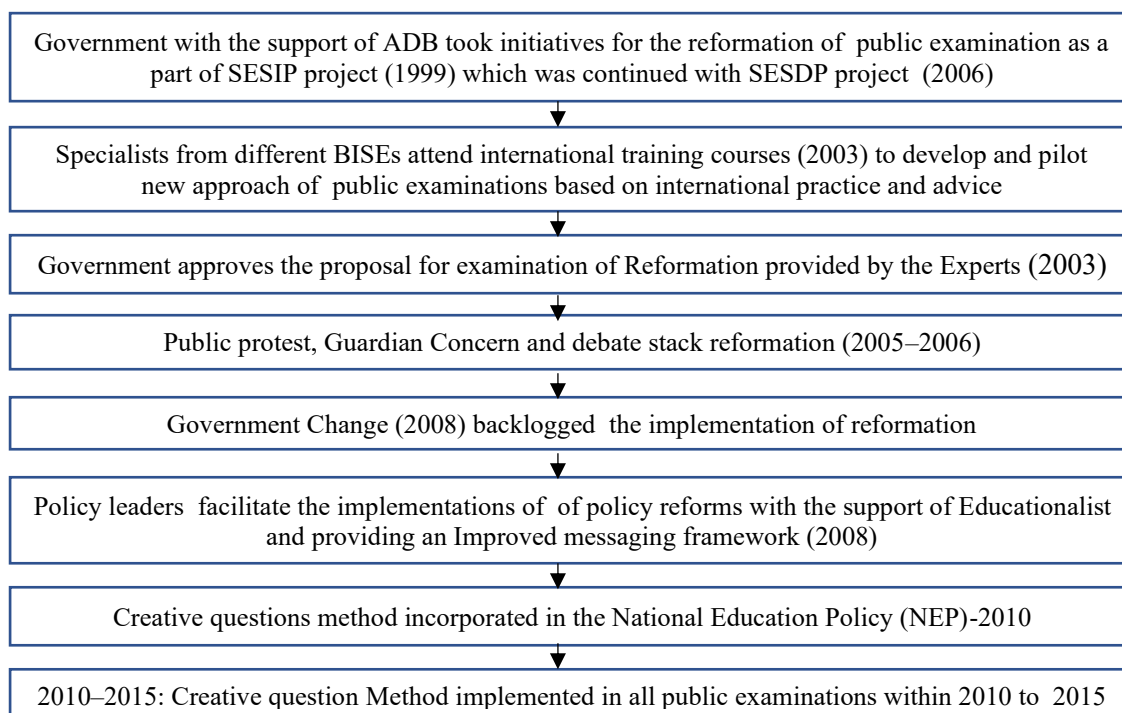


Figure 2: Stages of Creative Question-Based Assessment Method Implementation

Source: Policy Reform in Bangladesh's Secondary Education (1993–2013), Tracing Causal Processes and Examining ADB's Contribution, Topical Paper-IME, ADB, 2025

2.6 Bloom's Taxonomy and Creative Question Method

2.6.1 Bloom's Taxonomy

In 1956, **American** Educational Psychologist Benjamin Samuel Bloom developed a framework for categorizing learning outcomes or educational goals, commonly known as Bloom's Taxonomy. This taxonomy is widely used in the classroom or assessment fields. Bloom's recognized three types of Domains of Learning. These are the cognitive domain (Knowledge-based), Affective domain (Emotion-based), and Psychomotor domain (Action-based) (Bloom, 1956).

Cognitive Domain deals with how a person can utilize and process any information in a meaningful way. It focuses on recall and recognition of knowledge and intellectual development of skills and abilities. Six major categories of cognitive domain processes, from the simplest to the most complex, are mainly used

in the classroom or assessment fields. Most works in curriculum development have taken place by considering these domains where the specific definition of educational objectives can be found, and student behavior can be explained (Khatun, 2012). The short descriptions of these six levels of the cognitive domain are:

- 1) *Knowledge*: The ability to remember, recall any knowledge facts, conceptual terms
- 2) *Comprehension*: The ability to construct or grasp meaning from the material.
- 3) *Application*: The ability of students to apply gained knowledge to new situations or in a changing context.
- 4) *Analysis*: Draw relationships or show connections from Separate parts and differentiate and examine those parts from inference.
- 5) *Synthesis*: The ability to combine to build a coherent or unique relationship, emphasizing creating a new structure, meaning, or association.
- 6) *Evaluation*: The ability to justify or Judge any decision or defend, support, and critique any facts.

Note: Adapted and summarized from *Taxonomy of educational objectives : The classification of educational goals*, Handbook II: Affective domain. D.R. Krathwohl, B.S. Bloom, B.B Masia, 1964, New York: David McKay

In 2001 Anderson and Karrthwohl revised this taxonomy by bringing slight changes in the last two stages of Cognitive skills.

Bloom's Taxonomy (1956)	Revised Taxonomy (2001)
Evaluation	Creating
Synthesis	Evaluating
Analysis	Analyzing
Application	Applying
Comprehension	Understanding
knowledge	Remembering.

Source: Anderson, L. & Krathwohl, D. R. (2001)

According to this revised taxonomy, the six cognitive processes and utilization in the assessment field can be summarized with the following figures:

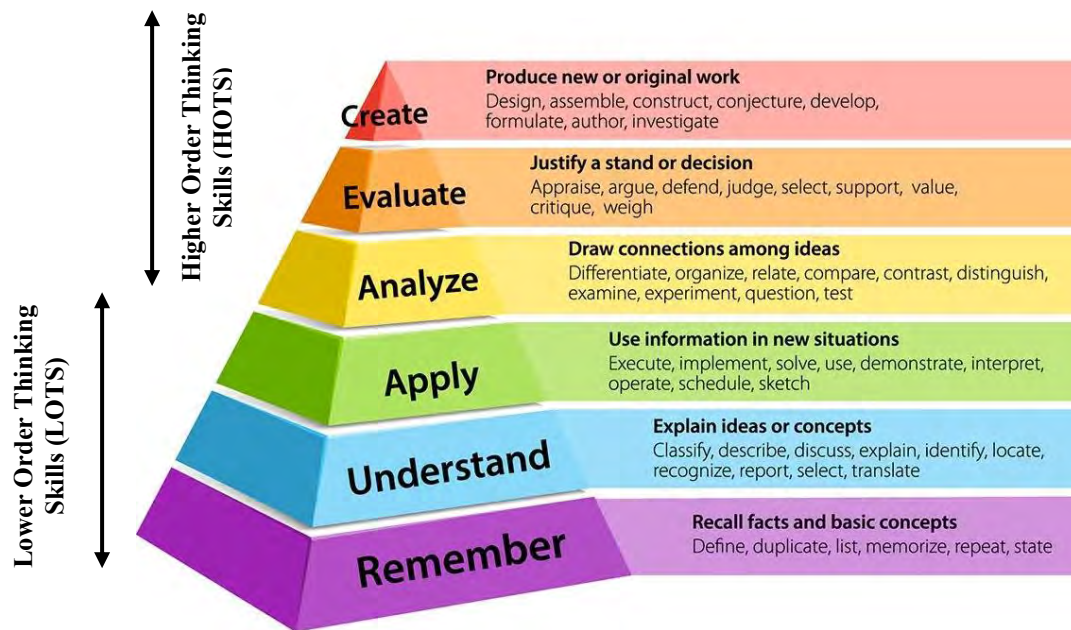


Figure 3: Cognitive domain of Bloom's Taxonomy in a nutshell

Information Source: Anderson, L. & Krathwohl, D. R. (2001)

Image Source: <https://ekazabridgingthegap.com/services/>

2.6.2 Structure of Creative Question based on Bloom's Taxonomy

In the Creative Questions of Bangladesh, **these six cognitive levels are divided into four levels**, and four questions are designed in a set of Creative Questions to assess these four skill levels. Bloom's Taxonomy's first three (3) levels are the same in the assessing level of Creative Question. The last three levels of Bloom's Taxonomy- Analyzing, Evaluating, and Creating are combined as Higher-order skills in the Creative Question Method (SESIP, 2014; Riyad, 2016).

Cognitive Levels in Bloom's Taxonomy	Skill level assessed through a set of Creative Question
Creating	Higher-Order Skill
Evaluating	
Analyzing	
Applying	Application-level
Understanding	Comprehension level
Remembering	Knowledge level

Source: Training Manual on Creative Question Preparation - SESIP, 2014

There are two parts at the SSC and HSC levels in one Subject's 100 marks Question paper: Essay type Part and Multiple Choice Question (MCQ). Up to 2016, Essay Type carries 60% marks, and Multiple Choice Questions (MCQ) holds 40% marks. From 2017, Essay Type was 70% and MCQ 30%. In one essay-type Question paper, students need to answer 6/7 (before/after 2017) Creative Questions, each carrying ten(10) marks. Each Creative Question comprises of 4 level's questions. In a creative Question, at first, a case, clue, or passage is given **as a stem**; based on this stem, the four questions are designed and need to answer. Among the **four levels of 1 essay type questions**, the marks distribution is as follows-

Skill	Marks
Knowledge level	1
Understanding level	2
Application-level	3
Higher-order level	4

Source: Training Manual on Creative Question Preparation - SESIP, 2014

Here is illustrated a sample **Essay Type Creative Question Paper** to clarify Essay-type Creative Question Structure and four levels of skill assessment-

Model Question of HSC Examination

Subject Code : 2 9 2

Subject : Finance, Banking and Insurance

Time : 2 Hour 10 Minutes **Full Marks—60**

[Answer any six of the following Questions]

Stem →

Understanding level Qs. →

Comprehension level Qs →

Application level Qs →

higher order Skill level Qs →

1. Mr. Javed is an established businessman. He wants to expand his business. So invests two third of income in share market. But after some month he fall into serious financial crisis. He can not pay salary to his employees for financial crisis.
 - a. What is the relationship between risk and return ? 1
 - b. What is finance ? 2
 - c. In the stem, which principal is not followed by Mr. Javed ? 3
 - d. How can Mr. Javed solve his problem ? Show your logic ? 4
2. Mr. Rony has a cosmetic shop. He is an only one owner of this shop. For that reason, he bears all profit and loss. He has different types of cosmetics that is distributed to customers. He holds different categories of same product for controlling risk.
 - a. What is the ultimate goal of a firm ? 1
 - b. What do you mean by partnership business ? 2
 - c. According to stem, which type of business man is Mr. Rony ? – Explain. 3
 - d. Which principle does Mr. Rony follow for development of business ? Show your arguments. 4

Figure 4: Example of Essay Type Creative Questions

Image Source: <https://teachingbd24.com>

In the MCQ Part, each item carries one(1) mark. All the MCQ Questions combinedly used to assess those four levels, covering the whole curriculum. The following figure illustrates the marks distribution of Multiple Choice Questions from lower-order to higher-order skills.

Skill	Percentage
Knowledge level	30-40%
Understanding level	30-40%
Application-level	10-20%
Higher-order level	10-20%

Figure 5: MCQ Question distribution based on four (4) skill

Note: Adapted from Ministry of Education: Training module of Finance Banking and Insurance-SESIP, 2014, Bangladesh.

An example of a Multiple Choice Question (MCQ) part of a Creative Question Paper is depicted in Appendix 3

The main guideline for preparing Creative Question was formulated from the Secondary Education Sector Development Program (SESDP) named "Examination System Reformation Guideline." There is also an individual training manual for SSC and HSC levels for each Subject provided by the Bangladesh Examination Development Unit under SESIP (SESIP, 2014). A teacher needs to achieve a specific level's skill to prepare a set of Creative Questions and follow the guideline. The methodology chapter will explain the detailed procedures for Creative Question Preparation.

2.7 Policy Dilemma

Bangladesh Government took a project with the support of the Asian Development Bank on Examination Reformation as a part of the SESIP project costing 8 billion Taka to bring a positive change in the assessment system and the overall education policy of Bangladesh (ADB, 2015). As part of this reformation, the Creative Question-based assessment system was started formally in 2010 at the SSC level to ensure a qualitative education system.

It was expected that the students would be more creative, and the teaching-learning situation would be suitably more accessible to them (Billah, 2017). The

main dream was that students would get rid of memorization or learning by heart and learn anything with a clear understanding of its applicability. Instead of only copying any information from memory to examination paper, they could apply these learnings in their practical life with creative, analytical thinking. Besides, the dependency on Guide Book and Coaching center will be stopped. The Students will focus more on textbooks which ultimately help achieve curriculum objectives (Mushtaq Ahmed, 2019). It is mentioned in the National Education-2010 that no memorization-based learning should be continued; the proper evaluation is not conducted in memorization-based education. If the assessment is done on what a student can understand and apply in his practical life, that would be an actual evaluation. In this regard, the creative question method was launched as the examination reformation in the education sector (Elias, 2016).

But After one decade of launching the Creative Question-Based assessment method, it is now pronounced by different stakeholders whether this method has achieved its objectives or not (Billah, 2017)?

According to the Academic Supervision Report, conducted by the Directorate of Secondary and Higher Education in January 2019, only 58% of teachers achieved the competency of preparing Creative Question. The rest, 42% of teachers, can't prepare Creative Questions. Among those 42%, 13% of teachers are vulnerable and can't prepare 'Questions Paper' in this Creative Question Method. Most of them coordinate the examination by purchasing readymade questions from different teacher associations. The remaining 29% of teachers can partially prepare creative questions with the support of other institutions' teachers. In this scenario, where teachers can't apply this method clearly, it is common for students not to understand it (Mushtaq Ahmed, 2019b).

Another report conducted by the IMED of the ministry of planning on Secondary Education Sector Development Project (SESDP) in 2017 says that sixty percent of students don't understand the creative question method. In 2017, the same result was also published by the Monitoring and Evaluation unit report of DSHE.

Teachers and students become dependent on Notes and guidebooks again in this context. One of the critical objectives of creative questions was to emphasize reading Textbooks with reducing dependency on the guidebooks. Besides, coaching centers and Private Tuition Culture again gained momentum where the objective was to relieve students from coaching center dependency and encourage classroom-based learning (Billah, 2017).

Considering these issues, from the various levels of Guardians, stakeholders, and a few educationalists, it was raised that this creative Question method should be revised or back to the previous traditional Question-Answer based Examination System (Muhammad Mahbubur Rahman Litu, 2019).

On the contrary, most of the Prominent Educationalists involved in launching this Creative Method and the stakeholders engaged in Educational Administration and Policy Making opined that this method should be continued. Still, some revisions and clarification are needed (Sultana, 2020). Prof. Abdullah Abu Sayed, the pioneer of this reformation, said the Creative Question Method is a great tool to make a nation Creative (Sayeed, 2014). Another Prominent Scholar, Dr. Jafor Iqba, viewed the issues this way, "Good Questions Means Creative Questions. No Bangladeshi Educationalist develops this creative question method. All the world's students are evaluated with this method, just as we started later and named differently. Maybe the training was not sufficient for the teachers. Besides, deep subjective knowledge is required to prepare good Creative qualitative questions" ((M. J. Iqbal, 2016)). The Director of the Bangladesh Examination Development Unit (BEDU), Mr. Rabiul Kabir, said that preparing creative Questions is not easy. To create an excellent qualitative Creative questions paper, teachers must have deep subjective knowledge and understand education psychology (Mustaque, 2019b).

2.8 Research Gap

In this dilemma, authentic professional research with empirical data-based observation should be conducted without being biased and politically motivated (Billah, 2017) to evaluate the implementation of the creative question method.

National research should be driven further by taking opinions directly from the teachers to critically analyze the different factors related to the Creative question-based assessment system (Riyad, 2016). In this context, a minimal number of researches were conducted within the last few years.

An analysis of the creative question implementation scenario as part of the Academic Supervision Report of DSHE, 2019 reveals that 42% of teachers can't prepare creative questions. But this report doesn't provide any data on which part of the creative questions (Essay Type, Stem, MCQ) teachers face more or less difficulty.

DSHE assumes some problems for which the creative question method is not appropriately implemented to explore this issue. These are insufficient training, teacher competence, willingness, weak monitoring of regional administration, coaching mentality, etc., by taking statements from some teacher leaders and educational experts (Mushtaq Ahmed, 2019b).

But these statements are sometimes controversial and don't provide any empirical data-based findings that precisely measure how these issues influence the teacher's strength in designing creative questions. Academic Supervision Report, 2019; Riyad (2016) and Yasmin et al. (2020) also mentioned 'training lackings of teacher' as one of the significant causes of not implementing creative question method with some qualitative interviews. But, none of these researches precisely measured how the strength of a teacher's designed creative question is varied based on their training reception or not. Though most of the research stated three types of training: Master Training, General Training, and In-house training (Yasmin et al., 2020), no study precisely measured how the strength of creative questions varied on the different types of training reception. Can 'training' alone significantly enhance the strength of creative questions without considering other issues? There is no empirical data-based evidence-oriented research on this issue. Many educationalists opined that still, a significant portion of teachers depends on notebook and guidebook (Habib, 2016; Billah, 2017); but no field-oriented data found on how these dependencies are associated with the strength of designing creative question and why still they

want to depend on this note and guidebook. Riyad (2016) also stated that 'not getting sufficient time to prepare a question set' is also responsible for not preparing a qualitative Creative question paper with focus group discussion. But, getting enough time is how related to the preparation of qualitative creative questions is not mentioned precisely with any empirical data-based evidence. Moreover, there is no field-level data-based study regarding the implementation scenario of the creative question method in different regional cities, urban or local areas.

In this context of the research gap and policy dilemma mentioned above, it is crucially demanded from the different levels to precisely assess and analyze the factors associated with the strength of designing creative questions with empirical data-based evidence. It is also expected to explore the field-level opinion on continuing the creative question-based assessment system for the following revised curriculum. In addition, what other issues should be addressed to strengthen the overall creative question method assessment system

This research at first tries to **measure** the strength of designed creative questions by the teachers and critically **explores** various features of the overall strength and partial strength in the different parts of the creative questions designed by each teacher. Then **the factors associated** with the strength of designing creative questions are **assessed**. Their **relationship is analyzed** with empirical data collected from the teachers through a **field-level survey** on the creative question-based assessment system. The **in-depth causal explanation** of these factors is analyzed through **interviews with practitioner teachers and educational policy leaders**. These interviews were also used to find out what other issues needed to be addressed to strengthen the overall creative question-based assessment policy. For this issue and to find out anything else related to students' perspectives, findings of **different documents were also triangulated** with the above-mentioned quantitative analysis of the exploration and analysis of factors and qualitative interviews of the causal explanation of those factors.

CHAPTER THREE

METHODOLOGY

Summary

This chapter describes the methodology and the applicability of the Training Manual of Creative Question Preparation, Examination Reformation Guideline, various Government Reports, and other literature as the tools of an analytical framework to measure and analyze the strength of designing creative questions by the teachers. Besides, it conceptualizes the other factors associated with the strength of designing creative questions based on these reports and guidelines. As part of its quantitative analysis, an online survey was conducted on 316 teachers as respondents with a Google Questionnaire Form. To find out the causal relationship of those factors and to recognize the issues that should be considered to strengthen the overall creative question-based assessment policy, an interview with 09 Senior teachers and Educational Policy leaders was conducted in addition to the literature review and quantitative analysis of this study.

3.1 Methodology

As per the research gap, it was necessary to determine the factors associated with the strength of designed creative questions, their causal relationships, and what other factors should be considered to strengthen the overall Creative Question-Based Assessment System. In this regard, the authors proceeded with a mixed research design. A mixed-method research design is a procedure for collecting, analyzing, and mixing qualitative and quantitative research methods in one single study to understand a research problem (Creswell, 2012).

One of the main objectives of mixed-method research is to provide quantitative and qualitative data analysis toward a deepen and clear understanding of the research problem being addressed (Caruth, 2013; Ponce, 2011; Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009; Berman, 2008; Greene, 2007). The same authors also mentioned that among the different mixed-method designs, **explanatory design** with sequential phases of quantitative and qualitative parts is

used to describe research in-depth. In the first phase, a quantitative study is used to measure the attributes or properties of any problems. In the second phase, qualitative analysis is conducted to deepen the findings of the quantitative part. Again, a **triangulation design** that combines two or more research methods is often used to increase the validity and credibility of research findings (Noble & Heale, 2019). As part of **mixed-method research**, this study uses **explanatory design** and **triangulation design** for an insightful better conclusion.

3.2 Analytical Framework

An analytical framework is a diagram or model that helps to explain how a specific type of analysis will be conducted. It is designed to structure an analyst's thinking logically and systematically and set an apparent driving force behind their lines of inquiry. (Pacheco-Vega, 2018). Developing analysis frameworks suppose breaking down the issue at stake into sub-components and creating a mental model, often presented visually, that provides a foundation and a guide for data collation and analysis and their boundaries. (Chataigner, 2017). Therefore, it outlines the actions required in the light of theoretical and practical consideration for a research project or paper based on the previous knowledge of other researchers' points of view and their observations on the research subject.

In this research, the combined literature of Training Module, 2014 by SESIP¹⁰ and Examination Reformation Guideline formulated by SESDP¹¹ are used to measure the strength of the designed creative question by each teacher. Academic

10 Secondary Education Sector Investment Program (SESIP, 2014-2024) was launched in 2014 as a continuation and based on the inputs of the mentioned previous projects. multi-tranche financing supports with ADB amounting to US\$ 500 million for 10 years was arranged for this project under which a robust training program was initiated on creative question preparation (SESIP, 2014). <https://sesip.gov.bd/>

11 SESDP- Secondary Education Sector Development Program (SESDP, 2006-2014) was initiated in 2006 with the financial support from ADB to improve the quality of secondary education by revising curricula, supporting reforms of national examinations, strengthening student assessments, and school management committee. It also focused on the functional specialization of the BCS-Education cadre. The reforms under the SESDP maintained the continuation of those reformations formulated under the former SEDP(1993-2002) and SESIP (1999-2007) projects (ADB, 2015).

Supervision Report, 2019 by DSHE¹², various government reports, and other literature as documents are used to analyze the factors influencing the strength of designing creative questions and find out their interrelation with statistical analysis.

In this context, at first, a survey on the various features of the Creative Question from the teachers was conducted **to assess and analyze the nature of multiple factors** associated with the strength of designing creative questions as the quantitative part. For the **critical explanation** of the **causal relationship of these factors**, some in-depth interviews were taken with different sagacious senior teachers, master trainers of the Creative Question method, and some senior educational policymakers as the qualitative approach. Then the findings of the Quantitative Survey and Qualitative Interviews were aligned with the existing literature as a triangular analysis to validate the results. The interviews and various documents were also used to analyze the other relevant issues **that needed to be addressed to strengthen** the overall creative question-based assessment system.

The details of these manual, guidelines, reports and other documents are explained in the latter part with the explanation of the survey questionnaire design.

¹² To monitor, review and evaluate all the project's activities in Secondary and Higher Secondary Education regularly; the Monitoring and Evaluation wing of the Directorate of Secondary and Higher Education(DSHE) publishes a details report every year. <http://www.dshe.gov.bd/>

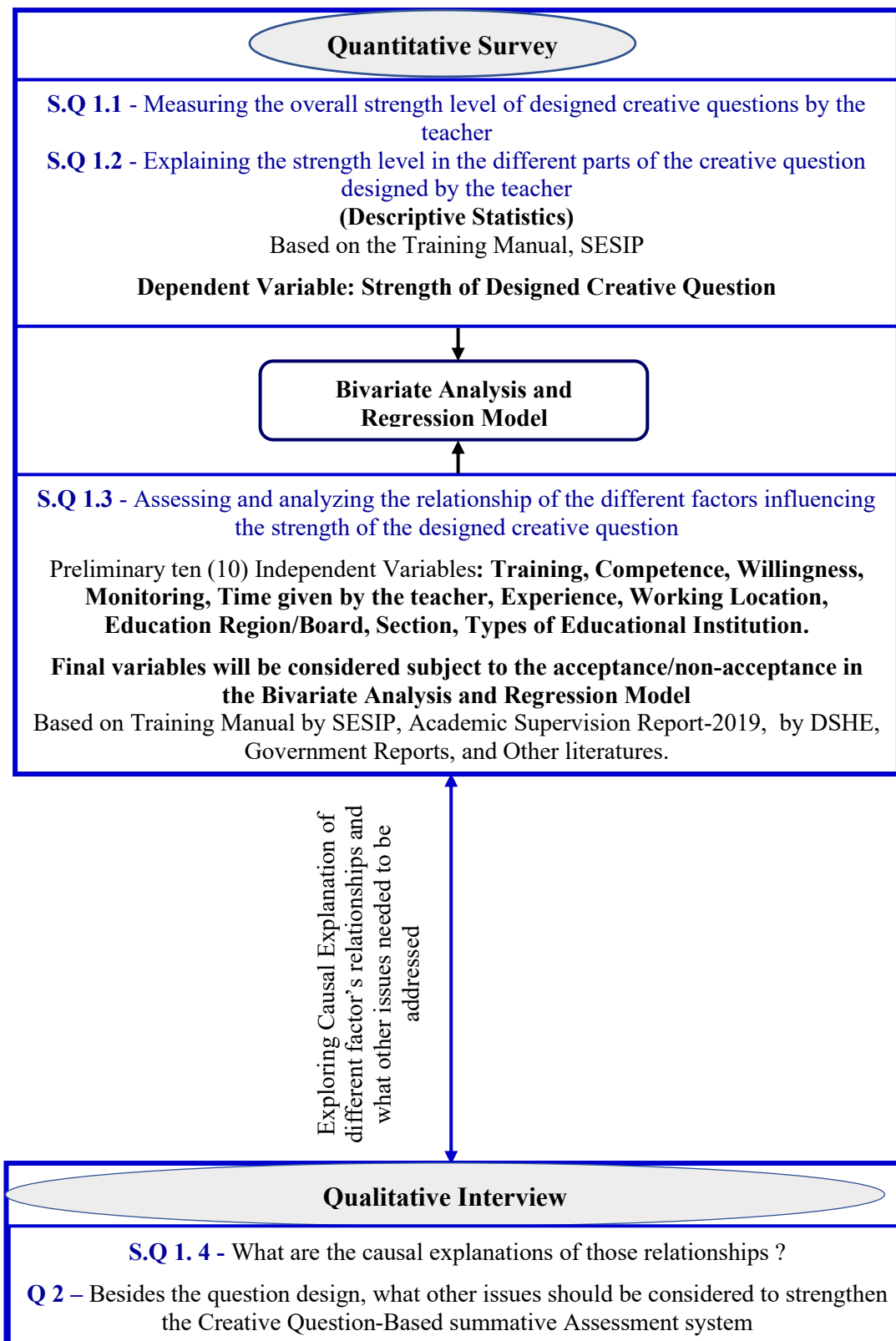


Figure 6: Analytical Framework Diagram

3.3 Survey Questionnaires for Quantitative Analysis

For the quantitative part, the data was collected through an online survey Questionnaire. The Survey questionnaires were designed using the Google Questionnaires form. This questionnaire form was disseminated to the teachers as respondents to this survey mostly directly through various social media, like; Facebook, WhatsApp, and mail. Besides, the questionnaire link was also sent to the National Academy for Educational Management's (NAEM)¹³ authority for instructing their different training programs participant's to participate in this survey. In the same way, some request letters with questionnaire links were also sent to various institutions' heads.

The questionnaire is attached in Appendix 1. There was a total of 43 Questions in the Questionnaire form. Question 1-8 depicts respondents' demographic and geographic information, including some categorical independent variables and teachers' experience. In the second part, Questions 9-28 were used to assess the teacher's opinion/confidence level in designing creative questions as the measurement tools of the dependent variable "Strength of Designing Creative Question." Under the Training and Professional factors part, Questions 29-36 were used to measure the independent variable - training and competence. As part of Institutional factors, Question 37-42 also illustrates the teacher's willingness, monitoring, time as independent variables, and the respondent's opinion on the continuation of the creative Question method. Finally, through an Open-ended Question No. 43, it was also tried to consider the teacher's any other comment/opinion on the creative question-based summative assessment system. There were some reverse questions among the five (5) point-Likert Scale Questions in this questionnaire. That means the information of these questions is presented

13 National Academy for Educational Management (NAEM) is the apex training institute for secondary and Higher Secondary level educational management. It organizes the Foundation Training Course (FTC), Courses on Educational administration and Management for Bangladesh Civil Service (BCS)-Education Cadre officials, and other educational policy dissemination courses for secondary and higher secondary Management Stakeholders. <http://www.naem.gov.bd/>

reversely. Therefore, the answer was also considered reversely. The details of these reverse questions will be explained in the later variable setting part.

For the convenience of the respondents, the questionnaire was prepared both in Bangla and English Versions.

Bangla Version link: <https://forms.gle/AZqqigaVuPhOr5J58>

English Version link: <https://forms.gle/XHTfTKNL3Puix6jE6>

3.4 Variable Settings and Explanation

3.4.1 Dependent Variable

To improve secondary education's quality by revising curricula, supporting reforms of national examinations, and strengthening student assessment along with the continuation of the former SEDP and SESIP projects, the Secondary Education Development Sector Development Program (SESDP) was initiated in 2006. As a part of the examination reformation under this SESDP project, the Ministry of Education provided a guideline for the Creative Question-based Examination reformation through a gazette notification¹⁴ on 6th June 2007. Based on this guideline, the detailed instruction for preparing creative questions was explained in the various Training Manual of different subjects on Creative Questions Preparation and Examination Script Evaluation, formulated by SESDP and later by the SESIP project. The core topics are the same in all the Subject's training manuals in the light of creative question features and preparation guidelines. The Training Manual of 2014, developed by the Bangladesh Examination Development Unit (BEDU)¹⁵ under the Secondary Education Sector Investment Program (SESIP), is used to

14 Gazette notification by the Ministry of Education to implement Creative Question Based (Formerly Structured Question) Examination Reformation. Gazette No EM/S:11/Various-6/SESIP/2004/999, Date: 6 June, 2007 (: শিখ/শ: ১১/বিবিধ-৬/সেসিপ/২০০৪/৯৯৯, তারিখ: ৬ জুন, ২০০৭)

15. Bangladesh Examination Development Unit was established under the Board of Intermediate and Secondary Education (BISE), Dhaka, also known as the Dhaka Education Board, to formulate policy and plan for all the public examination and assessment systems at Higher Secondary level in Bangladesh. The BEDU formulates the training manual for preparing creative questions on different subjects. Here, the Training Manual, 2014 of Finance, Banking, and Insurance, is used to analyze various features of the creative question (SESIP, 2014) .

analyze the various features and to assess the teacher's strength in designing creative question papers. For the teacher's capacity building to prepare qualitative Creative Question, two types of training, 12 days of master training and three (3) days of general training, were provided to different schools and college teachers (ADB, 2015).

The preparation of one set of good qualitative Creative question papers following the guideline depends not only on the training received. The qualitative application of the training manual and examination reformation guideline's instruction on the question paper by the teachers also depends on the teacher's willingness, competence, monitoring, time given by teachers, coaching mentality, questions business of some teacher's association and some other external educational factors (Yasmin et al., 2020; Mustaque, 2019b; Riyad, 2016). But if the instruction and procedure mentioned in the training manual and examination reformation guidelines are genuinely reflected in the question paper, then the question paper set by one teacher can be considered an excellent qualitative Creative Question Paper (Training Module-Finance, Banking, and Insurance, 2014, SESIP). Hence, in this study, the dependent variable "strength of one teacher's designed creative question paper" can be evaluated with the capacity to reflect the creative Question features and procedures on a question paper mentioned in the training manual and guideline. Here, the strength of one teacher's designed creative question paper is measured by considering the opinion/confidence level on the various features of the creative questions features and creative question preparation procedure mentioned in the guideline through **twenty (20) numbers of 5-point Likert scale questions. The summative index of these 20 questions is calculated to measure the overall "strength of one teacher's designed creative question paper."** The key features of the Creative Question Preparation Guideline based on which those 20 questions are considered to measure the strength of the designed creative questions are illustrated below-

3.4.1.1 Features and Procedures of Preparing Creative Questions-

A 100 marks creative question paper is divided into two parts: Descriptive/Essay Type-70% and Multiple Choice Questions (MCQ)-30%.

Descriptive or Essay Type Question

Students need to answer 7 question sets weighing ten (10) marks each in an essay-type question paper. One set of creative questions starts with a stem. Under this stem, students need to answer four levels of the question, which are designed based on the six cognitive skills of Bloom's Taxonomy.

The stem is an introductory statement taken from the relevant surrounding daily life activities or imaginative situations. A creative question weighs ten (10) marks divided into that four (4) levels of Question¹⁶ (NCTB, 2012; Labeeba Hafiz, 2019).

Some key characteristics of preparing Stems are -

- The stem should be unique. Any paragraph or part of a textbook can't be directly used as Stem (Q13*)¹⁷
- It will be related to textbook content but can't be directly quoted from the textbook.
- The Stem language would be attractive, easily understandable, student's curiosity instigating, and as much as possible in brief.
- The stem scenario should be prepared considering the skill level.
- If the question can be answered by ignoring the stem, then the stem is not well-constructed.

Under every Stem of one Question, the four levels of the question that should be answered hierarchically are Knowledge Level, Comprehension Level, Application level, and Higher Order-Skill Level question. The four questions are

16. An example of a set of Essay-type creative Question paper is mentioned on page No:20 of the Literature Review Chapter and in Appendix 2.

17. Here, the bracketed number (Q13) indicates the question number of the questionnaire. The left-handed sentences depict the information based on which Question No. 13 (Q13) of the questionnaire is designed. Star '*' means, It's a reverse question. Here (*) indicates that this information is reversely presented in the Q13. These kinds of reverse questions are designed to authentically validate the respondent's opinion on the respective issues. Hence, the reverse answer is considered. If a respondent answers 5, it is finally considered as 1. In this way, if anyone answers 1, it is regarded as 5.

designed considering the six levels of cognitive thinking skills "Remembering, Understanding, Applying, Analysing, Evaluating and Creating" mentioned in the Revised Bloom's Taxonomy (Malek et al., 2012) – (Q9). The four levels of question should be designed considering the theme of the stem. Among those, the first two levels of the question can be answered without noticing the stem But, without considering the stem, the last two level's questions can't be answered (NCTB, 2012) - (Q14*).

Note: All of the above instruction is also mentioned in the training manual for creative question preparation by SESIP (SESIP, 2014).

Based on the Stem, the critical features of preparing four levels of questions based on Bloom's Taxonomy can be summarized in the following table-

Six (6) levels of Cognitive thinking skills according to Bloom's Taxonomy and Revised Bloom's Taxonomy	Four (4) levels of question in one Creative Question	Key Feature and Guideline
Knowledge/Remembering	Knowledge Level	The knowledge level is the Primary level of Cognitive thinking skills. It means recalling something from previously known learnings. The facts included in this level are: recalling or recognizing general words, particular information, theory, method, Process, Concept, and principles. Preparing knowledge-level questions is comparatively easy. The answer to the knowledge level question is found directly in the textbook - (Q10*).

Comprehension/Understanding	Comprehension Level	Comprehension ability is the student's ability to understand any facts' meaning. It could be understanding any information, principles, formulas, rules, method, process, etc. If anyone understands, it can explain or comprehend. Once understood, it is possible to present the content orally and with the help of a table, graph, diagram, and picture. Answering such questions requires more skill than knowledge level. The use of comprehension-level questions is essential for learning and evaluation
Application/Applying	Application Level	Application-level refers to the ability to apply prior knowledge in a new situation - (Q12*). It could be the application of laws, regulations, theories, formulas, rules, methods, concepts, principles, etc. Application-level skills may include preparing charts and graphs, proper use, and demonstrating a method and calculations.
Analysis/Analysing	Higher-Order Skill Level	Higher-Order thinking skills refer to the analysis (Specific to General), synthesis (General to Specific), and evaluation (judgment, logical reasoning) of a subject. Divide the entire topic, concept, or content into different elements or parts and identify their relationship. Creating a structure or design by collecting information and idea from various sources, judging the value of any opinion, work, solution, and method. All the other lower-level thinking skills are
Evaluation/Evaluating		

Synthesis/Creating		included as the highest skill level. Higher-Order thinking skills are the ability to analyze critically, make decisions based on logical thinking, and evaluate a fact in a new situation using previously known information or theory (knowledge) - (Q11*).
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Source: Training Manual – Finance, Banking, and Insurance, 2014, SESIP

3.4.1.2 Key Features of Preparing Multiple Choice Questions (MCQ)

- A multiple-choice question (MCQ) starts with a stem or instruction, and based on this, there will have some answer options. One will be the correct answer among the answer options, and the others are distracters. The distracters are not the correct answers. These distracters should be formulated in such a way so that the candidates who have no clear idea about the topics are more likely to choose those distracters/options. Each alternative answer option must have a probability of being selected by at least 5% of the total candidates - (Q15).
- The Mutually Exclusive or Mutually Inclusive answer option should be avoided as much as possible - (Q16*).
- Answer option that says all of the above is correct or none of the above are right should be avoided - (Q17*).
- A set of Multiple Choice Question Papers must have 60% knowledge and comprehension level and 40% application and higher-order level questions - (Q18* and Q19*).
- In the MCQ question paper, the stem must be used to prepare the student's Application level and Higher-order skill level question - (Q28*).
- There will have three (3) types of MCQ Questions in the SSC, HSC, and internal examinations. These three types are i) Simple MCQ, ii) Multiple Completion MCQ and iii) Situation Set MCQ - (Q20).
 - (i) Simple MCQ questions begin in the form of questions or as incomplete sentences. Questions or incomplete sentences act as Stem. However, it is best to avoid incomplete sentences as much as possible. Then there are four

alternative answers, In which only one answer is correct. A simple MCQ Question is used to evaluate knowledge level - (Q21*). Sometimes this type of question is also used to assess Comprehension level. As knowledge and comprehension level is assessed through Simple MCQ, there will be no new scenario in the stem of this type of MCQ - (Q22*).

(ii) In a Multiple Completion MCQ, in the beginning, three (3) facts/statements/ideas are given after the initial sentence. Among these three (3) facts/statements/ideas, 1/2/3 could be correct. Four (4) alternatives are made by arranging these pieces of information. Students need to choose one answer from these four (4) alternatives - (Q23). This type of question is used to create questions that are not memory-dependent - (Q25). Through such questions, it is possible to evaluate students' comprehension, application, and higher-order skills (A pictorial example of this type of question is illustrated in the questionnaire). But Multiple Completion MCQ will never be more than 20% of the total MCQ questions - (Q24*).

(iii) Situation Set MCQ will start with a stem/scenario/situation. In this type of MCQ, a few MCQ questions can be asked from the same stem/information/scenario - (Q26). The questions will be interrelated (A pictorial example is illustrated in the questionnaire). These MCQs are used to prepare application and higher-order skill level questions. Sometimes, the Comprehension level's question can also be made from this type of uniform information of situation set MCQ. However, it is advisable not to create knowledge-level questions using the situation set MCQ - (Q27).

Source: Training Manual – Finance, Banking, and Insurance, 2014, SESIP

These are some key features of the Creative Question Preparation Guideline mentioned in **the Training manual of Creative question Preparation** as per the Examination Reformation Guideline. **Here are only those features illustrated which are used in the survey questionnaire.**

Each teacher's strength in designing Creative Questions is measured with the summative index of these 20 numbers of 5-point Likert scale questions in the survey

Questionnaire. As the most significant scale is 5, the highest score with these 20 questions can be 100. Each teacher's strength in Designed Creative Question (SDCQ) is measured based on the score achieved within this 100 score. Considering this Strength of Designed Creative Question (SDCQ) as the dependent variable, other explanatory/independent variables are analyzed to find the interrelationship with the dependent variable.

3.4.2 Independent/Explanatory Variables

According to the Academic Supervision Report, 2019, conducted by the Monitoring and Evaluation Unit of the Directorate of Secondary and Higher Education, some significant causes for not being able to prepare good qualitative creative questions by the teachers are; not getting sufficient training, lackings of competency, lackings of willingness, weak monitoring of the field level supervisory officers, dependency on note and guidebook, coaching mentality of the teachers and teacher association's business (Mustaque, 2019b; Yasmin et al., 2020). Riyad (2016) also mentioned that not getting sufficient time is one of the significant causes of not preparing qualitative creative questions along with the above causes. Sometimes, it is also influenced by the teacher's experience or length of service. The ability to design creative questions is also different based on region or educational board, rural/urban area, and Secondary/higher secondary level (Center for Educational Research, 2018; Habib, 2016).

In this context, here the core independent variables of the strength of designing creative questions are considered teacher's competence, authority's monitoring, willingness, training, experience, time given by teachers, education institution's location, education board/region, the section of teaching, types of the educational institution.

Training: For the effective implementation of the Creative question method, SESDP arranged two types of Training Programs. Twelve days (12) Training of Master Trainers and three (3) days Training for General Teacher. At first, the "12 days Training of Master Trainers" was provided to Question Setters, moderators, Chief examiners, and examiners of different Education Boards.

Based on the performance in these training, final master trainers were selected. Then, a three (3) days General Training program was arranged for the General Teacher with those Master Trainers considered Instructor. Besides, the main controlling authority-Directorate of Secondary and Higher Education (DSHE), also provided instruction to arrange in-house training for the institutions (ADB, 2015; SESIP, 2014). But still, approximately 40% of teachers received training by combining all types of training facilities available for the Creative Question method ((Yasmin et al., 2020). Considering these issues, this research tried to specifically measure how the strength of designing creative questions is varied based on the receiving of various types of training or not receiving. In this regard, through Q29, it is asked who received training and didn't receive training (0=No, 1=Yes). Based on the types of training, the received training (1=Yes) is again classified into three groups; 2=Master training, 3=General Training (Education Board or DSHE provided), and 4=In-house training from own institution through Q30.

Competence: The Director of the Bangladesh Examination Development Unit (BEDU) said that the main problem with the creative question implementation is the Teacher's Quality and Competence (Mustaque, 2019b). Academic Supervision Report, 2019 by DSHE and Riyad (2016) also mentioned teachers' competence influences the quality of preparing Creative Questions. Various evaluation reports of the creative Question method stated that the teacher with deep subjective knowledge passed from a high-graded university and good academic records are comparatively better at preparing creative Questions. Q31-Q34 measures the four academic results on GPA 4/5-point scale. According to the education ministry's GPA conversion criteria, the teacher who passed in the former division or class is also converted on GPA 4/5-point scale. Q35 measures from which graded university they passed (3=Public University, 2=National University, 1=Private University). Most of the students in Bangladesh at first aim to be doctors, engineers, Customs Officers, Police Officers, Administrative Officers, etc. Many students compete for or choose the teaching profession whenever they don't have other alternative options (Center for Educational Research, 2018). Despite having other options, the persons who choose or compete for teacher recruitment as the prioritized choice are

comparatively more competent than those who select the teaching profession because of not having any other options. Q36 measures how the participant chooses the teaching profession with other job opportunities on 5 point scale by taking reverse answers. Competence is measured considering the average of Q31-Q36 for each teacher.

Willingness: According to the Academic Supervision Report, 2019, Conducted by DSHE, one of the primary reasons for not properly implementing the Creative Question method is the teacher's unwillingness (Mustaque, 2019b). One Responsible Officer of SESIP Said, "Though teachers got training, they don't practice it enthusiastically. If the institution's teachers don't prepare questions from their own will and don't practice with the students, this problem will be continued" (Mustaque, 2019a). Preparing a set of good qualitative Creative questions requires academic mastery and brainstorming with sufficient time. In this context, teachers sometimes prepare ready-made questions from the Guidebook/notebook and purchase questions from the professional teacher's association (Riyadh, 2016; Billah, 2017; Mushtaq Ahmed, 2019b). The academic supervision report conducted on 8,219 schools among the country's 18,598 high schools by DSHE in July 2019 shows that 42% of teachers still don't prepare creative questions. Among those, almost 28% of teachers prepare questions with the support of other school teachers following the guidebook. The rest, 16%, purchase ready-made questions from teachers' associations or professional organizations (Mustaque, 2019a). Q37 measure the teacher's willingness to prepare creative without following a guidebook or support from other school teachers. Q38 measures the eagerness of teachers to purchase questions from teachers' associations or professional organizations (the answer was taken considering a reverse scale). The summative index of these two questions measures the teacher's willingness to prepare creative questions.

Monitoring: Academic Supervision Report, 2019 of Monitoring and Evaluation Unit, DSHE itself admits that weak monitoring of the field level supervisory authority is one of the significant Causes of not preparing qualitative creative questions (Mustaque, 2019b). Riyadh (2016) also emphasizes the necessity

of effective monitoring to ensure the quality of the creative question system. Q39 measures the internal monitoring faced by the teacher, and Q40 measures the external monitoring from the central educational authority faced by the teachers or institutions to prepare qualitative creative questions. The summative index of these two questions measures the monitoring faced by each teacher to prepare qualitative creative questions.

Time: Almost all government reports and research papers depict that one of the crucial reasons for not preparing qualitative creative questions is the time limitation to submit a creative question paper. Some teachers are confident and capable, but they can't prepare expected creative questions for time deficiency (Riyad, 2016). In his research findings, the same author also mentioned that it is usually instructed to submit 2/3 Subject's Question paper within three-four days after notice. Q41 measures approximately how many hours a teacher spend preparing one set of creative question paper for each subject.

Experience: Generally, master training was given to senior teachers expecting that experienced teachers would be more competent to clarify the issue of creative questions (ADB, 2015). The Bangladesh Examination Development Unit (BEDU) director said that besides the general teacher, we are getting some senior master trainer who doesn't understand the creative question issue (Mustaque, 2019b). In this regard, Q3 intends to measure how the length of service or teaching experience related to the strength of designing creative questions.

Other Independent Variables: As Bangladesh Education system is divided into three sections named Science, Commerce, and Arts at the Secondary and Higher Secondary level (Asad, 2009); with **Q2**, the teacher's **teaching section** is asked to measure how the creative Question preparation is varied based on these three sections. Here, 1=Humanities, 2=Business Education, and 3=Science. According to the Academic Supervision Report, 2019 of DSHE, the teachers of the Barishal Region can prepare the lowest percentage (30.76%), and Chittagong Region teachers can prepare the highest rate (80.31%) of creative questions (Mustaque, 2019a). Besides, based on the Government or Private educational

Institutions, our rural area teachers don't have the expected capacity to prepare qualitative creative questions (Center for Educational Research, 2018). In this regard, **Q5** intends to measure how the strength of designing creative questions varies based on ten (10) **education boards** responsible for coordinating examinations in different regions. **Q7** is designed to verify the difference in creative Question preparation based on the **educational institution's location** in urban, rural, and city areas. To find out the Government and Non-Government differences as the two types of **educational institutions** in the strength of designing creative questions, **Q8** is designed.

3.4.3 Variable Coding

Dependent Variable		
Strength of Designed Creative Question (sdcq)		Continuous–Ratio Scale Measured through the summative index of Question 9(Q9) to Question 28(Q28) formulated in 5 points Likert Scale with considering Cronbach alpha Total Score= 20 questions × 5 = 100 Based on the Training Manual, SESIP 2014
10 Independent/Explanatory variables (Based on Academic Supervision Report-2019, DSHE, and Various Literatures)		
5 Continuous Variables		
Academic Competence (Competence)		Continuous-Ratio Scale Average of Q31- Q36 Details illustrated in the previous variable Explanation Part
Teacher's Self-willingness (T_willingness)		Continuous-Ratio Scale Summative Index of Q37 and Q38
Monitoring by authority (Monitoring)		Continuous-Ratio Scale Internal Monitoring-Q39 and External Monitoring-Q40 Summative Index of Q39 and Q40
Time is given by the teacher (Time)		Continuous-Ratio Scale Average time (hours) given by the teacher to prepare a set of one Subject's creative Questions- Q41
Length of service (Experience)		Continuous-Ratio Scale Years in Teaching Profession – Q03
5 Categorical Variables		
Training	Training received	Categorical - Nominal Scale , Question 29 0 = No, 1=Yes
	Types of Training received	Categorical - Nominal Scale Combination of Question 29 and Question 30 0= No training, 2= Master Training 3=General Training (Education Board or DSHE provided) 4=In-house training from your institution
Section of Teaching (Section)		Categorical - Nominal Scale, Question 2 1=Humanities, 2=Business Education, 3=Science
Educational Institution Location (Worklctn)		Categorical - Nominal Scale, Question 7 1=City/District, 2=Urban/Sub-District, 3=Union/Rural
Board of Education (Eduboard)		Categorical - Nominal Scale, Question 5 1=Barisal, 2=Chittagong, 3=Comilla, 4=Dhaka, 5=Dinajpur, 6=Jessore, 7=Madrasah, 8=Mymensingh, 9=Rajshahi, 10=Sylhet
Types of Educational Institution (typeeduin)		Categorical - Nominal Scale, Question 8 0=Government, 1=Non-Government

3.5 Data Analysis tools and Hypothesis

STATA (Statistical Software for Data Science) **version 14.1** program is used to analyze data by transforming and encoding the information from the questionnaires.

At first, through **Descriptive statistics**, the various feature of the Strength of Designed Creative Questions is analyzed.

Then, one of the critical objectives of the Quantitative part of this study is to build a **Regression Model**. As per the **backward elimination method**, the following steps are followed to build that model –

- i) **Normality Test**
- ii) **Bivariate Analysis**
- iii) **Building a preliminary base regression model**
- iv) **Post Estimation tests, like Checking Multicollinearity, Heteroskedasticity.**
- v) **Building Final Regression Model**

As part of the **Regression Model building**, the following **ten (10) Hypothesis** is tested under **Bivariate Analysis** to verify the significance of the relationship between dependent and **ten (10) independent variables**.

Hypothesis	Respective Bivariate Analysis
Hypothesis I: Higher Academic Competence of the Teacher increases the Strength of the designed Creative Question.	Correlation Analysis
Hypothesis II: The Strength of Creative Question Papers varies based on Teacher's Self-willingness	
Hypothesis III: Monitoring by the Superior authority can enhance the Strength of the designed Creative Question	
Hypothesis IV: If the teacher gives more time, the Strength of the Creative Question Paper will be increased more.	
Hypothesis V: The Teacher's length of service or experience can enhance the Strength of the designed Creative Question Paper.	

Hypothesis VI: The strength of the teacher's designed creative question (sdcq) is varied based on training reception or different types of training.	One-way ANOVA
Hypothesis VII: The strength of the designed creative question paper by the teacher is varied based on Ten "Education Boards"	One-way ANOVA
Hypothesis VIII: The strength of designing Creative Question is varied based on Teacher's Teaching Section (Science, Business Education, Humanities).	One-way ANOVA
Hypothesis IX: Based on the District, Urban, and Village area's educational institution, the Strength of designed creative Questions is varied.	One-way ANOVA
Hypothesis X: The Strength of designed creative questions is varied based on Govt. and Private Educational institutions	Independent Sample T-Test

3.6 Population and Sampling Distribution

In this study, the population was considered the whole secondary and Higher secondary level teachers. In this regard, secondary and Higher secondary level teachers were served questionnaires.

Fixing the sample size for any Quantitative research is a challenging task as the sample size varies based on the nature of the study. According to Steven (1996), at least 15 samples are needed for each independent variable in social science. In this study, primarily ten (10) independent variables were considered. Therefore 150 samples were required. Besides, Tabachnick and Fidell (2018) used the formula " $N > 50 + 8M$ " for determining sample size, where M represents the number of predictors in the analysis. As per this formula, more than 130 samples were needed.

However, in this study total of 316 samples were collected. At first, the author used a cluster sampling philosophy to collect the sample from 10 education boards/regions considering each board as one cluster. Then, from these boards, the samples were chosen randomly. Besides, it is tried to maintain the significant representativeness of Government and Non-Govt. Institution, three (3) sections – Science, arts and Commerce, and city, urban and rural area educational institution's teachers as sample respondents. Combining Cluster and Random sampling makes the sampling distribution more representative. **Here is depicted a picture of the sampling distribution.**

Table 1: Sampling Distribution (N=316)

Geographic and Professional factors	Frequency (N)	Percent (%)
SECTION OF TEACHING		
Humanities	134	42.41
Business Education	72	22.78
Science	110	34.81
BOARD OF EDUCATION		
Barisal	12	3.8
Chittagong	73	23.1
Comilla	41	12.97
Dhaka	68	21.52
Dinajpur	24	7.59
Jessore	24	7.59
Madrasah	11	3.48
Mymensingh	22	6.96
Rajshahi	28	8.86
Sylhet	13	4.11
TYPES OF EDUCATIONAL INSTITUTIONS		
Government	260	82.28
Non-Government	56	17.72
EDUCATIONAL INSTITUTION LOCATION		
District	216	68.35
Sub-District	66	20.89
Union/Rural	34	10.76
TRAINING RECEIVED		
No	180	57.28
Yes	136	42.72
TYPES OF TRAINING RECEIVED		
No Training	180	56.96
Master training	36	11.39
General Training (Edu Board or DSHE)	80	25.32
In-house training	20	6.33

3.7 Qualitative Interview

3.7.1 Interview Process and Interviewee

To explain the causal relationship of different factors associated with the strength of designed creative questions and to explore a more in-depth story of strengthening creative question-based summative assessment policy, some

interviews as taken **after concluding the quantitative analysis**. The interview was conducted online due to COVID-19 and the convenience of the participants using Zoom.

The interview was conducted with a total of 09 interviewees. These 09 participants were involved in teaching at any stage of their career but now serving in different positions. All the participants have experience in the public examination' creative question preparation. Some of them have experience as Public examination examiners and chief Examiners. Among those, six (6) participants were from different levels of teachers who were involved with creative question settings and moderation for a long time. Some of them are master trainers. One was a Principal of a Government college, one associate professor of the Teacher's training college, Chattogram, and one was the Training Specialist of the National Academy for Educational Management (NAEM). The participant's identity was kept anonymous as per the interviewee's request.

3.7.2 Interview Questionnaire

Question 1: Should the **Creative-Question-based Summative Assessment system be continued** in the coming revised curriculum?

Question 2: In your viewpoint, what is the **overall scenario of the teacher's strength level** in designing creative questions?

Follow-up Question: **(I)** This survey of 2022 shows that 50% of teachers can't prepare satisfactory creative questions; Academic Supervision Report, 2019 said, 42% can't prepare creative questions. What could be the **cause of this difference?**

(II) In **which part** do most teachers face difficulty?

Question 3: Why most teachers can not design qualitative Creative Question Paper.

Follow-Up Question: How are the different issues related to the strength of designing creative questions?

Question 4: Besides the question design, **what other issues** needed to be considered to **strengthen the creative question-based summative assessment system**.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

Summary

An in-depth analysis of the data revealed various significant findings. The majority of the teachers opined to continue the creative question-based summative assessment system in the following revised curriculum. According to the descriptive results, 50% of teachers can't prepare a satisfactory level's creative question paper. The Dinajpur region's teachers are more expert, and the Barishal region's teachers are comparatively less expert in preparing acceptable level's creative question papers. The regression result shows that the strength of the designed creative question paper is mainly influenced by the teacher's competence, willingness, authority's monitoring, time given by the teacher, teacher's length of service, and reception of the different training. The qualitative interview revealed some unexplored stories of the causal explanation of these relationships. The chapter provides detailed, interesting findings of the creative question-based summative assessment policy from the statistical and field-level opinion viewpoints.

4.1 Descriptive Statistics

4.1.1 Opinion on Continuation of the creative Question based summative assessment system

This study tries to gather opinions on continuing the creative question-based summative assessment system regarding the policy dilemma. **73.10% of teachers opined 'yes' to the continuation** of the creative question-based summative assessment system in the following curriculum revision.

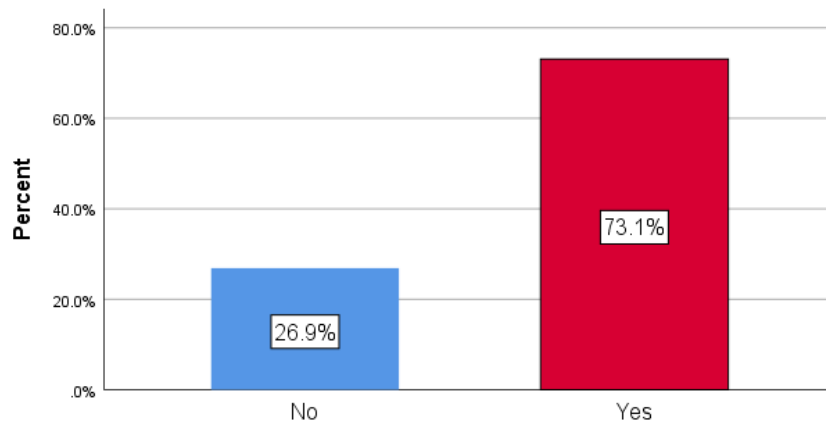


Figure 7: Graph of Opinion on the Continuation of Creative Question-Based Summative Assessment System

4.1.2 Exploratory Analysis of the Dependent Variable "Strength of Designed Creative Question by the teacher."

It is already explained in the methodology chapter that the dependent variable "Strength of designed creative question (sdcq)" by each teacher is measured through the summative index of twenty (20) numbers of 5-point Likert scale questions asked in the questionnaire (Q9-Q28). The total highest score was $20 \times 5 = 100$. The summary statistics of this calculated variable "sdcq" –

Table 2: Summary statistics of Dependent Variable "sdcq"

Statistics Strength of Designed Creative Question (sdcq) by the teacher										
Variables	Obs	Mean	Std. Dev.	Min	Max	Q_1 p25	Q_2 p50	Q_3 p75	Skew.	Kurt.
sdcq	316	60.69	8.669	40	94	55	59.5	64	1.059	4.702

The teacher's average strength of designed creative questions is 60.69, with a standard deviation of 8.669. The minimum strength value is 40, and the Maximum strength value is 94. Considering the Quartiles, the first quartile Q_1 indicates that 25% of 'sdcq' data is smaller than 55, whereas the third quartile Q_3 demonstrates that 75% of the 'sqcq' data is smaller than 64 and 25% larger than 64. The second quartile Q_2 indicates-the median of the 'sdcq' is 59.5. Let's consider the **normality** of this 'sdcq' variable. It is slightly not symmetric to the normal distribution since it

is positively skewed with a greater than '0' skewness value which is 1.059, and a little bit leptokurtic than the normal curve with a greater than '3' value of kurtosis, which is 4.702. For this reason, in our regression model, the 'sdcq' is converted to a 'logarithm of sdcq's to consider a more normal distribution of the dependent variable 'sdcq.' Then, the Teacher's Strength in designing creative questions (sdcq) is divided into three groups – poor, good excellent based on the score achieved by each teacher within the total 100 scores.

Table 3: Teacher's Strength level in designing creative questions

Scores achieved in 'sdcq.'	Level (code)	Expected Types (code)	Freq.	Percent (Level)	Percent (Types)
40-59	Poor (3)	Not-satisfactory (2)	158	50.00	50.00
60-79	Good (4)	Satisfactory (1)	142	44.94	50.00
80-100	Excellent (5)		16	5.06	
Total			316	100.00	100.00

The figure shows that almost **50% of teachers'** designed creative question strength level is poor, which is **not satisfactory**, whereas 44.94% can prepare good level and 5.06% excellent level creative question which can be considered **Satisfactory (50%)**. Coincidentally, both 'satisfactory' and 'not-satisfactory' types are 50%.

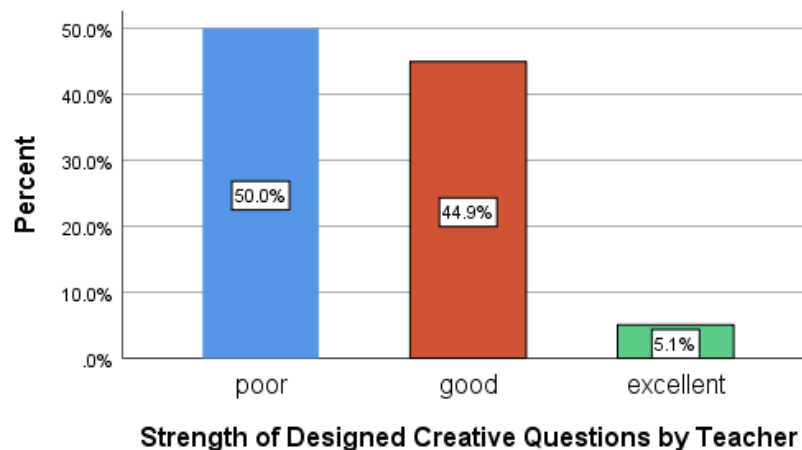


Figure 8: Graph on Strength level of the designed creative question by the teacher

In more in-depth, the teacher's strength level in the different parts of the designing creative question can be summarized with the following tables mentioned on the next page-

Table 4: Details of Strength of the designed creative Question by the teacher in the different parts of the creative question

Strength of Designed Creative Question (sdcq)	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	Mean Score
1. The four levels of questions "Knowledge, Comprehension, Application, and Higher-order Skills" in the Creative question method are done considering the six levels of thinking skills "Knowledge, Perception, Application, Analysis, Evaluation, and Synthesis" - Q9	26 8.2%	33 10.4%	43 13.6%	124 39.2%	90 28.5%	3.69
2. The Question of the "knowledge level" can be made in such a way so that its answer cannot be found directly from the textbook- Q10*	51 16.1%	69 21.8%	33 10.4%	67 21.2%	96 30.4%	3.28
3. To assess the skill of 'making a decision based on critical reasoning & logic' and 'evaluating a fact' – " Application-level " questions can be asked – Q11*	106 33.5%	140 44.3%	26 8.2%	22 7.0%	22 7.0%	2.09
4. "Higher-Order Skill" Level's Questions can be used to assess 'the ability to apply a previously learned subject into a new situation' - Q12*	135 42.7%	123 38.9%	24 7.6%	15 4.7%	19 6.0%	1.92
5. Any part/paragraph of the textbook can be used directly for making stem - Q13*	47 14.9%	78 24.7%	47 14.9%	63 19.9%	81 25.6%	3.17
6. The stem must be considered to answer all four parts of the creative Question – Q14*	67 21.2%	67 21.2%	38 12.0%	73 23.1%	71 22.5%	3.04
7. Multiple choice questions (MCQ) should be prepared in such a way so that each alternative answer is likely to be chosen by at least 5% of the total candidates – Q15	29 9.2%	35 11.1%	54 17.1%	93 29.4%	105 33.2%	3.66
8. Mutually Exclusive / Mutually Inclusive information could also be used to create multiple choice question (MCQ) options - Q16*	60 19.0%	139 44.0%	70 22.2%	17 5.4%	30 9.5%	2.42
9. All of the above are correct / none of the above is correct" - with these types of sentences, answer options of multiple-choice questions (MCQ) can be made – Q17*	68 21.5%	97 30.7%	41 13.0%	37 11.7%	73 23.1%	2.84
10. It is advisable to have 40% knowledge and comprehension level questions in multiple-choice questions (MCQ) – Q18*	85 26.9%	136 43.0%	36 11.4%	42 13.3%	17 5.4%	2.27

11. It is advisable to have 60% application and higher-order level questions in multiple-choice questions (MCQ) - Q19*	76 24.1%	118 37.3%	44 13.9%	52 16.5%	26 8.2%	2.47
12. Simple MCQ, Multiple Completion MCQ, Situation Set MCQ - with these three types of questions, Multiple Choice Questions should be made - Q20	11 3.5%	29 9.2%	54 17.1%	120 38.0%	102 32.3%	3.86
13. "Simple MCQ" can be used to assess a student's application skill and higher-order skill level - Q21*	63 19.9%	116 36.7%	53 16.8%	48 15.2%	36 11.4%	2.61
14. Simple MCQ's stem also needs to have a new scenario - Q22*	88 27.8%	117 37.0%	56 17.7%	34 10.8%	21 6.6%	2.31
15. Consider the picture's MCQ - This type of Question is "Multiple Completion MCQ" - - Q23	14 4.4%	17 5.4%	57 18.0%	104 32.9%	124 39.2%	3.97
16. Multiple Completion MCQ" could be more than 20% of the total MCQ - Q24*	53 16.8%	93 29.4%	61 19.3%	75 23.7%	34 10.8%	2.82
17. "Multiple Completion MCQ" can be used to create not 'memory-dependent' questions - Q25	15 4.7%	28 8.9%	59 18.7%	135 42.7%	79 25.0%	3.74
18. Like the picture's questions – The MCQ questions which are used to ask a few questions from the same stem/information/scenario are "Situation Set MCQ" - Q26	6 1.9%	15 4.7%	81 25.6%	119 37.7%	95 30.1%	3.89
19. Using "Situation Set MCQ" to prepare 'knowledge level' questions is not advisable - Q27	22 7.0%	28 8.9%	57 18.0%	107 33.9%	102 32.3%	3.76
20. The Question of assessing students' application and Higher-Order skills can be made without using stem in MCQ - Q28*	52 16.5%	110 34.8%	46 14.6%	55 17.4%	53 16.8%	2.83

Note: Here, the right-sided number Q9, Q10... indicates the question number of the questionnaire. Star '*' means, It's a reverse question. Here (*) indicates that this information is reversely presented in the Q10. These kinds of reverse questions are designed to authentically validate the respondent's opinion/confidence level on the respective issues. Hence, the reverse answer is considered. If a respondent answers 5, it is finally considered as 1. In this way, if anyone answers 1, it is regarded as 5.*

The mean score is four (4) below in all the statements. That means the teacher's strength level is lower in almost all the parts of the creative question. But specifically, in some aspects, the strength level is very inferior. As in Statement 3 and 4, the mean score for designing **Applications and Higher-order skill level questions is 2.09 and 1.92**, respectively, on the enormous scale of 5. These scores are below the median score of 2.5. That indicates the **teacher's strength is very low** in designing **Applications and Higher-Order skill level questions**. They are facing more difficulty in developing these portions of the questionnaire. In the same way, in statements 8,9,10,11, which are related to MCQ, the mean score is three (3) below, which indicates that **in designing the MCQ question part**, the teacher also faces more difficulty.

The **Cronbach's Alpha** for these 20 items was **0.7285**, higher than 0.7. This score indicates **high internal consistency and reliability in measuring these 20 items**, and these items' scales could be deemed acceptable.

4.1.3 Exploratory Analysis of the Independent Variables

4.1.3.1 Training

Among all the teacher participants, 56.96% of teachers didn't receive any training on the creative question. Among the training received, 11.39 % received the Master training to train other General Teachers, 25.52% received three days of General Training, and 6.33% of teachers received their institution-arranged in-house training.

Table 5: Training/Types of Training Received

Training/Types of Training Received	Freq.	Percent
No Training	180	56.96 %
Master training	36	11.39 %
General Training (Edu Board or DSHE)	80	25.32 %
In-house Training	20	6.33 %
Total	316	100.00 %

4.1.3.2 Competence

As detail explained in the Methodology chapter, Competence is measured through the average of 4 academic results – SSC, HSC, Graduation, and Masters, last graduated university ranking and their choosing option for teaching. The average Competence is 3.706, with a substantial standard deviation of 0.311. That means there is a considerable variation in teachers' Competence to design creative questions.

Variable	Obs	Mean	Std. Dev.	Min	Max
Competence	316	3.706	.311	2.49	4.3

If we see more specific details of the Competence, there is a considerable variation in teachers' four academic results, passing university and choosing the option for the teaching profession. There is a substantial variation of SSC and HSC Results with almost 0.4 above standard deviation and graduation, and Master results with 0.3 above standard deviation.

Table 6: Competence Details

Variable	Obs	Mean	Std. Dev.	Min	Max
result ssc	316	4.391	.434	2.63	5
result hsc	316	4.252	.537	2.2	5
result graduation	316	3.224	.399	2	4
result master	303	3.306	.377	2	4
university	316	2.677	.561	1	3
teach option	316	4.38	1.055	1	5

4.1.3.3 Teacher's Self-Willingness

As per the methodology discussion, two items are used to measure the teacher's willingness to prepare the creative question paper. From statement 1 (Q37), "The teachers of our Institution are very sincere in designing their creative questions without the help of any kind of guidebook," we see there is a divergence in the opinion of teachers. Only 27.2% agreed with this statement, with an average score of 3.16.

Statement 2 (Q38) measures, instead of the teacher's self-willingness, to what extent the teacher prepare questions by buying question from professional organizations. Almost 54.1 % strongly agree that they didn't purchase questions from teacher's associations or professional organizations. The mean score regarding not purchasing ready-made questions from outside is 4.00, which is positive. The average score of these two statements measured the teacher's willingness to prepare creative question papers.

Table 7: Teacher's willingness

Willingness	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	strongly agree (5)	Mean
1. The teachers of our institution are very sincere in designing their creative questions without the help of any guidebook – Q37	46 14.6%	59 18.7%	67 21.2%	86 27.2%	58 18.4%	3.16
2. Questions are not bought in our organization from teachers' associations or professional organizations - Q38*	22 7.0%	31 9.8%	43 13.6%	49 15.5%	171 54.1%	4.00

4.1.3.4 Monitoring

Monitoring is measured through two statements, Internal Monitoring and External Monitoring. Statement 1 (Q39) measured the internal Monitoring from the teacher's own organization, where the mean score is 4.02, and 39.6% opined strongly agree that they face internal Monitoring. On the other hand, statement 2 (Q40) measures external Monitoring, where the mean score is only 2.11. That means most teachers didn't face any external monitoring to prepare creative questions from superior authority.

It is shown that only 0.9 % opined as strongly agree that they face external Monitoring.

Table 8: Monitoring

Monitoring	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	strongly agree (5)	Mean
1. Our organization regularly monitors whether the creative Question papers are appropriately implemented - Q39	9 2.8%	18 5.7%	55 17.4%	109 34.5%	125 39.6%	4.02
2. Sometimes, we face Monitoring of creative questions from the Board of Education, DSHE, or other superior organizations - Q40	96 30.4%	113 35.8%	86 27.2%	18 5.7%	3 0.9%	2.11

4.1.3.5 The Teacher's given time to prepare Creative Question (Time)

To prepare a set of creative question papers for a subject, we see that a teacher spends an average of 6.80 hours. There is a considerable variation in teachers' time, which is reflected in the standard deviation of this variable, 3.568. That means different teachers spend different amounts of time preparing creative questions.

Variable	Obs	Mean	Std. Dev.	Min	Max
time	316	6.841	3.568	1	20

4.1.3.6 Experience or Length of Service of Teachers

As mentioned in the methodology chapter, it was thought that the Strength of the designed creative Question varied based on the teacher's length of service. The measured service length and experience mean score was 10.218 years, with a substantial standard deviation of 7.038. That means there were diversified ages or different experienced teachers.

Variable	Obs	Mean	Std. Dev.	Min	Max
experience n	316	10.218	7.038	1	30

4.1.3.7 Strength type of designing creative questions based on Education Boards or Region

As depicted in Table 3, we divided the "Strength of Designed Creative Question (sdcq)" score for our different analysis purposes into two types: satisfactory and not satisfactory. We analyze these **strength types** based on ten (10) education regions or boards through a Crosstabulation and chi-square test. We see that **Dinajpur region Teachers** can prepare the **highest percentage (66.7%)** of satisfactory type creative question papers. In contrast, **Barishal Region** Teachers can prepare the **lowest rate (33.3%)** of satisfactory type creative question papers, **considering the chi-square test's P-value (0.054)** is significant at a 10% significance level.

Table 9: Crosstabulation and Chi-Square Tests on Types of the Strength of designed Creative Question and 10 Education Boards of or regions

		Types of the Strength of designed Creative Question		Total
		Not-Satisfactory	Satisfactory	
Board of Education	Barisal	8 66.7%	4 33.3%	12 100.0%
	Chittagong	32 43.8%	41 56.2%	73 100.0%
	Comilla	18 43.9%	23 56.1%	41 100.0%
	Dhaka	43 63.2%	25 36.8%	68 100.0%
	Dinajpur	8 33.3%	16 66.7%	24 100.0%
	Jessore	9 37.5%	15 62.5%	24 100.0%
	Madrasah	6 54.5%	5 45.5%	11 100.0%
	Mymensingh	8 36.4%	14 63.6%	22 100.0%
	Rajshahi	18 64.3%	10 35.7%	28 100.0%
	Sylhet	8 61.5%	5 38.5%	13 100.0%
Total		158 50.0%	158 50.0%	316 100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.689 ^a	9	0.054

4.1.3.8 Strength type of the designed creative questions based on Section

According to the three sections of Secondary and Higher Secondary level, the **science section teacher** can prepare the **highest 59.1% of the satisfactory type** creative question. The business education teacher can prepare 45.8%, and the humanities Teacher can prepare the lowest 44.8% Satisfactory Creative question paper, **considering the chi-square test's P-value (0.061) is significant at a 10% significance level.**

Table 10: Crosstabulation and Chi-square Test on Types of the Strength of designed Creative Question and Section of teaching

Types of the Strength of designed Creative Question	Section of teaching		
	Humanities	Business Education	Science
Not-Satisfactory	74 55.2%	39 54.2%	45 40.9%
Satisfactory	60 44.8%	33 45.8%	65 59.1%
Total	134 100.0%	72 100.0%	110 100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	5.599a	2	0.061

4.1.3.9 Strength type of the designed creative questions based on Government and Private Educational institutions

Though, the Private Educational Institution's teachers can prepare more satisfactory type creative question papers (53.6%) than the Government Institution's teachers. But, this is not a significant difference since the P-Value (0.556) of the chi-square test **is not significant even at a 10% significance level.**

Table 11: Crosstabulation and Chi-square Test on Types of the Strength of designed Creative Question and Govt. vs. Private Educational Institution

Types of the Strength Creative question	Types of Educational Institution	
	Government	Private
Not-Satisfactory	132 50.8%	26 46.4%
Satisfactory	128 49.2%	30 53.6%

Total		260 100.0%	56 100.0%
Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.347 ^a	1	0.556

In the same way, the **cross-tabulation and chi-square** test between the **education Institution's location (City, Urban, Rural) and strength type** showed no significant difference in the strength type of the designed creative question by the teacher among City, urban and rural areas. In the chi-square, the P-value was 0.915, which is much higher even at the 10% significance level. In this regard, this cross-tabulation is not shown here.

4.2 Regression Model

A regression model is built to assess the factors associated with the strength of designing creative questions by the teacher and analyzing their relationship. Here, the regression model building has proceeded with the Backward Elimination method. According to the psychology dictionary, Backward elimination is a statistical procedure that removes the least essential variables step-wise and leaves only the most significant ones. (N., 2013). Therefore, in our model-building process, the normality of the dependent variable "sdcq" is first checked. Then Bivariate analysis is done to consider the variables to keep in our preliminary model. After some post-estimation tests on this primary model, the final model is designed.

4.2.1 Checking the Normality of the Dependent Variable

From the histogram of the dependent variable Strength of Designed Creative Question (sdcq) by the teacher with the normal curve, we see this data is slight positively or rightly skewed with a greater than '0' skewness value which is 1.059. Besides a little bit leptokurtic than the normal curve with a greater than '3' value of normal curve's kurtosis, which is 4.702

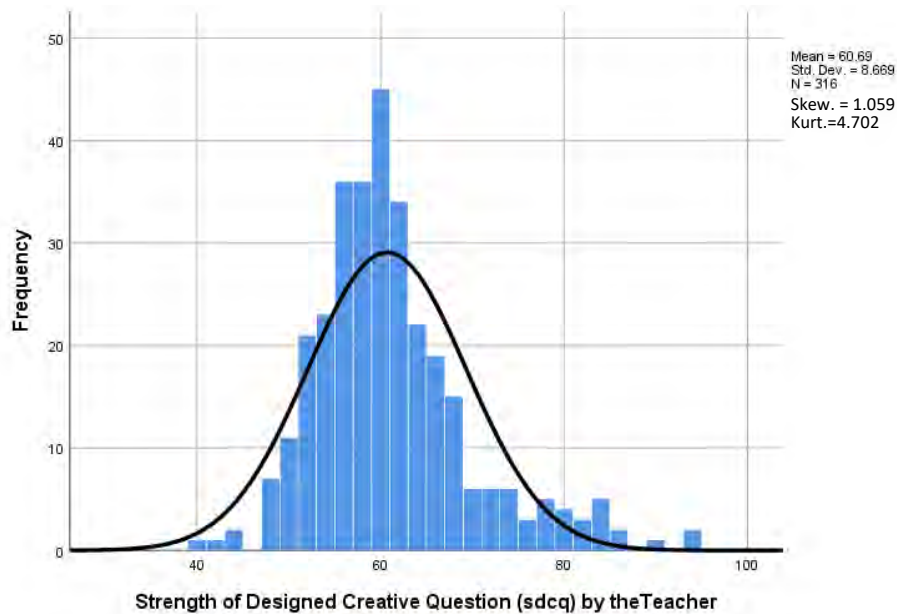


Figure 9: Histogram of 'sdcq'

In this regard, we converted this "sdcq" into a logarithm form of sdcq. The "log of sdcq" is comparatively more normally distributed with skewness of 0.537, closer to the normal distribution's skewness of '0'. Besides, the kurtosis of "log of sdcq" is comparatively closer to the normal distribution's kurtosis (3), which is 3.87. Therefore, for our regression model, finally, we considered **this logarithm transformation of sdcq** as our **dependent variable**, which will be denoted as "log_sdcq."

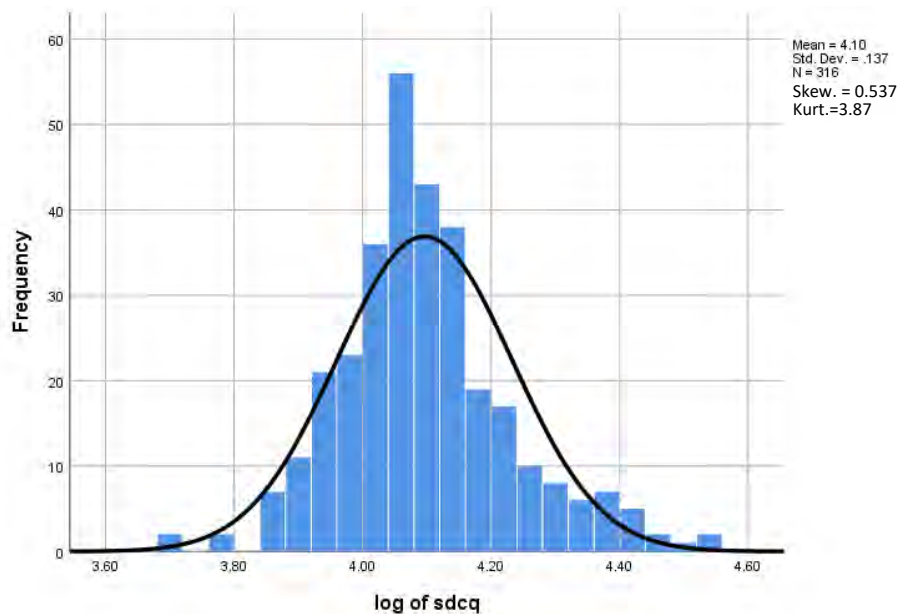


Figure 10: Histogram of 'logarithm of sdcq'

4.2.2 Bivariate Analysis

It is discussed and summarized in the 3.4.3 variable coding section of the methodology chapter that the author primarily considered **ten (10) independent variables** to build the regression model. Among these ten (10) variables, five (5) are **continuous variables**, which are **Competence**, teacher's willingness (**T_Willingness**), **Monitoring**, time given by the teacher (**Time**), and teacher's experience (**Experience**). The other five (5) are **categorical variables**, which are **Training**, Education Board/Region (**Eduboard**), Section of Teaching (**Section**), Educational Institution Location (**Worklctn**), Types of Educational Institution (**Typeeduin**). To analyze which independent variables will be considered for the regression model, the author first proceeded with the bivariate analysis of these dependent and independent variables explaining the significance of their relationship with the hypothesis testing.

4.2.2.1 Correlation Analysis for Continuous Independent Variables

Before running the regression model, the five (5) continuous variables' relationship with the dependent variable is analyzed through correlation analysis. As per the methodology chapter discussion, the hypothesis for those five continuous variables was –

Hypothesis I for Competence: Higher Academic Competence of the Teacher increases the Strength of the Creative Question.

Hypothesis II for willingness: The Strength of Creative Question Papers varies based on Teacher's Self-willingness

Hypothesis III for Monitoring: Monitoring by Superior authority can enhance the Strength of the Creative Question

Hypothesis IV for time: If the teacher gives more time, the Strength of the Creative Question Paper will be increased more.

Hypothesis V for experience: The Teacher's length of service or experience can enhance the Strength of the Creative Question Paper.

The Correlation Matrix for these five (5) continuous variable hypotheses was -

Table 12: Matrix of correlations

Variables	Log_sdcq	Competence	Willingness	Monitoring	Time	Experience
Log_sdcq	1.000					
Competence	0.243**	1.000				
Willingness	0.519**	0.125	1.000			
Monitoring	0.673**	0.082	0.379	1.000		
Time	0.483**	0.206	0.325	0.324	1.000	
Experience	0.346**	-0.142	0.241	0.230	0.180	1.000

****.** *Correlation is significant at 0.01 level (1%) (2-tailed).*

Log_sdcq = Logarithm of the Strength of Designed Creative Question (sdcq) by the teacher

Here we see that all **five (5) continuous independent variables significantly correlated with the log_sdcq** of the five (5) hypotheses above. Teachers' willingness and authority's monitoring are highly correlated with the strength of designing creative Questions (log_sdcq). Time given by the teacher, teacher's experience, and Competence has a moderate correlation with log_sdcq.

4.2.2.2 ANOVA and Independent Sample T-Test for Categorical Independent Variables

Among the five (5) categorical independent variables, there are 'two groups' and 'two more groups' type variables. **Training**, Education Board/Region (**Eduboard**), Section of Teaching (**Section**), and Educational Institution Location (**Worklctn**) are 'two more groups' type variables. Therefore, these four **(4) categorical variables' relationship** significance with **the strength of designing creative questions (log_sdcq)** is analyzed through the One-Way ANOVA test. Only the Types of Educational Institution (**Typeeduin**) is a 'two group' type variable. Its relationship with the log_sdcq is analyzed through Independent Sample T-Test.

4.2.2.2.1 Testing the hypothesis between training and strength of designing creative questions (log_sdcq).

In this regard, the hypothesis was –

Hypothesis VI (Training): The strength of the teacher's designed creative question (sdcq) is varied based on training reception or different types of training.

Since there were four (4) groups in the final training variable, 0=No Training, 2=Master Training, 3=General Training (Education Board or DSHE provided), and 4=In-house training from own institution; the hypothesis of this training variable and log_sdcq is analyzed through One-Way ANOVA.

Table 13: Analysis of Variance (ANOVA) for Training and log_sdcq

log of sdcq					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.851	3	0.284	17.590	0.000
Within Groups	5.031	312	0.016		
Total	5.882	315			

Since the **P value<0.01**; therefore this is significant even at a 1% level of significance. That means the strength of designing creative questions varies significantly based on training reception and not or different types of training.

4.2.2.2.2 Testing the hypothesis between Education Board/Region and strength of designing creative question (log_sdcq).

Hypothesis VII (Education Board/Region): The strength of the designed creative question paper by the teacher is varied based on Ten "Education Boards"

Since there was ten (10) education boards (two more groups) under this Education Board (Eduboard) variable; so that, this hypothesis of eduboard and log_sdcq is also analyzed through One-way ANOVA.

Table 14: Analysis of Variance (ANOVA) for eduboard and log_sdcq

log of sdcq					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.186	9	0.021	1.113	0.353
Within Groups	5.695	306	0.019		
Total	5.882	315			

Since the **P-value is >0.05**; therefore **this is not significant** at even a 10% level of significance. That means the **strength of designing creative questions is not varied significantly based on ten (10) education boards.**

4.2.2.2.3 Testing the hypothesis between Teacher's Teaching Section and strength of designing creative question (log_sdcq).

Hypothesis VIII (Section): It is assumed that the strength of designing Creative Question is varied based on Teacher's Teaching Section. As there are three (3) sections; Science, Business education, and Humanities; the hypothesis result of the teaching section and log_sdcq through ANOVA was as follows-

Table 15: Analysis of Variance (ANOVA) for teaching section and log_sdcq

log of sdcq					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.041	2	0.020	1.098	0.335
Within Groups	5.841	313	0.019		
Total	5.882	315			

As the P-value is >0.05; therefore **this is not significant** at even a 10% level of significance. Thus, the **strength of designing creative questions is not varied significantly based on three (3) sections** of secondary and higher secondary levels.

4.2.2.2.4 Testing the hypothesis between Education Institution Location (worklctn) and strength of designing creative question (log_sdcq).

Hypothesis IX (Working Location): Based on the District, Urban, and Village area's educational institution, the strength of designing creative Questions is varied. For the three (3) Educational Institutional locations, the hypothesis result with the log_sdcq through ANOVA was –

Table 16: Analysis of Variance (ANOVA) for Education Institution Location and log_sdcq

log of sdcq					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.094	2	0.047	2.540	0.080
Within Groups	5.788	313	0.018		
Total	5.882	315			

Here the **P-value is > 0.05**; therefore, **this is not significant** at the 5% significance level. Thus, the **strength of designing creative questions is not significantly varied based on education institution location.**

4.2.2.2.5 Testing the hypothesis between Types of Education Institution (typeeduin) and strength of designing creative questions (log_sdcq).

Hypothesis X (Types of Educational Institution): The Strength of designed creative questions is varied based on Govt. and Private Educational institutions.

There are two types of educational institutions, Government and Private. Thus, the hypothesis for this 'two groups' variable "Types of Education Institution (typeeduin)" with the strength of designing creative questions (log_sdcq) is analyzed through Independent Sample T-Test. The result was –

Table 17: Independent Samples Test for Types of Education Institution (typeeduin) and log_sdcq

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
log of sdcq	Equal variances assumed	0.010	0.922	-0.731	314	0.465
	Equal variances not assumed			-0.745	82.060	0.459

According to Levene's test, since the Equal Variances assumption is accepted, **the P-value is 0.465 > 0.05**. So, **this is not significant even** at a 10% significance level. Therefore, Thus, **the strength of designing creative questions is not significantly varied between Government and Private Educational institutions.**

Hence, it is seen that among five (5) categorical variables, **only training has a significant relationship with 'log_sdcq.'** The other four variables-Eduboard, Section, Working location, and Types of the educational institution have no significant relationship with 'log_sdcq.' It is here mentionable that if the five (5) categorical variables were directly put in the primary regression model, that time, it would be a long list of variables, as there were the highest 10 group's categorical variables. Therefore, these categorical variables' significance on 'log_sdcq' is tested before running in the regression result through the required bivariate analysis.

4.2.3 Base Regression Result

From the Bivariate Analysis of ten (10) independent variables, we found that five (5) continuous independent variables are significantly correlated with the dependent variable, that is-logarithm form of the strength of the designed creative question (log_sdcq) by the teacher. Among the five (5) categorical variables, only **training** has a significant relationship with the log_sdcq. Therefore, these six (6) independent variables, Competence, Willingness, Monitoring, Time, Experience, and Training, are considered for the base regression model.

Among the four (4) groups of training variables, '0=No training' is considered the reference group. The base regression model was –

Table 18: Base Multiple Linear regression Results

Dependent Variable	Strength of Designed Creative Question by the Teacher - Logarithm form (log_sdcq)		
	Coef.	St.Err.	p-value
Competence	.072***	.016	0.000
T_Willingness	.035***	.007	0.000
Monitoring	.091***	.007	0.000
Time	.007***	.001	0.000
Experience	.002**	.001	0.012
<i>Types of Training (ref: No Training)</i>			
Master training	.028	.019	0.141
General Training (Edu Board or DSHE)	.037***	.013	0.005
In-house training	.048**	.02	0.018
Constant	3.339***	.062	0.000
R-squared	0.638	Number of obs	316
F-test	67.498	Prob > F	0.000
*** $p < .01$, ** $p < .05$, * $p < .1$			

4.2.4 Post estimation Test

Some post-estimation diagnoses were conducted to check whether the model fulfills some fundamentals assumption of regression model building.

4.2.4.1 Checking the Multicollinearity

Variance Inflation Factor (VIF) is measured for this base model to check multicollinearity. The VIF score of the model was –

Table 19: Variance Inflation Factor (VIF)

Variable	VIF
Competence	1.103
T_Willingness	1.277
Monitoring	1.262
Time	1.245
Experience n	1.757
Master training	1.64
General Training	1.403
In-house training	1.073
Mean VIF	1.345

Here, all the VIFs are significantly lower than 10. The highest VIF is 1.757. Therefore, there is no problem with Multicolliniarity in this model.

4.2.4.1 Checking the Heteroskedasticity

Whether the heteroskedasticity problem or the Variances are constant or not of this model is checked through White's general heteroskedasticity test.

Table 20: White's general heteroskedasticity test

White's test for Ho: homoskedasticity against Ha: unrestricted heteroskedasticity $\chi^2(38) = 130.37$ Prob > $\chi^2 = 0.0000$ Cameron & Trivedi's decomposition of IM-test				
Source	χ^2	df	p	
Heteroskedasticity	130.370	38	0.000	
Skewness	24.240	8	0.002	
Kurtosis	2.330	1	0.127	
Total	156.940	47	0.000	

Here, the null hypothesis is assumed as homoskedasticity or variances are constant. Since the P-value is <0.05, therefore Null hypothesis is rejected. That means there is a problem with heteroskedasticity in this base model.

4.2.3 Final Multiple Linear Regression Result

To solve the heteroskedasticity problem, the Robust Standard Errors of this base model are measured. Therefore, the final Regression Model is designed considering the robust results of base regression.

Table 21: Final Multiple Linear regression Results

Dependent Variable	Strength of Designed Creative Question by the Teacher - Logarithm form (log_sdcq)		
	Coef.	St.Err.	p-value
Competence	.072***	.015	0
T_Willingness	.035***	.007	0
Monitoring	.091***	.01	0
Time	.007***	.002	0
Experience	.002**	.001	.046
<i>Types of Training (ref: No Training)</i>			
Master training	.028	.024	.25
General Training (Edu Board or DSHE)	.037***	.012	.003
In-house training	.048**	.023	.039
Constant	3.339***	.062	0
R-squared	0.638	Number of obs	316
F-test	45.499	Prob > F	0.000
*** $p < .01$, ** $p < .05$, * $p < .1$			

4.2.3.1 Model Fitness

From the model summary, we see that **the explanatory power of this model is well, as R-Square is 0.638. So, we can accept this model.** F –Value is significant at a 0.01 level regarding **the goodness of fit.** That means the model **is significant at a 1% level of significance.** The final regression model is built **solving with the heteroskedasticity problem.** Moreover, all the **VIF scores were lower than 10,** so there is **no problem with multicollinearity.** Therefore, it can be said, **the model's fitness is good.**

4.2.3.2 Regression Equation and Interpretation

The coefficient results show that all the five (5) continuous independent variables- Competence, T_Willingness, Monitoring, Time, and Experience, are positively related to the strength of designed creative questions. If these variables are increased, the strength of the designed creative question will also be increased. In the case of training, though Master training's coefficient is not significant at a 5% level of significance, the teachers who received any three types of training, their strength in designing creative questions is higher than those who didn't receive training. Here who didn't receive training are the reference category for the categorical Training variable. The qualitative interview will explain why the strength of the designed creative question of the master training receiver is not significant. Finally, The regression equation is –

$$\log_sdcq = 3.339 + 0.072 \times \text{Competence} + 0.035 \times \text{T_Willingness} + 0.091 \times \text{Monitoring} + 0.007 \times \text{Time} + 0.002 \times \text{Experience} + 0.037 \times \text{General Training} + 0.048 \times \text{In-house Training}$$

Taking anti log on both sides, the equation is -

$$sdcq = \exp(3.339) * \exp(0.072 \times \text{Competence}) * \exp(0.035 \times \text{T_Willingness}) * \exp(0.091 \times \text{Monitoring}) * \exp(0.007 \times \text{Time}) * \exp(0.002 \times \text{Experience}) * \exp(0.037 \times \text{General Training}) * \exp(0.048 \times \text{In-house Training}).$$

The coefficient of Competence, $\exp(0.072) = 1.075$, indicates that with one **unit increase in a teacher's competence level**, we can expect to see about $(1.075-1)*100 = 7.5\%$ **increase** in the level of "strength of the designed creative question (sdcq)" by the teacher. In the same way, the coefficient of T_Willingness, $\exp(0.035) = 1.036$, indicates that with **one unit increase in teacher's willingness level**, we can expect to see about $(1.036-1)*100 = 3.6\%$ **increase** in the strength level of designed creative question. Similarly, it can be said for Monitoring's coefficient, $\exp(0.091) = 1.095$, that with **one unit increase in monitoring level**;

the strength of the designed creative question will be increased by $(1.095-1)*100=9.5\%$. If the teacher **gives an extra one unit of time**, the strength level of their designed creative question will be enhanced by $\exp(0.007) = 1.007 = (1.007-1)*100=0.7\%$. Similarly, it can predict that if the **teacher is one year more experienced**, their strength level in designing creative questions is increased by $\exp(0.002) = 1.002 = (1.002-1)*100 = 0.2\%$. For the categorical independent variable, the teacher **who didn't receive training is considered the reference group**. Therefore, the coefficient of General Training, $\exp(0.037) = 1.038$, indicates that the strength of the designed creative question (sdcq) will be $(1.038-1)*100=3.8\%$ **higher** for the teacher **who received general training** than the teacher who didn't receive any training when other variables are adjusted or fixed. In the same way, the coefficient of In-house Training, $\exp(0.048) = 1.049$, explained that the teacher **who received in-house training** has a strength level of designed creative questions $(1.049-1)*100 = 4.9\%$ **higher** than the teacher who didn't receive any training.

In a nutshell and from the priority viewpoint, it can be said that the highest three **continuous** variables are **Monitoring, Competence, and Teacher's Willingness**; One unit increase of these variables can enhance the strength of the designed creative question by **9.5%, 7.5%, and 3.6% respectively**.

On the contrary, **Experience and Time** have a **comparatively lower influence** on the strength of designed creative questions since these increase the strength of the designed creative question by only **0.2% and 0.7%**, respectively.

Again, both **In-house** and **General Training** can enhance the strength of the designed creative question by **4.9% and 3.8 %**, respectively.

The causal explanation of these relationships will be analyzed in the qualitative interview.

Table 22: Summary of the interpretation of regression equation

One Unit Increase Independent Variables		Coefficient Calculation from Regression Equation	Expected changes in the “Strength of Designed Creative Question (sdcq)” by the teacher Dependent Variable
One unit increase in Monitoring - 1 st		$\exp(0.091) = 1.095$, $(1.095-1)*100 = 9.5\%$	9.5% increase in “sdcq”
One unit increase in Competence - 2 nd		$\exp(0.072) = 1.075$ $(1.075-1)*100 = 7.5\%$	7.5% increase in “sdcq”
One unit increase in T_Willingness		$\exp(0.035) = 1.036$, $(1.036-1)*100 = 3.6\%$	3.6% increase in “sdcq”
One unit increase in Time		$\exp(0.007) = 1.007$ $(1.007-1)*100 = 0.7\%$	0.7% increase in “sdcq.”
One unit increase in Experience		$(0.002) = 1.002$ $(1.002-1)*100 = 0.2\%$	0.2% increase in “sdcq.”
Training – 3 rd	One unit increase in In-house training	$\exp(0.048) = 1.049$, $(1.049-1)*100 = 4.9\%$	4.9% increase in “sdcq” than who didn’t receive training
	One unit increase in General Training (Edu Board or DSHE)	$\exp(0.037) = 1.038$, $(1.038-1)*100 = 3.8\%$	3.8 % increase in “sdcq” increase than who didn’t receive training

4.3 Reliability and Validity

For regression model building, one of the major parts of this research was measuring the dependent variable "strength of the designed creative question (**sdcq**)" by the teacher. The **Cronbach's alpha** for the 20 questions based on which this "**sdcq**" variable is measured was **0.7285**, higher than **0.7**. This score indicates the **high internal consistency** of these 20 questions and **the reliability** of measuring this "**sdcq**" variable. The **Variance Inflation Factor (VIF)** for the independent variables was **very lower than 10**. Even the highest VIF was 1.757 indicating there are **no multicollinearity or autocorrelation problems**. The adjusted **R-Square** of the final regression model is **0.638**, which is **well** in terms of the model's explanatory power.

The regression model is **fit 1% level of significance**. In addition, there **were no heteroskedasticity problems** in the final regression result. These factors ensured the **reliability and validity** of this study.

4.4 Qualitative Interview

4.4.1 Interviewee

The interviewee's information is depicted here. The identity was kept anonymous as per the interviewee's request.

Interviewee Code	Interviewee Characteristics	Number
	Teachers involved with creative question preparation	6
P4, P6	Two (2) teachers from Science	
P1, P5	Two (2) teachers from Business Education	
P3, P9	Two (2) teachers from Humanities	
	Among those, three (3) teachers also served as Master trainers of creative questions training and Chief examiner of the education board	
P2	One (1) Associate Professor of the Teachers Training College (TTC)	1
P7	One (1) Principal of Government College	1
P8	One (1) Training Specialist from National Academy for Educational Management (NAEM)	1
Total Interviewee		9

4.4.2 Interview data analysis

Interview Question 1: Should the Creative-Question-based Summative Assessment system be continued in the coming revised curriculum			
No	Themes	Interview Data	Codes
1.1	Continuation of Creative Question-based Summative Assessment System	<p>Creative question is effective, but teachers cant's prepare questions correctly. (P1, P5)</p> <p>The problem is not the creative question method; the problem is the teacher's quality, training lackings, and weakness of the system's ingredients. (P2, P6)</p>	<p>1.1</p> <p>Should be continued</p> <p>-With necessary modification</p> <p>Finding gaps and faults</p>

		<p>It should be continued. But the structure would be different for different subjects. (P2, P7, P9)</p> <p>No need for the involvement of a new method; this existing method should be developed. The faults of this method should be found through research. (P3)</p> <p>Some new features could be added without continuing all portions of the creative question method. (P4, P8)</p>	through Authentic research
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Interview Question 2: In your viewpoint, what is the **overall scenario of the teacher's strength level** in designing creative questions?

Follow-up Question: **(I)** This survey of 2022 shows that 50% of teachers can't prepare satisfactory creative questions; Academic Supervision Report, 2019 said, 42% can't prepare creative questions. What could be the **cause of this difference?**

(II) In which part do most teachers face difficulty?

No	Themes	Interview Data	Codes
2.1	Overall strength level in designing creative question	<p>There is a huge lacking in designing creative questions. (P1, P4, P5, P7)</p> <p>There is a significant difference among the various teachers in developing creative questions. (P2, P3, P9)</p> <p>Sometimes, the designed creative question is not expected in the Board level exam. So, the situation of marginal level, you can imagine. (P3, P8)</p>	2.1 - Mentionable lackings in the strength of designed creative question
2.2	Causes of the difference	<p>At the Secondary level, some new teachers who joined from Non-Cadre are comparatively better at designing questions than the previous teacher. (P2, P7, P8)</p> <p>Last few years, some new teachers have been trying to build expertise from their initiatives. (P1, P3, P7)</p> <p>Some Institutions are increasing their in-house training facilities. (P4, P6)</p>	2.2 - Within the last three years, teacher's strength level somehow increased for- New Recruitment, Own initiative, In-house training
2.3	Strength in designing different	Can not prepare proper, attractive, relevant stem. (P5)	2.3 - Can not differentiate between

	<p>parts of the creative question.</p> <p>Application and Higher-Order level question.</p> <p>Stem</p>	<p>Can prepare Knowledge, Comprehension, and Application type questions. But, in most cases, Higher-order questions become the application level's question. (P1, P5, P7)</p> <p>Some teachers prepare the higher-order question by adding "show logic" to the application-level question. (P2)</p> <p>The knowledge, based on which knowledge level question is designed, based on the same knowledge/information, a Higher-order question is created. (P4).</p>	<p>Application and Higher-Order level question.</p>
2.4	<p>MCQ Part.</p>	<p>MCQ's Question design scenario is very poor in Internal Examination. Some portion is maintained in the Board examination. (P5)</p> <p>Some teachers, giving 25 knowledge-level questions in a set of MCQ Papers, said I prepared the question paper. (P4).</p> <p>In some question papers, 25 MCQs are memory dependent, meaning the teacher instigates memorization. (P4)</p> <p>In SSC and HSC Examination, Multiple Completion MCQ and Situation Set MCQ are decreasing daily, whereas, in University admission tests, students are assessed with this critical MCQ. (P2, P6)</p> <p>Many teachers can't prepare Multiple Completion MCQ and Situation Set MCQ as Higher-Order MCQ. If they can develop this type of MCQ, students would not need to go through University Admission coaching further to become experts in solving these types of MCQs. (P2).</p> <p>Earlier, these issues were discussed in the teacher community and media. Now, it's become as usual. (P2)</p> <p>Designing Multiple Completion and Situation Set MCQ requires huge brainstorming, in-depth subjective knowledge and sufficient time. (P5)</p>	<p>2.4.1 - Apathy to give Multiple Completion and Situation Set MCQs in MCQ Paper. Causes-</p> <p>2.4.2 - Need for proper brainstorming, adequate skill, and sufficient time.</p>

		Especially in most cases at the school level, these issues of MCQ are almost not practiced.	
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Interview Question 3: Why most teachers can not design qualitative Creative Question Paper.

Follow-Up Question: How are the different issues related to the strength of designing creative questions?

No	Themes	Interview Data	Codes
3.1	Competence	<p>Lackings of Subjective knowledge (P1, P3)</p> <p>The top brilliant students should be recruited as teachers to build a nation with an enlightened education. But in our civil service examination, in most cases, the students doing better are going to Foreign Service, police service, customs service, etc., instead of education service. (P1, P3, P5)</p> <p>Though the civil service-education cadre officers have good quality, they are very minimal in number. The non-government teacher's scenario is very frustrating. This non-government teacher is the most considerable portion of all the teachers. (P1, P2, P4, P7)</p> <p>In the non-government sector, almost 2/3 of the teachers do not have the expected quality. Because here, the recruitment process is problematic. Before establishing NTRCA, most non-government teachers were recruited based on Political lobbying, nepotism, and other forms of corruption. So qualitative competent teachers were not recruited as non-government teachers. Therefore, their competency is not proven, and they entered the teaching profession with low quality. (P1, P2, P5, P6, P7)</p> <p>Not only 3/12 days training in Bangladesh, even if you train these lower competent people at the international level for one month; the quality of their</p>	<p>3.1.1 - Government teacher is comparatively competent.</p> <p>3.1.2 - Recruitment is faulty for the non-government teacher. So competent teacher is not recruited.</p> <p>3.1.3 - Recruitment should be-</p> <p>Free, fare</p> <p>Without nepotism, lobbying, and corruption for the non-government teacher.</p>

		<p>designed creative questions will not be improved since they don't have the expected teaching eligibility. (P4, P7)</p> <p>The teaching profession should make attractive. The teachers who can truly realize the word "creativity" that teachers should be included in the education system. (P1, P3, P9)</p>	
3.2	Monitoring	<p>Proper monitoring is almost absent. (P1, P2, P3, P4, P9)</p> <p>There should have an internal committee to evaluate the designed question. (P1)</p> <p>Though some quality is evaluated or moderated in board examination as external monitoring, there is almost no internal monitoring in the institution's assessment. (P2, P3, P6)</p> <p>There is practically no internal monitoring. If the institution head monitors performing his responsibility correctly, the quality would be ensured. The institutional capacity should be developed for monitoring. (P3, P6)</p> <p>There should have compulsory monitoring of designed questions and monitoring for teachers before and after training (P8, P9)</p> <p>Sometimes, we heard that some teachers faced disciplinary actions for copying directly from a guidebook or using some insulting or controversial issues in Board exam questions. But, we didn't encounter any internal monitoring to increase teachers' consciousness. (P1, P4)</p> <p>Most institutions have this mentality "Our institution's students will answer with this question, why there is needed so monitoring or moderation if the passing rate is good, that's better." (P4, P7)</p> <p>The maximum moderation board thinks that if any question is differently creative, it is a tricky question. So the board omits</p>	<p>3.2.1 - Lackings of internal monitoring</p> <p>3.2.2 - The apathy of institutions head to monitor</p> <p>3.2.3 - Controversial external monitoring</p>

		this. But I designed this question not for all students; only 5-10% of brilliant students could answer this. To choose that 5-10%, I have designed this question. (P2, P5)	
3.3	Willingness	<p>Requiring immense brainstorming and time, they don't give that sort of effort. (P1, P2, P4, P5, P6, P7, P8)</p> <p>It's easy to copy from the guidebook without brainstorming, just by changing the figures and name of the problems. (P2, P3, P5, P7)</p> <p>In some institutions, if the teacher designs a creative thinking-oriented question following the guideline, it may seem critical to some students. That time, the headteacher rebukes the teacher, why do you prepare such a tricky question? With this challenging question, the passing rate will be lower. If the passing rate is lower, the guardians also pressure the teachers. Sometimes, the managing committee recommends retrenching that teacher because of a lower passing rate in his subject. At that time, the teacher again returns to design guidebook-oriented ready-made questions. (P2, P5)</p> <p>Even sometimes, in public board exam question settings, wholly new or comparatively critical creative question is not accepted, fear of a reduction in passing percentage. Therefore, the teacher prepares average standard questions. But, it was supposed not to repeat any question in the creative question paper. (P4, P3, P5, P7)</p> <p>Especially, new teachers are eager to design qualitative creative questions. But, we can't ensure them the proper environment. (P2, P9)</p>	<p>3.3.1 - Requires brainstorming and time</p> <p>3.3.2 - Easy to copy from the guidebook</p> <p>3.3.3 - If the question is genuinely creative, authority omits this as a critical question.</p> <p>3.3.4 - Pressure from authority and guardians to make easy questions.</p>
3.4	Time	Giving proper time by the teacher is a relative issue. It depends on the teacher's competence and logistic support. (P1, P6)	3.4.1 Time is a relative issue

		<p>A very little honorarium is paid for designing a creative question script. So they would not be motivated to give proper time. (P2, P4, P5)</p> <p>Even there is no special recognition for a qualitative creative question design. (P2)</p> <p>The teachers, who have laptops or printers, can prepare quickly. But, the teacher, who doesn't have a laptop, can not maintain any question bank. Composing outside requires enormous time. (P1, P3, P4, P5, P7, P9)</p> <p>A considerable amount of time is needed to design a set of qualitative creative question papers. But authorities don't give us enough time. Sometimes, only within 2-3 days deadline, they instruct to submit a question paper. After finishing the institution's routine task, own home task, and how much time is remained, with that time, it's tough to prepare a qualitative creative question paper. (P2, P6)</p>	<p>3.4.2 The teachers who have logistic support require less time.</p> <p>3.4.3 Little honorarium demotivate to give proper time</p>
3.5	Experience	<p>All the senior teachers are not equally skilled in designing creative questions. Sometimes, some junior teachers can develop more effective creative question. (P5, P6)</p> <p>Over time or length of service, the strength of the designed creative question is increased. (P3)</p> <p>Experience sometimes provides better clues to design creative questions. (P2)</p> <p>It is not only the central fact. Teachers' competence is related to this issue. (P4)</p>	<p>3.5.1 - Experience provides some better clues</p> <p>3.5.2 - Over time, strength increased.</p> <p>3.5.3 - Experience is not the central fact.</p>
3.6	Training	<p>There are some out of grammar (guidelines) speech to design creative questions. So that, the company of trainer or training is needed. (P3, P5)</p> <p>It's not easy to teach all the tools and techniques of structured creative question preparation within three days of training. (P1, P3, P4, P8)</p>	<p>3.6.1 - Insufficient Training duration</p> <p>3.6.2 - The questionable selection process of trainee</p>

		<p>Due to some faults in the training mechanism, the creative question method has not achieved its ultimate objective. (P1, P5, P7)</p> <p>Since some teachers don't have in-depth subjective knowledge, therefore, even after training, they can't design expected creative question papers. (P2, P6, P8)</p> <p>Sometimes teachers include their names in the master training with lobbying. (P4, P5)</p> <p>For some unskilled master trainers, sometimes, controversy is risen among the teachers for designing creative questions, which is ridiculous. (P5, P6)</p> <p>I am a master trainer, and after 12 days of training, I am not satisfied with what I gained or learned. (P4)</p> <p>There is a quality difference among the master trainers selected from the field level since when we sit for Board examination' question setting; there were controversial issues on some familiar topics with some teachers who also received master training. (P5)</p> <p>There were different opinions among those master trainers who received training from the central level and those who received training from the local level. (P1, P5, P7)</p> <p>In-house training is very effective, even than the formal general training. (P3, P9)</p> <p>We should not wait for the education ministry's training. In-house training should arranged with the expert teachers. (P9)</p>	<p>3.6.3 - Trainee selection for master training is faulty.</p> <p>3.6.4 - Sometimes selected based on experiences.</p> <p>3.6.5 - Master trainer's skills lackings</p>
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Interview Question 4: Besides the question design, **what other issues** needed to be considered **to strengthen the creative question-based summative assessment system.**

No	Themes	Interview Data	Codes
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4.1	Answer Script Evaluation	<p>Besides the creative question design, training and emphasis should be given to the 'answer script' evaluation. There is no content on answer script evaluation in the three (3) days general training syllabus. (P3)</p> <p>Sometimes authorities ordered the teacher to evaluate 600 students' answer scripts within ten (10) days. No extra leave is given to that teacher, or his daily workload is not reduced. He is doing his regular over-loaded routine tasks, again scrutinizing these answer scripts within ten days. Therefore, as usual, he just turns the page and gives numbers. One student writes for 3/4 hours, and the teacher evaluates this script within 3/4 minutes. Therefore, it is becoming a hypothetical evaluation, not an actual evaluation. (P1, P6).</p> <p>Sometimes, the board evaluates many answer scripts with some selected teachers. But they could disseminate it to all the teachers. In this system, you can't assess the answer script properly. (P2)</p> <p>Sometimes, public exam answer scripts are distributed to the known teacher of the board's employee or based on nepotism. Some teachers do lobbying to get these answer scripts. Being financially benefitted is the main issue for those evaluators or teachers, not the actual assessment. (P8)</p> <p>Doing some optional tasks (like filling the circle of the teacher's personal information) requires more time than assessing the main body of the answer script. This time should be reduced with any innovative system. (P5, P7)</p>	<p>4.1.1 - Having content on answer script evaluation in the current training syllabus</p> <p>4.1.2 - Insufficient time to scrutinize the answer script</p> <p>4.1.3 - Distribution of answers scripts by the board without professionalism and based on lobbying, nepotism, and corruption.</p> <p>4.1.4 - The optional task of answer script evaluation should be reduced</p> <p>4.1.5 - Some Qualitative teachers and best institution teachers refuse to evaluate answer scripts</p>
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		<p>Sometimes, some qualitative teachers refuse to evaluate answer scripts or to be invigilators in the examination hall because they don't have financial insolvency or are powerful. At that time, some non-government teachers, who have a financial ruin, do lobbying to get answer scripts for evaluation. But, he doesn't have the expected quality to evaluate the public exam's answer script. (P1, P4)</p> <p>The students of Dhaka college are the best, but all the teachers of Dhaka college are not the best. Some teachers who are best in terms of power and lobbying are getting posted in Dhaka college. That teachers do not want to evaluate the answer script. At that time, the board said we could not assess the public exam's answer script with the best institution's teacher. (P1, P7)</p>	
4.2	Recruitment	<p>The recruitment process is not good. Specially non-government teachers recruitment is not transparent and systematic. (P1, P4, P5, P7)</p> <p>At the secondary level, Most of the teachers are non-government. The competence level of the recruited teachers at the non-government secondary level is abysmal. (P1, P9, P8)</p> <p>In the non-government teaching profession, most brilliant students don't want to join at first, but when they don't find any other better job, they come to non-government teaching. (P1, P2, P3).</p>	<p>4.2.1 - The non-government teacher recruitment process is not transparent and systematic.</p> <p>4.2.2 - The quality of the non-government teacher is abysmal</p>
4.3	Honorarium for Question design and answer script Evaluation	<p>The honorarium for assessment should be increased. No teachers will give 10 hours for designing a question for only Tk.100.</p> <p>Do not give good honorarium; at least you can provide good honor." (P2)</p>	4.3 - The honorarium for creative question design and answer script

		You are not giving anything but wanting everything, so how will you expect quality? (P4)	evaluation should be increased
4.4	Logistics support for teacher	Teachers should be provided logistics support like laptops, computers, printers, internet, etc., so they don't need to go outside to compose and analyze their question paper. (P1, P3, P7, P9)	4.4 - Logistics supports like, laptops, printers, and the internet should be provided to teachers.
4.5	Result-oriented competition	<p>Result-based competition forcing to deteriorate the quality of creative question design. Sometimes, the teacher designs questions keeping in mind that a maximum number of students would be passed. (P1, P3, P4, P6, P8, P9)</p> <p>For example, in my chemistry subject, students are not enthusiastic about knowing chemistry; they are eager to secure an A+ grade. (P4)</p> <p>In the internal examination, there is an invisible inter-departmental competition within the institution. As a teacher, I will also be evaluated in this competition. That time, I designed the question in such a way so that 100% of the student would pass. But, if I made question what kind was supposed to design, 100% of students would never pass. (P1, P5)</p> <p>Inter-board result/passing rate competition in the public examination is very dangerous. For this reason, sometimes, students are not correctly evaluated. (P5, P8)</p> <p>Sometimes, even if a teacher logically scrutinizes an answering script, he is called by the board authority to increase marks. This way, the passing rate/GPA-5 is raised, but the quality is not improved. (P2, P5)</p>	<p>4.5.1 - Result or grade-oriented competition reduces the quality of the creative question design and answer script evaluation</p> <p>4.5.2 - Competition within education boards and institutions.</p> <p>4.5.3 – Open Publication of Annual Internal examination creates social pressure and influences assessment.</p>

		<p>But a high or low passing rate is not the success or failure of the board. The education boards are only involved with managing public exams, not involved with classroom teaching. (P5)</p> <p>Open publication of annual internal examination results creates tremendous pressure on students. For this open publication, competition is happening not only among the students but also among the guardians, making an invisible social pressure to students and somehow influencing the answer script evaluation. (P2, P6, P8, P9).</p>	
4.6	Marking	There should not have specific number-based marking. The marking should be "Excellent, Good, Average" type. (P2)	4.6 - Marks should be "Excellent, Good, Average" type, not any specific number
4.7	Teacher Student Ratio and Student's perspective	<p>Teacher-student ratio should be reduced significantly. (P1, P3, P6)</p> <p>Sometimes, students complain that answering seven essay-type questions within 2.5 hours is tough. But the teacher couldn't teach how to answer within short writings. Besides, the evaluator should not expect the student would write five pages within 5 minutes. (P2, P4)</p>	4.7 - Reduce teacher-student ratio to focus on individual student's need
4.8	Strengthening BEDU	<p>The Bangladesh Examination Development Unit (BEDU) should be revitalized by recruiting proper human resources. (P1, P2)</p> <p>Most of the teachers didn't hear the name of BEDU. (P1)</p>	4.8 - Should revitalize and active BEDU with adequate human resources.
4.9	Well dissemination of Creative Question Guideline	Most of the teachers didn't receive the Creative question preparation guideline. Only the teachers who got training got it. It should be circulated openly to all the teachers. So that, even if they don't get the training,	4.9 - Should disseminate Creative Question guidelines widely.

		they can get a fundamental concept quickly to design creative questions. (P1)	
4.10	Different question patterns for different subjects in the revised new curriculum	<p>Not typical, different question patterns for the different subjects should be launched within the creative question structure. The main structure could be the same. The four skill levels based on Bloom's taxonomy will be evaluated in all subjects. (P1, P2, P3, P5, P6)</p> <p>Or separate guidelines/question patterns for Science, Business Education, and Humanities. (P4, P7)</p> <p>It should not be mandatory to assess in exams through the same four patterns of questions in all subjects.</p> <p>For example, in physics, we are saying no need to prove $F=ma$; if a student can apply this with application-level math, that's all. But, if a student doesn't know how this formula is evolved, how will he introduce the related term of this formula, like momentum, distance, etc.? (P2)</p> <p>The structured descriptive statement type stem is not applied in all subjects. Like in NewZealand, we saw, "For a physics question, a youtube video link or website link is given; student watching that video, solve the question. Even to solve a physics problem, the formula and unit are shown in the question paper; students don't need to memorize that formula or unit. Just they judge whether students can solve the problem. (P2)</p> <p>The creative question should have both in the Summative and Formative assessment part. But should not be confined to any strict rule. Based on each subject pattern, the creative</p>	<p>4.10.1 - Different question patterns for the various subjects should be launched within the creative question structure.</p> <p>4.10.2 - The four skill levels based on Bloom's taxonomy will be evaluated in all subjects.</p> <p>4.10.3 - The creative question should be continued in the revised curriculum's Summative and Formative assessment with the required modification.</p>

		question will be designed. There may have some specific guidelines. But should give the teacher more space to visualize his creative thinking. (P2, P3, P6)	
4.11	Creative teaching for creative question-based assessment	<p>At first, need to teach creatively; then, I should develop the creative question. (P2, P3, P6)</p> <p>Creative teaching should be ensured for creative question-based assessment. (P4, P7)</p>	4.11 - Should be ensured creative teaching besides creative question-based assessment
4.12	Content of SSC and HSC Syllabus	<p>HSC syllabus is very vast considering the time. Sometimes, honors-level topics are included in the HSC level, which is also unrelated to the SSC level. (P2)</p> <p>The applied part of every subject related to daily life should be included in the syllabus. For example, history means not only the political history, economic history, evolution history, biological history, scientific history, etc., but should be included in the history syllabus of SSC and HSC. (P3)</p> <p>Text book should be updated with creative question settings. (P1, P4, P6)</p>	<p>4.12.1 - HSC syllabus should be reduced</p> <p>4.12.2 - Textbook contents of SSC and HSC should be updated with creative question settings and from the applied viewpoint.</p>
4.13	Empirical data-based research	<p>Regular research should be continued on the field-level assessment scenario. (P2, P3, P5)</p> <p>What kind of research importance has been given to inventing Corona Vaccine; more research importance should be given to this faulty education system. (P1)</p> <p>An empirical field-level data-based research is crucially needed to identify "Within the basic structure of creative question design, what kind of problems are faced by the teacher in different parts." (P5)</p>	4.13 - Empirical field-level data-based research should be conducted on the existing creative question-based assessment scenario.

4.14	Education Experts should run Education Ministry	<p>To formulate curriculum and assessment policy, the recommendation of university teachers and bureaucrats always gets priority. But in the case of secondary, higher secondary education curriculum and assessment policy development, the rights, responsibility, and eligibility only belong to education cadre officers as they are field-level practical experience-based experts in this field. Just if you give the whole responsibility of the education ministry to the education cadre instead of the administration cadre, you see, within ten (10) years, almost all the problems of the education sector will be solved. (P3).</p> <p>The officers coming into the education cadre service are also recruited through the same Bangladesh Civil Service examination along with other cadre services and following all the same steps. Indeed, they can drive the whole education sector. (P1, P5)</p> <p>The quality of the human resources related to educational management should be strictly ensured. (P7, P8)</p>	<p>4.14.1 - If the BCS-Education cadre officers run the whole education ministry, many education problems, including assessment-related issues, will be solved automatically.</p> <p>4.14.2 - Quality of the human resources related to educational management should be strictly ensured.</p>
4.15	Coordination	<p>Most teachers do not know what the board wants; the board does not know what teachers are teaching. Effective coordination should be among Teachers, students, and the Education Board (who manage the overall assessment). (P1, P5)</p> <p>All the components of education management should be integrated. If there is a gap anywhere, the whole education system will collapse. (P1)</p>	<p>4.15.1 - There should have effective coordination among different education management organs</p>

CHAPTER FIVE

DISCUSSION

Summary

This chapter discusses qualitative and quantitative data analysis results to summarize all the research question answers. The relevant table, graph number of the quantitative part and theme, and code number of the qualitative part are mentioned in the respective discussion within the bracket. Some information from different government reports and documents is also triangulated with some features of the combined discussions of quantitative and qualitative analysis findings. The answers to this study's research questions are depicted in this chapter.

Based on the data analysis of chapter four, here, the author discusses the findings following the research questions' requirements. From the quantitative data analysis parts, some sub-question answers are discussed from the exploratory viewpoint. The qualitative data findings are used as an explanatory tool to analyze the causal relationship of some quantitative findings. Some issues of quantitative data analysis and qualitative interview findings are triangulated with the literature or documents to increase the validity and reliability of those findings. To more visualize the discussion, at first, the **research questions** are depicted here again-

Q 1. What are the various factors associated with the strength of designing creative questions, and how are they interrelated?

Sub-Question-

S.Q 1.1 What is the teacher's **overall strength level** of the designed creative questions?

S.Q 1.2 What is the **strength level in the different parts** of the creative question designed by the teacher?

S.Q 1.3 How are **the different factors interrelated** with the **strength of designing creative questions**?

S.Q 1.4 What are the **Causal Explanations** of those relationships?

Q 2. Besides the question design, what other issues should be considered to strengthen the Creative Question-Based summative Assessment system?

Before discussing the research question wise discussion, first, the following findings are explained –

5.1 Opinion on Continuation of the creative Question-based summative assessment system:

Figure 7 (page-49)¹⁸ of the data analysis part illustrates that **73.10% of teachers expect to continue** this creative question-based summative assessment system in the coming revised curriculum. Most **interview participants** also opined **to continue** this summative assessment system subject to some required modification through original research (*Code 1.1, pages 72-73*). The comment of Dr. Jafor Iqbal, a renowned educationalist of Bangladesh, is mentionable in this regard - *"Any good question means creative question. The educators of Bangladesh do not invent the creative question method. This method is developed based on Bloom's Taxonomy. Students from all over the world are evaluated following Bloom's taxonomy. Just we renamed the application of Bloom's Taxonomy as Creative Question Method to be euphonious in our country. But for whatever reason, we could not build the required confidence of the teacher to prepare creative questions"* (Iqbal M. J., 2016). Therefore the **creative question-based summative assessment system can be continued** by adjusting any required modification.

5.2 The overall strength level in designing creative question

S.Q 1.1 What is the teacher's overall strength level of the designed creative questions?

It is found in *Table 2 (page 49)* that the **overall average strength** of the designed creative question by the teacher is **60.69**, with **a total score of 100**. Then this achieved score by the teacher is divided into three groups; poor (40-59), good (60-79), and Excellent (80-100). 50.0% of teachers can prepare poor-level creative questions, 44.94% can design a good creative question, and 5.06% can prepare excellent creative questions. Considering Poor as Not-Satisfactory and Good, and Excellent as Satisfactory, it is found; that **50% of teachers' prepared creative**

18 This type of graph and table numbers are hyperlinked. With pressing the ctrl key, Clicking on the bracketed word goes to the respective page. Besides, the table of contents of this file is visible on the left side as a bookmark, if the bookmark option is activated.

question is satisfactory, and 50% of teachers' designed creative question is Not-satisfactory (Table 3, Page 50). The Academic Supervision Report, 2019 of DSHE also showed that 42% of teachers couldn't prepare the expected level's creative question (Mushtaq Ahmed, 2019a). Regarding the strength difference between this 2022 study (50%) and the 2019 Report (42%), interviewees opined that some new teachers became involved in question preparation within the last three years. They developed themselves from their self-initiative and in some institutions through in-house training. Besides, all the teachers, especially young teachers, have been trying to increase their strength level in designing creative questions within the last few years by gaining expertise (*code 2.2, page 73*). One comment of an interviewee who is a trainer at the teachers' training college is -

"At the Secondary level, some new teachers who joined from Non-Cadre are comparatively better at designing questions than the previous teacher."

5.3 – Strength level in designing different parts of the creative question

S.Q 1.2 What is the **strength level in the different parts** of the creative question designed by the teacher?

The survey questions 3 and 4 of *Table 4 (page 51)* show that the **mean score** in designing **Application and Higher-Order skill level** questions is **2.09 and 1.92**, respectively, on the enormous **scale of 5**, which is considerably lower. That means the teacher's **strength level in designing Applications and Higher-order skill level questions is markedly lower**. Almost all the interviewees agreed in this context. They said most teachers couldn't differentiate between Application and Higher-order skill level questions (*code 2.3, pages 73-74*). One interviewee opined, *"Some teachers prepare the higher-order level question by just adding "show logic" to the application-level question."*

Another **considerable part is MCQ**. Most teachers can not prepare the expected level's creative MCQ question as per guidelines. The **mean score** for most of the survey questions **related to MCQ is lower than 3**. For question's 8,9,10,11, the **mean score is near 2.5** on the enormous **scale of 5 (Table 4, Page 51, 52)**. Most of

the interviewees agreed on this part with some insightful comments. They said most teachers could not prepare multiple-completion and situation-set MCQs to judge students' application and higher-order skills (*theme 2.4, code 2.4.1, page 74*). Therefore, in most cases, with just knowledge level questions, they prepare the whole MCQ part. One very critical and exciting comment in this regard was –

"Many teachers can't prepare Multiple Completion MCQ and Situation Set MCQ as Higher-Order level's MCQ. As a result, in SSC and HSC Examination, Multiple Completion MCQ and Situation Set MCQ are decreasing daily, whereas, in University admission tests, students are assessed with this critical MCQ. If the teacher could practice this type of MCQ as mentioned in the guideline, students would not need to go to University Admission coaching further to become experts in solving these types of MCQs in the admission test. Earlier, these issues were discussed in the teacher community and media. Now, it's become as usual."

5.4 – Factors associated with the strength of designing creative questions?

S.Q 1.3 How are the different factors interrelated with the strength of designing creative questions?

The **Final regression results of Table 21 (Page 68)** shows that six (6) **factors- teacher's competence, willingness, monitoring, time, experience, and training** significantly related to the strength of designing creative question among the ten (10) **preliminary assumed variables**. Among these, **five are continuous**, and one (**training**) is **categorical** variables, where 'no received training' is the **reference group**. From the summary of the regression equation interpretation (*Table 22, Page 71*), it is found that for one unit increase of **monitoring, competence, teacher's willingness, time** given by the teacher, and **experience**, the strength of the designed creative question (sdcq) by the teacher is increased by **9.5%, 7.5%, 3.6%, 0.7%, and 0.2% respectively**. In the case of training, one unit increase of **In-house Training** and **General Training** can enhance the strength of the designed creative question by **4.9% and 3.8 %**, respectively than the teacher who didn't receive training.

Among these six variables, **monitoring, competence, training, and teacher's willingness** is the **highest four (4)** variables according to their **importance priority**. Generally, it is thought that training is the most influential factor, **but, here, it is found that monitoring (1st) and Competence (2nd) are more influential than training (3rd) to ensure the quality of the designed creative question by the teacher**. Almost all the **interviewees opined** that monitoring, competence, training, and teacher's willingness are the top most prioritized factors needed to ensure the teacher's strength of the designed creative question. **Time** given by the teacher and **teacher's experience** or length of service has **comparatively lower importance**. Most interviewees said that experience or a teacher's length of service has some impact but comparatively a lower impact on the strength of the designed creative questions by the teacher. More details (code-wise) are explained in the next part.

5.5 – Causal Explanations of relationships

S.Q 1.4 What are the **Causal Explanations** of those relationships?

To find out how monitoring, teacher's competence, willingness, time, length of service or experience, and training influence the strength of designed creative question by the teacher, some interesting in-depth story is explored.

5.5.1 Monitoring:

Almost all the interviewees opined that due to **not having any structured monitoring system** within the institutions as **internal monitoring (theme 3.2, code 3.2.1, page 76)**, a large portion of the teacher doesn't want to ensure the quality of their designed creative question. One senior teacher said -*"There should have an internal committee to evaluate the designed question."* Sometimes, the **institution head shows apathy (code 3.2.2, page 76)** in performing any monitoring activities. The principal described this fact: *"Most institutions have this mentality that Our institution's students will answer with this question, why does there is needed so monitoring or moderation if the passing rate is good, that's better."*

Although there is some moderation or supervision as **external monitoring in public board exams (SSC/HSC)**, sometimes **this monitoring is controversial**

(code 3.2.3, page 76). One interviewee who was the master trainer explored this issue with this statement *"Many moderation boards think that if any question is differently creative, it is a hard question. So they omit this. But I designed this question, not for all students; only 5-10% of brilliant students could answer this. I have designed this question to choose that 5-10%"*. Many participants said that they never faced any internal monitoring from the open-ended question of the survey questionnaire. Though sometimes, they heard negative news about public exam questions, they didn't get any opportunity to be conscious of those issues. One opinion was – *"Sometimes, we heard that some teachers faced disciplinary actions for copying directly from a guidebook or using some insulting or controversial issues in Board exam questions. But, we didn't face any internal monitoring to increase teachers' consciousness"*.

Hence, within this limited practice of monitoring, the teacher who faces monitoring, the strength of designed creative questions by them is comparatively higher than others. Therefore, in the **quantitative analysis, monitoring** is found as the **most influential factor**.

5.5.2 Teacher's Competence

The regression model and regression equation showed that the **second most influential factor is the teacher's competence** to maximize the strength of the designed creative question. The majority of the interviewee emphasized this issue, saying that if the teacher is competent enough and have good subjective knowledge, his strength of designed creative question is better than others. But, the government teachers who are recruited through Bangladesh Civil Service – Education Cadre and Non-Cadre, sometimes come to the education sector because of not getting the opportunity to serve in other sectors. This scenario is reflected in this comment of an interviewee *"To build a nation with proper education, the top most brilliant student should be recruited as the teacher. But in our civil service examination, most cases, the students who are doing better are going to Foreign Service, police service, customs service, etc., instead of education service"*. Though **the civil service-education cadre officers and non-cadre teachers are comparatively**

more competent than non-government teachers, these numbers are minimal (theme 3.1, code 3.1.1, page 75).

The non-government teacher's scenario is very frustrating. They are the most considerable portion of all the teachers. Many interviewees opined that the recruitment process of non-government teachers is very faulty. **Most teachers were recruited based on lobbying, nepotism, and other forms of corruption** before launching the NTRCA examination (code 3.1.2-3, page 75). Therefore **their competence is not proven, and as a result, the question paper designed by them is also not qualitative.** The actual scenario is revealed with this comment of an interviewee - *"Not only 3/12 days training in Bangladesh, even if you train these lower competent people at international level for one month; the quality of their designed creative questions will not be improved significantly"*.

The Current Education Minister, Dr. Dipu Moni, also depicted this scenario through one of her recent comments- *"A large part of the teachers in our country, now they are coincidentally teachers, many could not go to any other profession, they never wanted to teach, but they came to teaching. We want the person who will come to the teaching profession, his life's goal will be teaching profession, and he will come by setting that goal"*.

(Source: <https://www.youtube.com/watch?v=NQqF6gx0XQk>)

Therefore the teachers with good competence have strength in designing creative questions. In this regard, the government should ensure teachers' competence by making the teaching profession attractive, guaranteeing a fair recruitment process, and proper training.

5.5.3 Training

The regression result (Table 21, Page 68) shows that for teachers who received general and in-house training, their strength in designing creative questions is significantly higher than that of teachers who didn't receive training. But the teacher who received the master training, their strength of designed creative **questions is not significantly higher** than that of the teacher who didn't receive training. In this context, many interviewees opined that **the trainee selection process was faulty**

(theme 3.6, code 3.6.2-3, pages 78-79). Master trainer was not selected based on the existing competence and skill of the teacher, just based on the teacher's experience and some other unwanted factors (code 3.6.4, page 79). One interviewee said, "Sometimes teachers include their names in the master training with lobbying and other forms of corruption." Therefore, for some unskilled master trainers, controversy arises among the teachers. One senior teacher interviewee said, "There is a quality difference among the master trainers since when we sit for Board examination' question setting; there were controversial issues on some familiar topics with some teachers who also received master training." Besides, the master training quality is not the same at the central and local levels. A master trainer interviewee said, "I am a master trainer, and after 12 days of training, I am not satisfied with what I gained or learned".

In this regard, though master trainer's designed creative **question's strength is higher but not significantly higher** than the teacher who didn't receive training. Besides, In-house training is very effective, even than the formal general training. Therefore, training is the third prioritized influential factor.

5.5.4 Teacher's willingness

All the interviewees opined that designing creative questions is laborious and requires immense brainstorming and time (*theme 3.3, code 3.3.1, page 77*). So, sometimes, they think copying from the guidebook is easy. At that time, their designed question's strength decreases with the repeated question. A considerable number of interviewees said that they feel a dual pressure from authority and guardians to make ordinary thinking questions so that the passing rate will be higher (*code 3.3.3-4, page 77*). One comment was – *"In some institutions, if the teacher designs a creative thinking-oriented question following the guideline, it may seem critical to some students. That time, the headteacher rebukes the teacher, why do you prepare such a tricky question? With this critical question, the passing rate will be lower. If the passing rate is lower, the guardians also pressure the teachers. Sometimes, the managing committee recommends retrenching that teacher because of a lower passing rate in his subject. At that time, the teacher again returns to*

design guidebook-oriented ready-made questions". Many interviewees said they face this kind of pressure even in public (SSC/HSC) examinations. An interviewee said, "Even sometimes, in public board exam question settings, wholly new or comparatively critical creative question is not accepted, fear of a reduction in passing percentage. Therefore, the teacher prepares average standard questions. But, it was supposed not to repeat any question in the creative question paper". The young teachers are comparatively enthusiastic about designing genuine creative questions.

Therefore, by overcoming these limitations and reducing dependency on guidebooks, the teacher who designs questions has more strength in developing creative questions than others.

5.5.4 Time

The regression model showed that "time given by the teacher" has a comparatively lower impact on the strength of designed creative questions by the teacher. It's reflected in this comment of an interviewee – *"Giving proper time by the teacher is a relative issue. It depends on the teacher's competence and logistic support".* Many interviewees said that teachers who have their logistic support need less time (**code 3.4.1-2, pages 77-78**). One interviewee said, *"The teachers, who have laptops or printers, can prepare easily. But the teacher, who doesn't have a laptop, can not maintain any question bank. Composing from outside requires enormous time".* Some interviewees said that teachers don't want to give much time due to not providing any substantial honorarium for designing questions (**code 3.4.3, page 78**). Many teachers opined that they are exhausted with the official workload and authority don't give enough time; so they don't want to provide sufficient time. This view is reflected in this statement – *"A considerable amount of time is needed to design a set of qualitative creative question papers. But authorities don't give us enough time. Sometimes, only within 2-3 days deadline, they instruct to submit a question paper. After finishing the institution's routine task, own home task, and how much time is remained, with that time, it's tough to prepare a qualitative creative question paper."*

Within these constraints, the teacher who gives sufficient time, the strength of their designed creative question is better than others.

5.5.5 Experience

From the regression equation interpretation (*Table 22, Page 71*), the teacher's **experience** or length of service is **the minor prioritized factor** but not last in designing creative questions. Interviewees also opined that length of service has an impact but is not the central issue in designing creative questions (*theme 3.5, page 78*). One interviewee said, *Experience sometimes provides better clues to design creative questions. But it is not only the central fact. Teachers' competence and other factors are related to this issue."*

Therefore it can be said that though over time or length of service, the strength of the designed creative question is increased, it has comparatively lower influence.

5.6 – Besides question design, other issues needed to be considered

Q 2. Besides the question design, what **other issues** should be considered to **strengthen the Creative Question-Based summative Assessment system?**

In this part, some in-depth story is revealed from all the interviewees –

5.6.1 Answer Script Evaluation

Almost all the interviewees said training and emphasis also should be given to the 'answer script' evaluation. If the public exam's answer script is not evaluated correctly, the ultimate output of the qualitative creative question will be futile. But one interviewee commented, *"There are **no contents on answer script evaluation in the three (3) days general training syllabus**".* Therefore, some content on answer script evaluation should be included in the current creative question preparation training syllabus (*theme 4.1, code 4.1.1, page 80*). Many interviewees opined that the time to scrutinize an answering script is insufficient compared to script number volume (*Code 4.1.2*).

Besides, they raised a very frustrating point that the board's distribution process of the answer script is very unprofessional (*Code 4.1.3*). One master trainer

interviewee said, *"Sometimes, public exam answer scripts are distributed to the known teacher of the board's employee or based on nepotism. Some teachers do lobbying to get these answer scripts. Being financially benefitted is the main issue for those evaluators or teachers, not the actual assessment"*. Doing some optional tasks (like filling the circle of the teacher's personal information) requires more time than assessing the main body of the answer script (**theme 4.1, code 4.1.4, page 80**). Another crucial issue is that some Qualitative but influential teachers and best institution teachers refuse to evaluate answer scripts (**code 4.1.5**). This fact is expressed in the following statement *"Sometimes, some qualitative teachers refuse to evaluate answer scripts or to be invigilators in the examination hall because they don't have financial insolvency or are powerful. At that time, some non-government teachers, who have a financial ruin, do lobbying to get answer scripts for evaluation. But, he doesn't have the expected quality to evaluate the public exam's answer script."*

Therefore, the issue of answer script evaluation should be considered more seriously to strengthen the overall summative assessment system.

5.6.2 Recruitment

Many interviewees expressed their consensus on this point that the non-government teacher recruitment process is not transparent and systematic (**theme 4.2, code 4.2.1, page 81**). For this reason, the quality of most non-government teachers is abysmal (**Code 4.2.2**). One interviewee opined, *"In the non-government teaching profession, most brilliant students don't want to join at first, but when they don't find any other better job, they come to non-government teaching."* This chapter's competence part (5.5.2) discusses relevant inquisitive facts on this issue.

Therefore it is tough to maintain the quality of assessment with a large part of the non-government teachers.

5.6.3 Honorarium for Question design and answer script Evaluation

The honorarium for creative question design and answer script evaluation should be increased. Some interviewees said no teachers would give 10 hours to design a set of question papers for only Tk.100 (**code 4.3, page 81**). One interviewee

expressed his agony with this statement – *"Do not give good honorarium; at least you can provide good honor to teachers."*

5.6.4 Logistics support for teacher

Teachers should be provided logistics support like laptops, computers, printers, internet facilities, etc., so they don't need to go outside to compose and analyze their question paper (*code 4.4, page 82*).

5.6.5 Result-oriented competition

Result-based competition forcing to deteriorate the quality of creative question design and answer script evaluation (*theme 4.5, code 4.5.1, page 82*). There is a result-based competition within the education boards and institutions, even inter-departmental competition within the same institutions (*code 4.5.2*). This fact is reflected in an interviewee's statement, *"In the internal examination, there is an invisible inter-departmental competition within the institution. As a teacher, I will also be evaluated in this competition. That time, I designed the question in such a way so that 100% of the student would pass. But, if I question what kind was supposed to design, 100% of students would never pass"*.

A chief examiner interviewee commented this way to reveal the inter-education board result competition in public exam results: *"Inter-board result/passing rate competition in the public examination is very dangerous. For this reason, sometimes, students are not correctly evaluated. Sometimes, even if a teacher logically scrutinizes an answering script, he is called by the board authority to increase marks. This way, the passing rate/GPA-5 is raised, but the quality is not improved"*.

Besides, the open publication of annual internal examination results to all creates tremendous pressure on students (*code 4.5.3*). One interviewee said, *"For this open publication, competition is happening not only among the students but also among the guardians, making an invisible social pressure on students and somehow influencing the answer script evaluation."*

5.6.6 Marking

The existing specific number-based marking should be abolished. The marking should be this type "Excellent, Good, Average" (*code 4.6, page 83*).

5.6.7 Teacher-Student Ratio and Student's perspective

Pupil-teacher ratio in Bangladesh at secondary and higher secondary is 35.10 and 38.67, respectively ((IndexMundi, 2018.). This vast gap hinders proper assessment. Therefore, the teacher-student ratio should be reduced significantly to focus on individual students' needs (*code 4.7, page 83*). How this issue affects, students' proper assessment is reflected in an interviewee's statement: *"Sometimes, students complain that answering seven essay-type questions within 2.5 hours is tough. But the teacher couldn't teach how to answer within short writings. Besides, the evaluator should not expect the student would write five pages within 5 minutes."*

5.6.8 Strengthening BEDU

The Bangladesh Examination Development Unit (BEDU), the core thinking body of assessment policy recommendations, should be revitalized and activated by recruiting proper human resources (*code 4.8, page 83*). How this organization works can be assumed from this comment of an interviewee *"Most of the teachers didn't hear the name of BEDU."*

5.6.9 Well dissemination of Creative Question Preparation Guideline

Most of the teachers didn't receive the Creative question preparation guideline. Only the teachers who got training got it (*code 4.9, page 83*). One interviewee said, *"It should be circulated openly to all the teachers. So that, even if the teacher doesn't get the training, they can quickly get a fundamental concept to design creative questions"*.

5.6.10 Different question patterns for different subjects within the creative question structure in the revised new curriculum

Not typical, different question patterns for the different subjects should be launched within the creative question structure (*theme 4.10, code 4.10.1, page 84*). Based on Bloom's taxonomy, the main structure to assess students' four skills levels will be

the same, but the pattern could be different (**code 4.10.2, page 84**). In this context, the interviewee of the teacher's training college shared her New Zealand training experience with this comment, *"For example, in physics, we are saying no need to prove $F=ma$; if a student can apply this formula with application-level math, that's all. But, if a student doesn't know how this formula is evolved, how will he introduce the related term of this formula, like momentum, distance, etc.? The structured descriptive statement type stem is not applied in all subjects. Like in New Zealand, we saw, "For a physics question, a youtube video link or website link is given; student watching that video, solve the question. Even to solve a physics problem, the formula and unit are shown in the question paper; students don't need to memorize that formula or unit. They judge whether students can solve the problem". Therefore, The creative question should be continued in the revised curriculum's Summative and Formative assessment with the required modification. But should not be confined to any strict rule. Based on each subject pattern, the creative question will be designed. There may have some specific guidelines. But should give the teacher more space to visualize his creative thinking (**code 4.10.3, page 84**).*

4.11 Creative teaching for creative question-based assessment

Creative teaching should be ensured for creative question-based assessment (**code 4.11, page 85**). An interviewee said, *"At first, I need to teach creatively; then I should develop the creative question."*

4.12 Content of SSC and HSC Syllabus

HSC syllabus is very vast considering the time in some subjects. Sometimes, honors-level topics are included in the HSC level, which is unrelated to the SSC level. So it should be reduced in some subjects (**theme 4.12, code 4.12.1, page 85**). The applied part of every subject related to daily life should be included in the textbook with creative question settings (**code 4.12.2**). One interviewee commented, *"For example, history means not only the political history, economic history, evolution history, biological history, scientific history, etc., should be included in the history syllabus of SSC and HSC."*

4.13 Empirical data-based research

Regular research should be continued on the field-level assessment scenario (**code 4.13, page 85**). One interviewee said, *"What kind of research importance has been given to inventing Corona Vaccine; more research importance should be given to this faulty education system."* Another master trainer interviewee highlighted this issue, saying, *"An empirical field-level data-based research is crucially needed to identify, within the basic structure of creative question design, what kind of problems are faced by the teacher in the different parts of creative question design. If the problem is identified by collecting data from the field level, still optimistic, the creative question-based assessment system will survive"*. This study itself fulfills the demand of this kind of research.

4.14 Education Experts should run Education Ministry

If the BCS-Education cadre officers run the whole education ministry, many education problems, including assessment-related issues, will be solved automatically (**theme 4.14, code 4.14.1, page 86**). One interviewee shared his long experience-based thinking: *"To formulate curriculum and assessment policy, the recommendation of university teachers and bureaucrats always gets priority. But in the case of secondary, higher secondary education curriculum and assessment policy development, the rights, responsibility, and eligibility only belong to education cadre officers as they are field-level practical experience-based experts in this field. Just if you give the whole responsibility of the education ministry to the education cadre instead of the administration cadre, you see, within ten (10) years, almost all the problems of the education sector will be solved"*.

4.15 Coordination

Effective coordination should be among different education management organs to implement any education policy, including the creative question-based summative assessment policy (**code 4.15, page 86**).

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

Summary

This chapter concludes the discussions and suggests policy recommendations to strengthen Bangladesh's creative question-based summative assessment policy. Moreover, the limitations and some implications for future research are also depicted here.

6.1 Conclusion

From all the findings and discussions, it can conclude that **73.10% of teachers expect to continue** the creative question-based summative assessment system in the coming revised curriculum, subject to some required modification through research. Among the existing teachers, **50% of the teachers** can't design satisfactory type creative questions. The teachers mostly face serious difficulty developing **Applications and Higher-order level parts** of a creative question. In **designing MCQ questions**, teachers tend to **ignore Multiple Completion MCQ and situation-set MCQ**, which are crucially needed to evaluate students' application and higher-order level skills. Among the ten (10) education regions or boards, the **highest satisfactory type** of creative question is designed in the '**Dinajpur**' region, and the **worst scenario** is in the '**Barishal**' area.

The factors that **significantly influence** the strength of designing creative questions are **monitoring, competence, training, teacher's willingness, time, and experience** as their **priority chronology**. Among these **six (6) factors**, for one unit increase of **monitoring, competence, teacher's willingness, time** given by the teacher, and **experience**, the strength of the designed creative question (sdcq) by the teacher is increased by **9.5%, 7.5%, 3.6%, 0.7%, and 0.2% respectively**. In the case of training, one unit increase of **In-house Training** and **General Training** can enhance the strength of the designed creative question by **4.9% and 3.8 %**, respectively than the teacher who didn't receive training.

Generally, it is thought that training is the most influential factor. **But this study found that the first and second factors-monitoring and competence** are more significantly influential than the **third-factor training** to ensure the strength of the designed creative question by the teacher.

In addition to **these factors of question design**, answer script evaluation, recruiting competent teachers through transparent and corruption-free recruitment, honorarium for assessment, providing logistic support like laptop printers for teachers, creative teaching for creative question-based assessment, eliminating result-based competition, continuing empirical data-based research on evaluation, running education ministry by education expert and coordination among different organs of the education ministry should also be considered to strengthen the creative question summative assessment system.

6.2 Limitations and suggestions for future research

In this research, though it was tried to explore different aspects through a quantitative and qualitative study, a larger number of diversified interviewees could provide a more in-depth story regarding the creative question-based assessment policy. Besides, due to COVID-19, almost all the interviews were conducted online. Interviewees could provide more exclusive information frankly if it were conducted face-to-face. In addition, it was expected to collect quantitative data from a larger diversified sample; due to collecting data entirely online, it was not possible to accommodate some portion in the survey.

It was also expected to collect data from students, but it was not feasible since almost all the educational institutions were off during the pandemic.

Finally, It would be more effective to have a comparative study between Bangladesh and some other countries. A more insightful future research focusing on the comparative assessment system among Bangladesh and some other exemplary countries could significantly strengthen Bangladesh's overall assessment policy.

6.3 Policy implications and Recommendations.

Based on the quantitative and qualitative findings and discussion, the government of Bangladesh can consider the following actions to strengthen the creative question summative assessment policy at secondary and higher secondary levels –

1. **Formal monitoring instructions** can be issued from the ministry of education to ensure the quality of the designed creative question by the teacher at the institution's internal examination and education board's public (SSC/HSC) examination. Especially for effective internal monitoring, the ministry can order every secondary/higher secondary institution **to form an internal monitoring committee** to evaluate the designed creative question at the various internal examinations.

2. **The most competent and brilliant people should be recruited as secondary and higher secondary level teachers.** Especially, the **non-government secondary level teacher recruitment process should make more transparent, dynamic, and free of corruption.** By providing competitive facilities, Bangladesh Civil Service (BCS) – education cadre job should make more appealing to attract **the most brilliant officers** in the education cadre. If the most brilliant people come as teachers in the education sector, many problems will be solved automatically (Center for Educational Research, 2018). But, **if the brilliant teacher is not recruited, how much training we may provide,** it will be tough to increase their competency to assess students professionally and unquestionably.

3. **A revised extensive training program** should be launched on **assessment** for all levels of the teacher. In this training, in addition to the creative question design part, **content on answer script evaluation** should also be included. Some **extra emphasis** should be given to the content of designing **the application and higher-order skill level questions and preparing multiple completion and situation set MCQs** in the creative question design part of training.

Significantly, the **selection of master trainers** who will train other general teachers should be **more transparent, competency-based, and free of biasedness**.

4. To motivate and increase the teacher's willingness, the **ministry of education** can issue **formal instruction** to the institution's head **for recognizing or rewarding** those teachers who will design **authentic creative question papers without following a ready-made guidebook or various teacher organization's question paper**. Besides, in that instruction, how much **minimum time should be given** to a teacher for designing a set of different subject creative question papers should be explicitly clarified so that **the teacher doesn't be compelled to prepare ordinary question papers for lackings of time** (Riyad, 2016). In addition, the ministry of education should **strictly prohibit or check** the issue of **forcing the teacher** by the institution's head, managing body, or board officers **to design the ordinary creative question papers to increase the passing rate**. Since this kind of pressure tremendously lessens the teacher's enthusiasm to develop qualitative creative question papers.

5. The honorarium for Question design and answer script evaluation should be **increased** with specific obligatory instructions.

6. The government should provide required **instrumental logistic support like a laptop, i-pad, and printers to the teachers** to equip them well with teaching and assessment apparatus.

7. Publicizing students' internal results publicly and openly to all should stop immediately. This open publication of results leads to **tremendous result-oriented competition** (Prodhan, 2016), which ultimately forces **to manipulate creative question design, answer script evaluation, and overall the whole assessment system**.

8. Besides the design of creative questions, creative classroom teaching should also be ensured. Moreover, the **textbook's contents should be developed from an applied viewpoint to instigate students' creativity**.

A summarized holistic model based on discussions and recommendations is depicted on the next page-

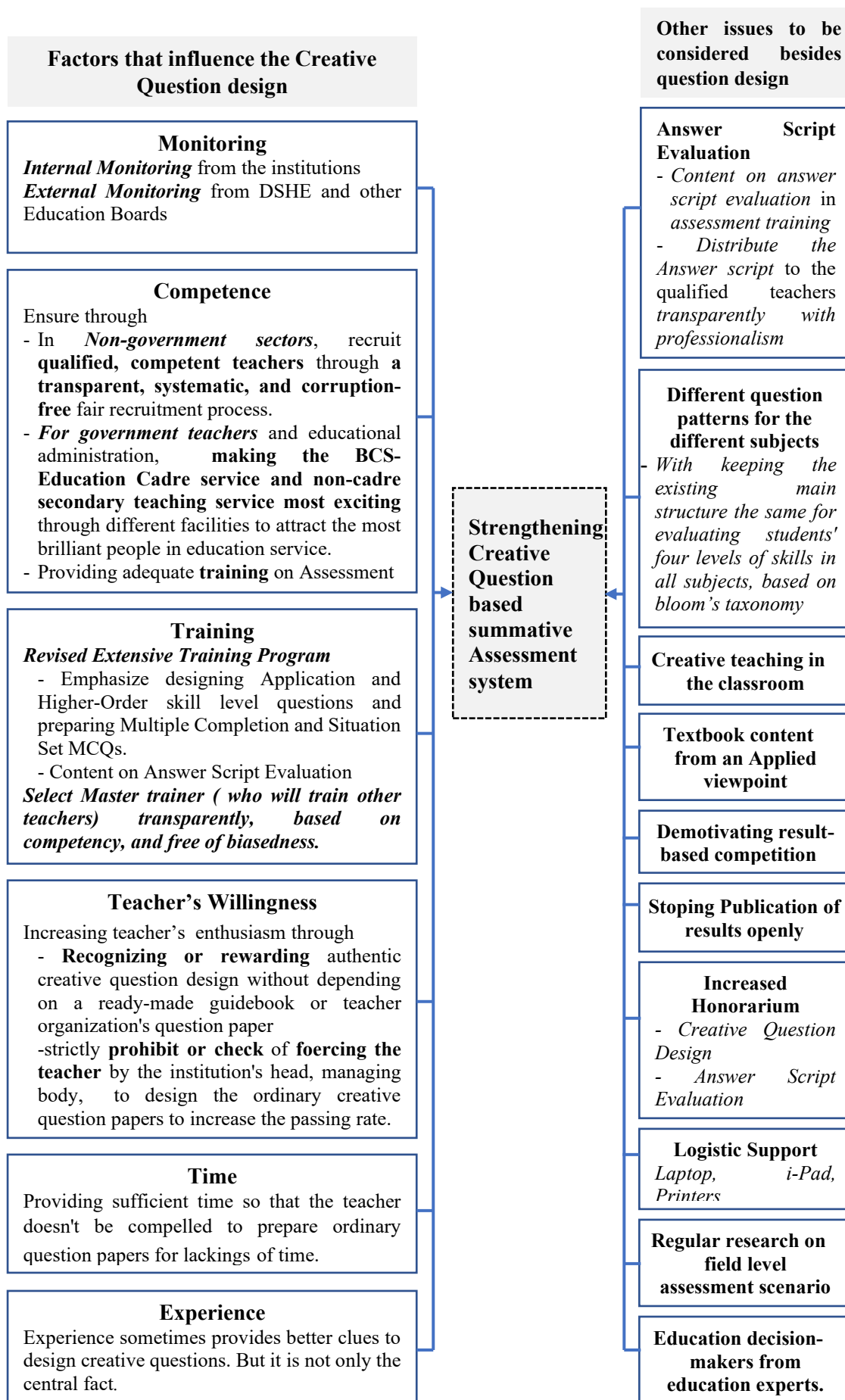


Figure 11: A holistic model of Strengthening Creative Question-Based Summative Assessment System in Bangladesh

9. The Bangladesh Examination Development Unit (BEDU) **capacity** should be improved by appointing competent, brilliant officers from **the BCS Education cadre** who are **genuine experts in the curriculum and assessment field**.

10. **Based on Bloom's taxonomy**, keeping the **existing main structure the same** for evaluating **students' four levels of skills in all subjects**, the **question pattern for the different subjects could be different** in the summative assessment part of the coming revised curriculum. Besides, the **guideline** for preparing creative question papers **should be disseminated equally** to all teachers to ensure that **even if any teacher misses to receive the training, they will get a concept of preparing creative questions just by following the guideline**.

11. **Regular research** on the **field-level scenario of student assessment** should be continued so that the **training curriculum and any instructions** from the ministry **on assessment** could be updated at any changing perspective.

12. Not only the directorate, various boards, and other departments of the education ministry; **the whole central education ministry should be run by the BCS-Education cadre officers who are genuine experts in the education field** with **long-term field-level experience and academic sagaciousness in education**. If the top decision-makers of the education ministry come from the education expert, many education problems, including assessment-related issues, will be automatically solved.

Finally, it can be said; that the educational assessment process is not a one-sided issue. There is a need for an integrated effort to strengthen the overall assessment system. If the mentioned Holistic model of strengthening the Creative question-based summative assessment system implements appropriately, it would expect that Bangladesh's education system will get rid of different experimental assessment policies at different times.

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APPENDIX -1

QUESTIONNAIRE

Factors associated with the strength of designing Creative Questions.

Respected Teacher – Assalamu Alaikum.

You are aware that the "Creative Question-Based Assessment System" has been practiced at the Secondary level in Bangladesh since 2010 and at the Higher Secondary level since 2012. Even after implementing the revised new curriculum, a Questionnaire should be made for the Summative Assessment part. At present, this assessment system is facing multidimensional criticism from different levels with various contradictory views. Although different studies are found in this context, there is not much research on analyzing the relevant factors associated with the strength of designing Creative Questions in the "Quantitative Approach."

This research, conducted by a JDS Fellow of the Graduate School of Governance Studies-Meiji University, Japan, tries to find out the interrelation of different required factors with the strength of designing creative questions by collecting opinions directly from the teachers.

Your sincere feedback through the following questions will play an important role in the successful accomplishment of this research. This can take up to 5 minutes. It is ensured that your provided information will have the highest confidentiality and will only be used for research purposes. No personal information like your name, phone number, or workplace name is being collected here. Thanks in advance for your cordial cooperation.

1. What level of teaching are you involved in?

Mark only one oval.

- ☐ Secondary
☐ Higher Secondary

2. In which section do you teach?

Mark only one oval.

- ☐ Science
☐ Business Education
☐ Humanities

3. You have been serving in the teaching profession for how many years?

4. The district name of your workplace *Mark only one oval.*

..... District Name *N.B: There are options to choose from 64 districts in the questionnaire, If all the 64 districts' name is written here, Appendix-1 is too large. Therefore, not written here all the districts name*

5. Under which "Board of Education" do you work? *Mark only one oval.*

- ☐ Barisal
- ☐ Chittagong
- ☐ Comilla
- ☐ Dhaka
- ☐ Dinajpur
- ☐ Jessore
- ☐ Madrasah
- ☐ Mymensingh
- ☐ Rajshahi
- ☐ Sylhet
- ☐

6. Under which version of the National Curriculum do you teach in your Institution?
- Mark only one oval.

- ☐ Bangla Version
- ☐ English Version

7. Your Workplace location - *Mark only one oval.*

- ☐ City/District town
- ☐ Urban/Upazila town
- ☐ Rural/ Union

8. What kind of educational Institution do you work in? *Mark only one oval*

- ☐ Government
- ☐ Private

**Opinion on designing
Creative Questionnaires –**

Please give your opinion on the following scale-

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

9. The four levels of questions "Knowledge, Comprehension, Application, and Higher-order Skills" in the Creative question method are done considering the six levels of thinking skills "Knowledge, Perception, Application, Analysis, Evaluation, and Synthesis" *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

10. The Question of the "knowledge level" can be made in such a way so that its answer cannot be found directly from the textbook- *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

11. To assess the skill of 'making a decision based on critical reasoning & logic' and 'evaluating a fact' – "Application-level" question can be asked- *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

12. "Higher-Order Skill" Level's Questions can be used to assess 'the ability to apply a previously learned subject into a new situation' *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

13. Any part/paragraph of the textbook can be used directly for making stem - *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

14. The stem must be considered to answer all four parts of the creative Question- *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

15. Multiple choice questions (MCQ) should be prepared in such a way so that each alternative answer is likely to be chosen by at least 5% of the total candidates - *Mark only one oval.*

1 2 3 4 5

Strongly disagree ☐ ☐ ☐ ☐ ☐ Strongly agree

16. Mutually Exclusive / Mutually Inclusive information could also be used to create multiple choice question options - *Mark only one oval.*

1 2 3 4 5

	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
17.	All of the above are correct or none of the above is correct" - with these types of sentences, answer options of multiple-choice questions (MCQ) can be made - <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
18.	It is advisable to have 40% knowledge and comprehension level questions in multiple-choice questions- <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
19.	It is advisable to have 60% application and higher-order level questions in multiple-choice questions (MCQ) - <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
20.	Simple MCQ, Multiple Completion MCQ, Situation Set MCQ - with these three types of questions, Multiple Choice Questions should be made - <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
21.	"Simple MCQ" can be used to assess a student's application skill and higher-order skill level - <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
22.	Simple MCQ's stem also needs to have a new scenario - <i>Mark only one oval.</i>	
	1 2 3 4 5	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	
23.	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> Consider the picture's MCQ - This type of Question is "Multiple Completion MCQ" - <i>Mark only one oval.</i> </div> <div style="width: 50%; border: 1px solid black; padding: 5px;"> <p>23. Financial statement includes -</p> <p>i. Income statement ii. Balance sheet</p> <p>iii. Cash flow statement</p> <p>Which one is correct ?</p> <p>Ⓐ i and ii Ⓑ i and iii</p> <p>Ⓒ ii and iii Ⓓ i, ii and iii</p> </div> </div>	
	Strongly disagree <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Strongly agree	

24. Multiple Completion MCQ" could be more than 20% of the total MCQ - *Mark only one oval.*

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

25. "Multiple Completion MCQ" can be used to create not 'memory-dependent' questions- *Mark only one oval.*

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

26. Like the picture's questions – The MCQ questions which are used to ask a few questions from the same stem/information/scenario are "Situation Set MCQ" - *Mark only one oval.*

Read the passage and answer 15 and 16 :

Mr. Abir operates a knitting factory beside the river in his own area. He gained a lot from the business and owned a land and other assets. He maintains the factory neat and clean by disposing the wastages into the river.

15. Which kind of responsibility Mr. Aber ignores ?

- Ⓐ financial responsibility
- Ⓑ Business responsibility
- Ⓒ Social responsibility
- Ⓓ Liquidity responsibility

16. What was the initial goal of Abir ?

- Ⓐ Profit maximization Ⓑ Wealth maximization
- Ⓒ Increasing production Ⓓ Social welfare

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

27. Using "Situation Set MCQ" to prepare 'knowledge level' questions is not advisable - *Mark only one oval.*

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

28. The Question of assessing students' application and Higher-Order skills can be made without using stem in MCQ *Mark only one oval.*

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

Training and professional factors

29. Have you already received any training on "Creative Question Paper" preparation? *Mark only one oval.*

- ☐ Yes. *Skip to question 30*
- ☐ No. *Skip to question 31*

30. If yes, you received what type of training ? *Mark only one oval.*

☐

Master training

☐

General Training (Education Board or DSHE provided)

☐

In-house training from your Institution

31. Your SSC result (Division / CGPA)?

32. Your HSC Result (Division / CGPA) ?

33. Your Honours / Graduation Result (Class / CGPA) ?

34. Your Masters Result (Class / CGPA)?

35. From Which university did you last graduate? *Mark only one oval.*

.....Put tick from All the university names of Bangladesh

N.B: There are options to choose from 138 universities in the questionnaire, If all the 138 universities name is written here, Appendix-1 is too large. Therefore, not written here all the universities name

36. I have chosen teaching profession because I did not have any other suitable job opportunity - *Mark only one oval.*

1 2 3 4 5

Strongly disagree

☐☐☐☐☐

Strongly agree

Institutional Factors

Please give your opinion on the following scale-

1 = Strongly disagree
Strongly agree

2 = Disagree

3 = Neutral

4 = Agree

5

37. The teachers of our Institution are very sincere in designing their creative questions without the help of any kind of guidebook. *Mark only one oval.*

1 2 3 4 5

Strongly disagree

☐☐☐☐☐

Strongly agree

38. Sometimes questions are bought in our organization from teachers association or professional organization *Mark only one oval.*

1 2 3 4 5

Strongly disagree

☐☐☐☐☐

Strongly agree

39. Our organization regularly monitors whether the creative Question papers are appropriately implemented - *Mark only one oval.*

1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly agree

40. Sometimes, we face monitoring of creative questions from the Board of Education, DSHE, or other superior organizations. *Mark only one oval.*

1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> Strongly agree

41. How many hours do you spend approximately preparing a "set of creative question papers" on a subject?

42. In the case of summative assessment, should the creative question method be continued? *Mark only one oval.*

☐ Yes

☐ No

43. Any of your other ideas/comments on the creative Question-based examination method (If any) -

Thank you very much for your sincere participation



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APPENDIX 2

Example of an Essay Type Creative Question Paper

Model Question of HSC Examination 2017 (All Board)

Subject Code :

2	9	2
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Subject : Finance, Banking and Insurance

Time : 2 Hour 10 Minutes

Full Marks—60

[Answer any six of the following Questions]

- | | |
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| <p>Stem →</p> <p>Understanding level Qs. →</p> <p>Comprehension level Qs →</p> <p>Application level Qs →</p> <p>higher order Skill level Qs →</p> | <ol style="list-style-type: none"> 1. Mr. Javed is an established businessman. He wants to expand his business. So invests two third of income in share market. But after some month he fall into serious financial crisis. He can not pay salary to his employees for financial crisis. <ol style="list-style-type: none"> a. What is the relationship between risk and return ? 1 b. What is finance ? 2 c. In the stem, which principal is not followed by Mr. Javed ? 3 d. How can Mr. Javed solve his problem ? Show your logic ? 4 2. Mr. Rony has a cosmetic shop. He is an only one owner of this shop. For that reason, he bears all profit and loss. He has different types of cosmetics that is distributed to customers. He holds different categories of same product for controlling risk. <ol style="list-style-type: none"> a. What is the ultimate goal of a firm ? 1 b. What do you mean by partnership business ? 2 c. According to stem, which type of business man is Mr. Roni ? – Explain. 3 d. Which principle does Mr. Roni follow for development of business ? Show your arguments. 4 3. Mr. Nahin Ahsan will deposit Tk 100 at the end of every 6 months in a savings account for 5 years. The interest rate is 6% compounded semi annually. He will receive his amount of money from his bank account. <ol style="list-style-type: none"> a. When does the value of money change ? 1 b. What is opportunity cost ? explain. 2 c. In the stem, how much money will be receive at the end of 5 years ? 3 d. If interest rate is change at 10% quarterly compounded, then what will be the amount in the account at the end of last year ? 4 4. Mr. Johir is a farmer. He has earned Tk. 5,00,000 by selling his crops and wanted to deposit that money at 12% interest for 10 years in Jahan Bank. But his brother advised him to buy a piece of land for cultivation. At present land's value becomes double in 10 years. Mr. Johir is an confused. |
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- a. What is the main reason of time value of money ? 1
 - b. What is annuity ? explain. 2
 - c. What is the future value of Mr. Johir's money ? 3
 - d. What do you think. in which sector Mr. Johir should invest ? explain it. 4
5. Earning before interest and tax (EBIT) of Pran Ltd. in 2015 was Tk. 20,00,000. *Depreciation was Tk 2,00,000 and corporate tax rate in 35%, Comparative changes of current asset.* Current liabilities and fixed asset in 2015 are as follows-

Particulars	2015	2014
Net fixed asset	20,00,000	15,00,000
Current asset	10,00,000	5,00,000
Creditors	15,00,000	1,00,000
Accrued expense	55,000	35,000

- a. What is the elaborations of BEP ? 1
 - b. What is financial statement ? 2
 - c. From above stem, calculate (i) cost of capital (ii) investment in net current asset. 3
 - d. Evaluate amount of free cash flow of Pran Ltd. in 2015. 4
6. Mukta Ltd. sells their every product at Tk. 150. Company's annual fixed operating expense is Tk. 9,00,000. Per unit variable cost of the company is Tk. 100.
- a. What is balance sheet ? 1
 - b. What is cash flow ? explain. 2
 - c. Calculate Break even point (both in unit and taka) of Mukta Company. 3
 - d. From above stem graphically represent company's break even point and explain it. 4
7. Recently Pran Ltd purchasing goods on credit from Dhaka Ltd. Maximum payment period of goods is 600 days. According to the condition of sales, 2.5% discount may be get if payment is made in 15 days. Manager of Pran Ltd. decides to take short term loan from bank getting the opportunity of discount. Bank interest rate of loan is 18%. In the next time Dhaka Ltd, extends payment period of goods of 10 days.
- a. What is commercial paper. 1
 - b. What do you mean by current asset management ? 2
 - c. According to the stem, calculate the cost of trade credit of Pran Ltd. 3

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- d. How do change in payment period affects on the loan decision of the manager of Pran Ltd. 4
8. Hasan Ltd. Company is a producer of readymade garments. There are some information of this company are as follows :

Particulars	Amount
Annual demand	12,000 units
Purchase price per unit	Tk. 20
Ordering cost per order	Tk. 15
Transportation and maintenance cost	20% of purchase price
Collection period	5 days
safety stock	200 units

Company determines reorder level at 367 unit. Mention that, due to unfavorable condition, product collection period in extended to double.

- a. What is short term financing ? 1
- b. What happened in cash conversion cycle due to increase in average collection period ? 2
- c. Calculate EOQ of Hasan Ltd. 3
- d. Mathematically explain, what affect in created on company's inventory management due to changing situation ? 4
9. Raj company's total amount of sales is Tk. 1,60,000 and the cost of goods sold is Tk. 1,00,000. Other administrative and selling expense is Tk. 35,000. Common stock (per share Tk. 100) Tk. 1,00,000 and at 10% debt capital Tk. 60,000, corporate tax rate 40%.
- a. What is liquidity ? 1
- b. Why financial analysis is so important ? 2
- c. Calculate the amount of earning per share (EPS) and rate of income on capital ? 3
- d. On the basis of profitability, evaluate the company's future success ?

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APPENDIX 3

Example of a Multiple Choice Question (MCQ) Paper

Subject Code :

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Model Question of HSC Examination 2017 (All Board)

(English Version)

Subject : Finance, Banking & Insurance (MCQ)

Time: 40 Minutes

Full Marks: 40

[Darken the circle (O) of the correct option from the following alternatives]

1. What is the relationship b/w risk and return ?
 (a) Positive (b) Negative
 (c) Neutral (d) Equilibrium
 2. Which is the more important sources of government tribute revenue ?
 (a) Tax (b) Import duty
 (c) Donation (d) Export
 3. Which type of organization works for the social welfare ?
 (a) Non business organization
 (b) Government organization
 (c) Business organization
 (d) Autonomous organization
 4. The risk which is caused by the failure of repayment of loan is called-
 (a) Business risk (b) Financial risk
 (c) Liquidity risk (d) Interest rate risk
 5. Business finance means-
 i. Capital accumulation
 ii. Liquidity maintenance
 iii. Scheduling income and expenditure
 Which one is correct ?
 (a) i and ii (b) i and iii
 (c) ii and iii (d) i, ii and iii
 6. Which responsibility does Joy company done ?
 (a) Responsibility to conformers and consumers
 (b) Responsibility to employees
 (c) Responsibility to investors
 (d) Responsibility to general people
 7. What is the reason behind the good financial condition of Joy company than Bijoy company ?
 (a) Increasing earning per share
 (b) Profit maximization
 (c) Wealth maximization
 (d) Increasing dividend
 8. Maturity period of commercial paper should not be more than ____ days.
 (a) 90 (b) 120
 (c) 270 (d) 275
 9. What is the net present value of the project ?
 (a) Tk 10,000 (b) Tk. 12,000
 (c) Tk. 15,000 (d) Tk. 25,000
 10. What should be the decision of Mr. Salman for this project ?
 (a) Should be rejected (b) Should be accepted
 (c) Should delay (d) Should analyze again
 11. The number of titles of ownership in a company is called-
 (a) Debenture (b) Common stock
 (c) Commercial paper (d) Portfolio
 12. If liquidity increases, what will happen to the profit ?
 (a) Increases (b) Decreases
 (c) Will be equal (d) No change
 13. Which type of source is bond ?
 (a) Short term (b) Mid term
 (c) Long term (d) Internal
 14. What does it mean by operating income ?
 (a) Income before tax (b) Income after tax
 (c) Interim income (d) Income from sales
- Read the passage and answer 15 and 16 :**
 Mr. Abir operates a knitting factory beside the river in his own area. He gained a lot from the business and owned a land and other assets. He maintains the factory neat and clean by disposing the wastages into the river.
15. Which kind of responsibility Mr. Aber ignores ?
 (a) financial responsibility
 (b) Business responsibility
 (c) Social responsibility
 (d) Liquidity responsibility
 16. What was the initial goal of Abir ?
 (a) Profit maximization (b) Wealth maximization
 (c) Increasing production (d) Social welfare
 17. When the cash inflow and cash out flow of a project does not depend on any other project is called-
 (a) Dependent project
 (b) Mutually rejected project
 (c) Independent project
 (d) Neutral project
 18. Which is the medium of exchange ?
 (a) Agreement (b) Money
 (c) Labour (d) Machineries
 19. Which one is negotiable instrument ?
 (a) Debit card (b) Credit card
 (c) Cheque (d) Visa card
 20. The process of taking long term investment decision is called -
 (a) Budget (b) Capital budgeting
 (c) Investment technique (d) Capital rationing

Simple MCQ

Situation Set
MCQ

**Multiple
Completion
MCQ**

21. Characteristics of present value is -
i. Discounting ii. Compounding
iii. Present value of one taka
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
Read the passage and answer 22 :
Akhi company's average collection period and average payment period are 60 days and 50 days respectively. Average age of inventory is 40 days.
22. According to the stem cash conversion cycle is ____ day.
Ⓐ 900 Ⓑ 90
Ⓒ 50 Ⓓ 30
23. Financial statement includes -
i. Income statement ii. Balance sheet
iii. Cash flow statement
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
Read the passage and answer 24 :
A company's fixed expense is Tk. 5,000; Variable cost of each units is Tk. 10. Selling price of each units is Tk 20.
24. Calculate the break even point.
Ⓐ 500 units Ⓑ 400 units
Ⓒ 250 units Ⓓ 600 units
25. Break even point includes-
i. Fixed cost ii. Variable cost
iii. Selling price
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
26. Which is generally accepted medium of exchange ?
Ⓐ Money Ⓑ Profit
Ⓒ Income Ⓓ Expense
27. Financial activity of a manager is -
i. Financial decision
ii. Investment decision
iii. Dividend decision
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
28. Interest compounded weekly means-
Ⓐ 52 times in a year Ⓑ 12 times in a year
Ⓒ 180 times in a year Ⓓ 36 times in a year
29. If you invest Tk. 2,000 @ 12% interest (simple interest), how much amount you would receive after 1 year ?
Ⓐ 2240 Ⓑ 2040 Ⓒ 2130 Ⓓ 3040

30. Present worth of future amount is called-
Ⓐ Wealth Ⓑ Future value
Ⓒ Annuity due Ⓓ Present value
31. EIR means-
Ⓐ Effective Interest Rate
Ⓑ Efficient Interest Rate
Ⓒ Effective Internal Rate
Ⓓ None of them
32. Which one is current asset ?
Ⓐ Cash Ⓑ Machineries
Ⓒ Share Ⓓ Furniture
33. Sources of short term finance are-
i. Commercial paper
ii. Banker's acceptance
iii. Bill of exchange
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
Read the passage and answer 34 and 35 :
BD food ltd received 10 lac taka from Dhaka Bank for 1 year at a rate of 12% interest. The interest of loan which will be deducted immediately.
34. The method followed in passage is -
Ⓐ Simple interest
Ⓑ Compounding interest
Ⓒ Discounting
Ⓓ Installment
35. If interest is deducted before providing the loan than real interest rate would be-
Ⓐ Higher Ⓑ Less
Ⓒ Same Ⓓ Both can be happened
36. Which one is a capital market instrument ?
i. Common share ii. Preferred share
iii. Bond
Which one is correct ?
Ⓐ i and ii Ⓑ i and iii
Ⓒ ii and iii Ⓓ i, ii and iii
37. Who bears the cost of trade credit ?
Ⓐ Customer Ⓑ Seller
Ⓒ Producer Ⓓ Wholesaler
38. Who is a middleman ?
Ⓐ Producer Ⓑ Wholesaler
Ⓒ Jobber Ⓓ Retailer
39. Financing one year or less than one year is called-
Ⓐ Short term Ⓑ Mid term
Ⓒ Long term Ⓓ Short and mid term
40. Deposit & With draw money at the end of year is called -
Ⓐ Annuity due Ⓑ Future value
Ⓒ Ordinary annuity Ⓓ Present value

**Situation Set
MCQ**

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