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MASTER OF BANKING AND FINANCE PROGRAMME

STAKEHOLDERS' ASSESSMENT ON GOVERNMENT POLICIES AND REGULATIONS FOR DIGITAL TRANSFORMATION IN BANKING INDUSTRY

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BANKING INDUSTRY

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ABSTRACT

This study examines the stakeholders' assessment variables on the government policies and regulations and tries to explore their relationship between government's policies and regulations and operational effectiveness of digital transformation in Myanmar banking industry. Descriptive method is used. Data are both primary data and secondary data. Primary data are collected by interviewing 50 sample stakeholders who are working at key position levels at different financial industry. As the survey instrument, a structured questionnaire and Key Informant Interviews or in-depth personal interview method is used to collect data and information from members. Descriptive statistics and reliability are tested for this study. Multiple regression analysis (SPSS 23) is used to analyze the relationship between stakeholders' assessment on purposes, governance and incentives of government policies and regulations to the operation effectiveness of digital transformation in Myanmar financial industry. In the analysis, financial stakeholders are strongly agreed upon the Government policies and regulations relation to the importance at purpose and governance to the development of banking sector in digital transformation. Whereas, financial stakeholders less assess on the current regulatory incentives. That is, it would not still encourage to current of digital transforming banking sector in Myanmar. Since, Omni Channel, Crypto currency, and Block chain digital currencies and technologies have been developed in neighboring countries, stakeholders are hoping government incentives to encourage more in digital transforming financial payment system in Myanmar.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATION

B2B	=	Business to Business
CBM	=	Central Bank of Myanmar
CRT	=	Cathode Ray Tube
DEDC	=	Digital Economy Development Committee
EAQ	=	Efficiency Assessment Questionnaire
KII	=	Key informant interview
LCD	=	liquid crystal display
IT	=	Information Technology

CHAPTER I

INTRODUCTION

Technology is ubiquitous to all consumers, rural and urban, in their daily life. from, Definition of digitization by Margaret Rouse (2007) shown inWhatIs.com, digitalization means the process of converting information into a digital format. In the digitalized format, information is gathered into discrete units of data which called bits (https://www.ispatguru.com/digitization-p) that can be separately addressed (usually in multiple-bit groups called bytes). This is called as binary data at which computers and many apparatuses (such as digital camera s and digital hearing aids) which perform same computing capacity that can be processed (https://issuu.com/iaetsdiaetsd/docs/icci).

On the same way, text and images are digitized: for example, a scanner captures an image (which may be an image of text) and converts it to an image file, such as a bitmap (https://www.thenigerianvoice.com/news/22). The function of digitalization for text image is by the use of an optical character recognition (OCR) program which analyzes light and dark areas in order to identify each alphabetic letter or numeric digit, and converts each character into an ASCII code

(https://www.bartleby.com/essay/The-Dark). .

By the definition in Rouse M. (2007) defined digitization of audio and video by the use of one of many analog-to-digital conversion processes in which a continuously variable (analog) signal is changed, without altering its essential content, into a multi-level (digital) signal.[1] The process of sampling measures the amplitude (signal strength) of an analog waveform at evenly spaced time markers and represents the samples as numerical values for input as digital data

(www.multitechsolutions.co.in/ services_digitisation.html).

Margaret Rouse (2007) further states the function of digitizing information as it makes easier to preserve, access, and share. It would be clear that, an original historical document may reach to people who goes its physical location, but with the help of digital

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[1]Rouse, M. (2009, November 02). *Definition of digitalization*. Retrieved from WhatIs.com

technology, when the document content is digitized, it can be reached to people worldwide. There is a growing trend towards digitization of historically and culturally significant data (Pavlovic, 2014).[2]

Banks around the world are grappling with digital transformation, not just in IT systems but also their culture. Caixa Bank's CEO, Gonzolo Gortazar stated that the banking business model is undergoing change, from product distribution to risk management across retail and corporate banking. The effect of the digital transformation is found as impacting on the traditional banking business model, effect in the customer experience and the impact on bank's future strategy. Digital Transformation at banking is not very far and it just moving from traditional banking to a digital world at present era. It is a vital change in how banks and other financial institutions learn about, interact with and satisfy customers.

Digital transforming in banking system has a lot of beneficial to bank stakeholders. That means it promotes banking process and customers service by 24/7 transaction. As shown in Bank's Policy, bank stakeholders are both individuals, legal entities or groups of persons (customers, employees, shareholders, governmental authorities, public organizations or 3rd party service provider, Audit firm), etc., who influence the bank). However, the development of banking sector is largely influenced by Government. The role of government in the financial sector is a continuously controversial issue around the world.

1.1   Rationale of the Study

Financial development is important as a key area for economic development. However, for its easy liquidity, government set strict rules and regulations aiming to protect to national economy. Digitization in banking is the interchangeability of bank data into a digital format with the adoption of technology. For that embracing digitalization, banks can provide enhanced customer services. This provides convenience to customers and helps in saving time. The 2010s are now experiencing a third wave of digital disruption. Digital banking is very different from traditional banking, due largely to the advent of Core banking software system. Not only in the banking industry, digitalization has started to transform many different industries, such as automobile, education

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[2]Pavlovic, M. (2014). *Bioengineering: A Conceptual Approach.* Springer Copyright. P.224.

industries, healthcare sector, etc., For the ease of mobile and internet banking, people no longer tend to visit the physical banking office.

Myanmar becomes one of the world's first fully digital nations. The consumer market in Myanmar has essentially bypassed the development stages seen in other economies and moved straight to digital and mobile, creating huge potential for internet-enabled businesses. The more technology advances, the more it's integrated into our daily lives. The benefit of the new digital wave in Myanmar is that it is creating new markets for local and international companies around the region. The use of Core banking software solution in Myanmar in the year 2017 started to encourage financial consumers in the digital era with some light on the desires of today's digital consumer. Core banking supports many transformative projects in digitalized operations and improve overall efficiency throughout the banking organization. It also promotes many digital banking services and people can benefits a lot from that development. However, government limits on bank performance aiming to protect bank failure. It is needed to study how stakeholders are viewing upon the Myanmar government supports on rules and regulations at digital transforming to assist to the development of more digitalized products and services banking sector in Myanmar.

1.2   Objectives of the Study

The objectives of the study are;

1. To explore the stakeholders' assessment variables on the government policies and regulations at digitalization in Myanmar banking industry.
2. To analyze the relationship between the stakeholders' assessment variables on government's policies and regulations and operational effectiveness of digital transformation in Myanmar banking industry

1.3   Scope and Method of the Study

Study based on Omni-channel approach which is a multichannel combination approach to customer that provides customers with a seamless shopping experience at where all the channels are tightly integrated, keeping customer in the center of the integration.

For the research method, study employs descriptive and analytical survey research method. The relevant data for this research is aimed to gather from primary data sources as well as secondary data sources.

1. Primary data are collected by interviewing50 sample stakeholders who are working at key position levels at different financial industry (Ministry of finance and Central bank of Myanmar for government body, bank director of one famous private commercial bank as shareholders, B2Bbank customer, bank employees (Key person), public organizations (3rd party IT service provider, and audit firm), Wave Mobile Wallet finance service provider, etc., who influence the bank are selected, and they are asked to response their options on, the extent to which, government policies and regulation for digital transformation at banking industry, are relating to the development of Myanmar banking sector. As the survey instrument, a structured questionnaire and personal interview methods is used to collect data and information from members.

2. Secondary data are based from the relevant textbook, banking business journals, banking research articles, and previously prepared research papers from the internet websites. Data collection is made during the month of October 2019. Descriptive statistics and reliability are tested for this study. Multiple regression analysis (SPSS 23) is used to analyze the relationship between stakeholders' assessment on government policies and regulations and operation effectiveness of digital transformation in Myanmar Banking industry.

1.4   Organization of the Study

This study organizes with five main chapters. Chapter (1) is introduction including rationale of the study, objectives of the study, scope and method of the study and organization of the study. Chapter (2) describes the theoretical background included the digitalization in banking industry and Omni-channel Approach of multichannel approach to sales along with related literature reviews and conceptual framework which compiled from the above literatures. Chapter (3) presents the historical background on digitalization in Myanmar banking industry and digital banking products and services provided by current banking industry. Along with that, it describes current government policies and regulations for digitalization in Myanmar banking industry. Chapter (4) is the analysis part on the stakeholders' assessment on government policies and regulations in digital

transformation of Myanmar banking industry and upon the digitalized techniques at banking industry. Chapter (5), where summary of findings, conclusions and the need of the further study are presented.

CHAPTER II

LITERATURE REVIEWS

In this chapter, the definition of digitalization and digital transformation are stated. Further, it extends the digitalization history, then to Omni-Channel approach to digitalization of multi-channel financial payments, and define the stakeholders in the financial industry. Last part of the chapter deals with the previous relevant literature reviews on government policies and regulations for digital transforming banking industry and conceptual framework of the study.

2.1   Definition of Digitalization and Digital Transformation

Hagberg J., et at (2016) stated in their article that digitalization for an on-going transformation of great digitalization[3]as the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business. Consumers around the globe expect their banks to act and interact more like top technology brands. According to(Rouse, 2007), digitalization is denoted as the process of converting information into a digital format. He further stated that format, information is organized into discrete units of data (called bit s) that can be separately addressed (usually in multiple-bit groups called bytes).

Digital transformation is also enabling digital workforce (source from: https://www.i-scoop.eu/digital-transform) by its profound conversion of business and organizational activities (training & development, staffing & recruiting, human resources as examples), processes (one stop shopping experiences), competencies (easy payment) and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way, with present and future shifts in mind (retrieved from: http://www.digitalskilling.com/business/). Researcher further states that this

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[3]Johan Hagberg, Malin Sundstrom, Niklas Egels-Zandén. (2016). The digitalization of retailing: an exploratory framework. *International Journal of Retail & Distribution Management*, ISSN: 0959-0552.

transformation has impacted other organizations such as governments, public sector agencies and organizations (https://infosense.com.au/).

One explains digital transformation as a journey with multiple connected intermediary goals, in the end, striving towards continuous optimization across processes, divisions and the business eco-system of a hyper-connected age where building the right links (between front end and back office, data from 'things' and decisions, people, teams, technologies, various players in ecosystems etc.) in function of that journey is key to succeed(retrieved from web: https://manoxblog.com/2018/07/11/digital)

A digital transformation approach focuses on creation at the capabilities of wholly leveraging the possibilities and opportunities of new technologies and their impact quicker, well and in more advanced way in the upcoming. However, digital transformation needs a dramatic approach with a strong roadmap, linking a variety of stakeholders, outside organizations and internal/external restrictions. In the digital transformation process, online and mobile channels are more important digital payment functions at retail banks (https://www2.deloitte.com/us/en/insights).

2.2   History of Digitalization

Back to the year 2000s, there had some industries who are facing digital revolution, such as changes in CRT TV to LCD TV, telephone booking at travel agent to direct purchase, and recruitment from online Job.com. For more distinct event is found at with the initiation of social media like Facebook and YouTube, people started to deliver their own content. In the travel industry, people started to book their own holidays using the Internet. In human resource recruitment, companies have started to change to the use of social media, with tools such as online job posting, such as LinkedIn web page, Myworld Career web page.

Beyond the 2010s, organizations were facing a third wave of digital disruption. During the time of facing disruption which was in the retailing sector in the 1990s – are now distinct development. This time in the digital transformation, social media effect is one of the key drivers, in which, customers interact with brands (http://www.oracle.com/us/industries/financial-services/). Digital marketing is not similarity to traditional marketing and it is very different from traditional marketing methods for its distinct advent of social media. By a result of digital revolution, many

different industries are affected and they are started to change to use of digital technology, such as the automotive sector. In this automobile sector as well, people no longer tend to visit car dealers as the first stage of looking for a car: they now usually conduct all of their research online and then go to the saleroom to make the final purchase.

Digital Banking is far beyond merely shifting to a digital world from traditional banking. The way banks and other financial institutions know, communicate with and satisfy customers is a crucial improvement. A successful digital transformation starts with an understanding of the actions of digital consumers, interests, choices, likes, dislikes, specified needs, etc. This transformation leads to the major changes in the organizations, from product-centric to customer-centric view.

CGI's research on understanding financial consumers in the digital era, sheds some light on the desires of today's digital consumer. Interestingly, at a time when financial institutions seem to be in a lock-step with each other, consumers are raising the bar on their expectations. And, CGI research, bank customers are willing to leave where they currently bank if their needs are not met. Figure (2.1) shows the customers' want in banking products and services, as follows.

Figure (2.1) Top 5 Customer Wants in Banking

Source: CGI Study. Digital Transformation in Banking – The Future of Banking.

More than 700 respondents selected "see me as a person" as a top want. For that effect of transformation into digital world, the print of the newspaper market has also been massively affected and the phenomena is about a third of what it was. If digital is added into that equation, it draws back to a market of about $20 billion but it is still appreciably lower than before: once the market has been disrupted, it changes significantly. The other interesting sector is retailing: e-commerce was not insignificant during the year 2000. However, it becomes a large section of the market and all of this growth is coming as a result of the disruption.

2.2.1 Four Key Digital Strategies

Oracle has witnessed several different approaches that banks have been using to help to drive a digital strategy as well as to react and deal with some of the FinTech companies.

a. **Launching a digital brand**. These strategies start by launching a digital brand. Many different banks have made it to many different markets (https://thefinancialbrand.com/59403/digi). Examples include Fidor Bank in Germany, UBank in Australia and mBank in Poland. All three of these banks have tried to challenge the issue of how to make it much easier to onboard a customer (https://onemileatatime.com/delta-air-lin). They've also competed on price because as digital-only players, they can become more aggressive in this area, as they have much lower costs than traditional banks. As a result, they have enjoyed a fairly broad-based adoption.

b. **Digitizing processes**. The second strategy involves banks that are seeking to deploy new digital processes (https://www.coursehero.com/file/p4m06ih/). This is another key area in which banks can compete from a digital perspective. They need a set of processes that are aligned with digital interactions so that they can compete successfully, based on the expectations that have been set by all of the other digital brands. The key processes include customer on-boarding, originations and relationship pricing.

c. **Modernizing the digital experience**. The third strategy involves modernizing the digital experience. The digital experience of many financial services companies tend to be rather dated. This doesn't really reflect what is happening with other digital brands, such as HTML5, responsive design, the ability to go back and support mobile devices, the Internet of Things, or even open API services. There

are many interesting examples where banks are deploying new technologies and modernizing their experience.

    d. **Launching a new digital capability**. For the final strategy, banks are looking at the possibility of delivering a new capability. However, they don't want to deliver this as part of their own Internet banking but rather as something completely new: as an add-on (e.g. mobile wallets).

2.2.2   Omni-Channel Approach to Digitalization

Brian B. (2014) explained Omnis word that is derived from Latin that means every/all and here suggests the integration of all physical channels (offline) and digital channels (online) to offer a unified customer experience (Wikipedia). Omni-Channel approach was developed to use in most effective way and to understand and bring the organization from traditional banking to digital banking (http://ibtbd.net/m-m-moyen-uddin-head-information-technologies-dhaka-bank/). Omni-channel approach, it is a multi-channel approach to serve to quick customer service by combining all the channels into one, keeping customer in the center of the integration. Omni channel, also called omni-channel, is trying to provide customers with a seamless shopping experience. Customers can easily shop online from a desktop or mobile device, or by telephone, or in a brick-and-mortar store, in ubiquitous way.

Along with the change of customers continuing their channel usage patterns, banks and credit firms need to focus on delivering a seamless customer experience across various touch points. More than just an axiom, Omni-channel banking is a opinion to catch at bottom-line on higher note by gaining deeply from customers' channels, behavior and preferences. In today business world, customers are more complicated and tech savvy knowledge, and to provide to their precise needs, each customer needs a exclusive experience from banking.

Customers wish their client banks to realize their unstated needs as well as their wants. For that reason, it does not come into surprise issue that these customers are expecting similar kind of response and service from banking institutions too. By researching new services, opening bank account, checking account balance, making transactions, loans, credits, wealth management, customer support, delivering an Omni-channel experience has become a key to success in this competitive market place

(Shruthi, 2014). 46% of people managing their finances online switch between device before completing the activity (Source Omni channel: The New Normal for Banks "Pew Research center, Banking Technology, September 30, 2013) The average cost to a lender for a mobile transaction is 10 cents, the average cost of a desktop-computer transaction is 20 Cents, and the average cost of an ATM transaction is $1.25 (Source: lenders place their Bets on Mobile Banking Javelin strategy & Research wall street journal, April9, 201).

The following diagram is covering the many customer touch points and the opportunities at which Omni-channel can use as important role in customer experience, as well as driving top and bottom lines of the organization.

Figure (2.2) Customer Touch Points at Digital Products
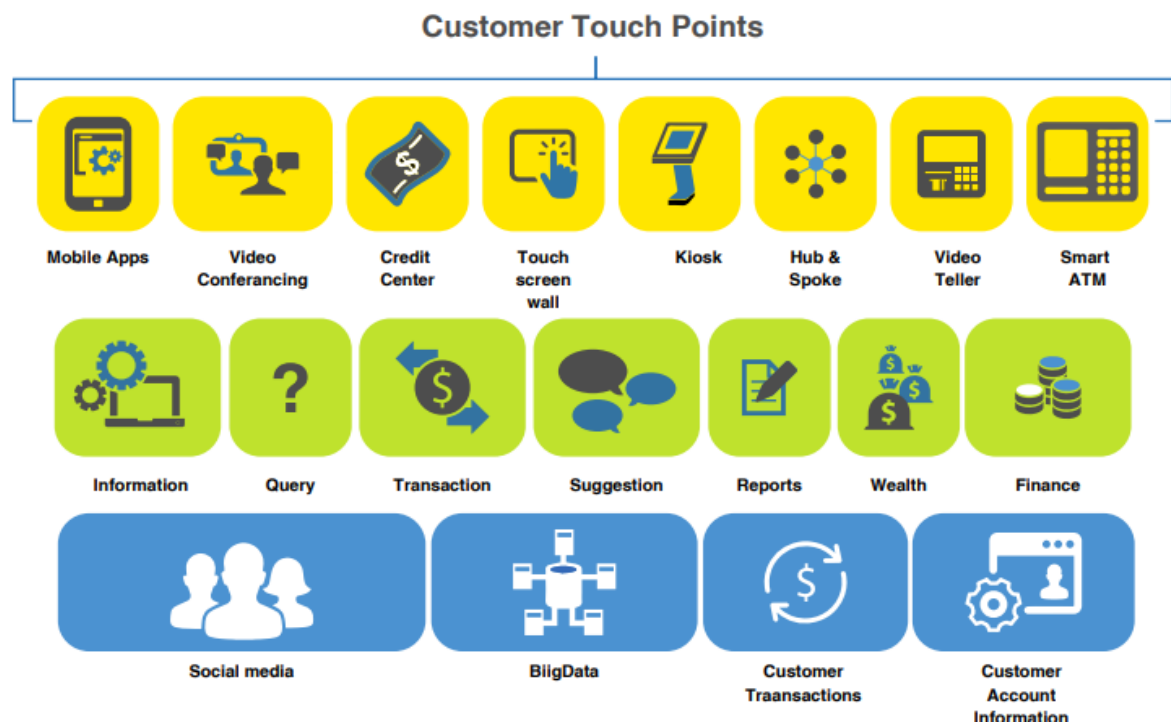
Source: (Shruthi, 2014)

As of today, various channels are working in their silos, but it's time to break their silos and renovate the banking experience by instigating Omni-channel strategy. This approach is based on a single brand name, providing customer centric experience to each and every customer as per their preference and behavior just like an individual bank for every customer – and so smoothly transacted that it becomes seamlessly embedded in the customer's lifestyle.

Various channels, but not limited to, which are the part of the Omni-channel: Regarding to banking transactions, customers are expecting to perform across all channels: namely deposit, open account, switch banks, close accounts, with draw, access/ manage account, use auto bill pay, transfer money apply for credit card. At present, various banking service channels are working in their one bank alone, but now, breaking these standalone services and innovate the banking experience in digital way by initiating Omni-channel strategy.

Thus, omni-channel is required in transforming digital banking sector. ATMs: Within more streamlined branches with a smaller footprint, ATMs can typically outnumber traditional tellers.

2.3   The Policy View in Financial Sector

The first approach focuses on policies to foster financial deepening while at the same time prevent overshooting. Among these policies are macroeconomic stability, strong informational and contractual frameworks and a regulatory framework that aligns risk-taking incentives with (both negative and positive) returns on these decisions. Cross-country comparisons have shown a strong link between macroeconomic stability and financial development (Boyd, Levine and Smith, 2001).

A large literature both across countries but also exploiting within-country variation and policy changes has shown the importance of the institutional infrastructure for financial deepening (Djankov, McLiesh, Shleifer, 2007). And the literature has also pointed to macroeconomic predictors of systemic banking distress and the optimal structure of the financial safety net, including deposit insurance and the regulatory framework (Barth, Caprio and Levine, 2007).

In summary, the policy view sees the problem of financial deepening as one of choosing the right policies. It also emphasizes, however, that this mix might very much differ across countries at different levels of economic and financial development and with different needs. The policy view has been behind the extensive financial sector work by both IMF and World Bank across the developing and the developed world.

2.4   Stakeholders in Financial Industry

Richard Dunbar and James Clunie (2013) explained that bankers knew that there are a number of different stakeholders or interested parties in the banking sector. These stakeholders include customers and depositors, regulators, investors, taxpayers, politicians and the directors and staff of banks. Relative power among stakeholders may differ, resulting in some interests being pursued at the expense of others. Since the most recent banking crisis, the relative power of regulators and policymakers has been paramount, while the control of shareholders, directors and workers has diminished. Traditionally, depositors have had a privileged position among stakeholders. Nonetheless, all stakeholders have an interest in the banking system's proper functioning, as none works in isolation. Bank creditors, whether equity holders, debt holders or funders, share a common interest in efficient financial system governance and management. Although they differ in terms of their risk tolerances, each class of investors obtains returns to compensate them for the risks they face. In the hope of obtaining return opportunities based on perceived risks, bank investors may invest their (limited) capital in properties. Decision-making by investors is uncertain. In most cases, an investor can simply avoid investing in assets that seem to deliver inadequate returns compared to the borne risks.

Figure (2.3)Stakeholders' Perception on Government Policies and Regulations at Transforming Digital Payment System

Source:(Rouse, 2007) The African Journal of Information and Communication (AJIC), Issue 14, 2015
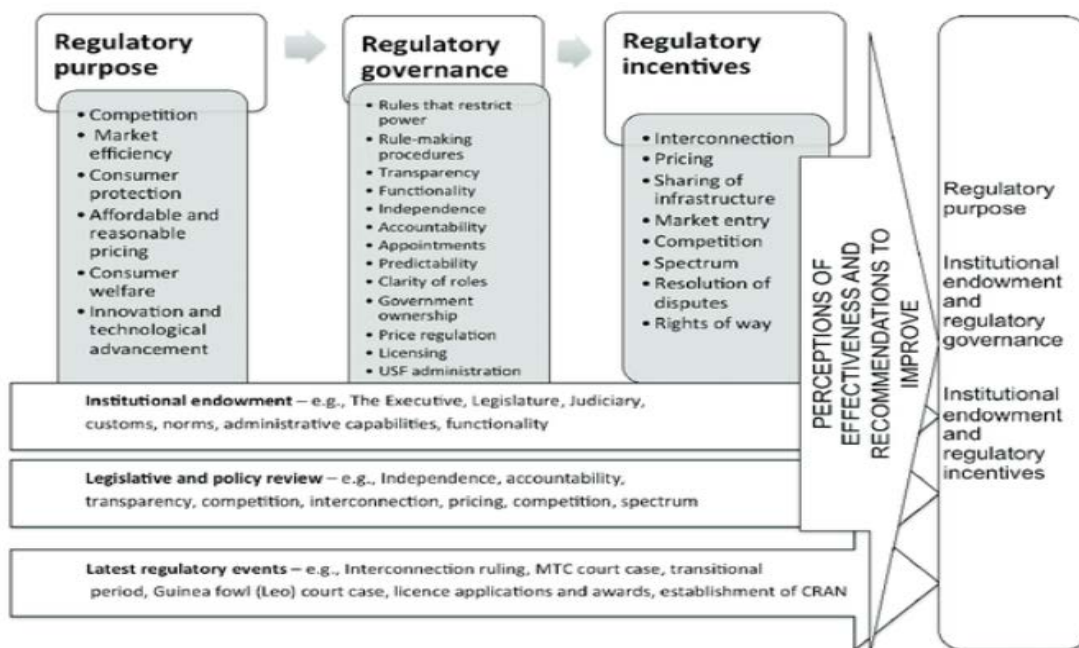
This conceptual framework has the academic value of offering a well-defined model that incorporates different factors used to test stakeholders ' perceptions of the efficacy of regulatory frameworks. The study goes beyond merely documenting the stakeholder's subjective opinions. It proposes a well-defined method for using expectations to create a view of the regulator's efficiency phenomenon, recording stakeholder views and the reasons for such views, with concrete examples based on factual developments, validating those views with a legal and theoretical analysis, and obtaining material improvement recommendations (The African Journal of Information and Communication (AJIC), Issue 14, 2015).

2.5 Banks Utilization Digital Interventions to Market their Services

Financial institutions have already accepted that transformation into digital will deeply alteration banking and entirely convert the industry's competitive landscape.

2.5.1 Digital Banking Products and Services

Digital banking involves high levels of process automation and web-based services and may include APIs enabling cross-institutional service composition to deliver banking products and provide transactions (Wiki). Digital bank is a virtual process including online banking and beyond as end-to-end or bank-to-consumer platform. So that digital banking must encompass the front end that consumers see, the back end that banker see through their servers and admin control panels, and the middleware that connect these nodes. All service delivery must have all the same functions as a head office, branch office, online service, bank cards, ATM and point of sale machines.

The earliest digital banking is the advent of ATMs and cards which launched in the 1960s (Kelman, James , 2016). By the year 1990s, the internet became widely available and online banking started becoming the norm. The improvement of broadband and ecommerce systems in the early 2000s led to what resembled the modern digital banking world today. The spread of smart phones through the next decade kick-off for transactions on the go beyond ATM machines. Over 60% of consumers now use their smart phones as the preferred method for digital banking(Locke, Clayton, 2017). This dynamic shape the basis of customer satisfaction, which can be nurtured with Customer Relationship Management (CRM) software, since banks can directly communicate with their customers. There is a demand for end-to-end consistency and for services, optimized

on convenience and user experience. The market provides cross platform front ends, enabling purchase decisions based on available technology such as mobile devices, with a desktop or Smart TV at home. In order for banks to meet consumer demands, they need to keep focusing on improving digital technology that provides agility, scalability and efficiency. Automation reduces the need for paper, which inevitably ends up taking up space that can be occupied with technology. By using software that accelerates productivity up to 50%, banks can improve customer service since they will be able to resolve issues at a faster pace.

Vincent Bastid et al (February 2016) explains the digital wallets which is the another new digital capability and would be a digital wallet app for banks who are determined not to let Apple and Google remain unchallenged in this marketplace. One interesting aspect for banks to consider is what is happening with their customers' wallets. In the digital space, there is still the traditional notion of a wallet. There is also a move towards contactless payments, whether that involves using the virtual wallet or the smart phone. Banks are also looking at using location-based offers to help to drive the customer experience. Smart phones are now becoming a key place where customers can look at their wallet, see their balance, pay money out and in and receive alerts and offers. Digital wallets are therefore an emerging space that is enjoying a considerable amount of investment from many different people.[4]

2.5.2 Block chain Technology Offers Improvements to Payment Security

A block chain originally block chain is a growing list of records, called blocks, that are linked using cryptography. Each block contains transaction data. Ameer Rosic (2016) stated that the technology behind bit coin lets people who do not know or trust each other build a dependable ledger. Block chain was invented by a person (or group of people) using the name Satoshi Nakamoto in 2008 to serve as the public transaction ledger of the crypto currency bit coin. This has implications far beyond the crypto currency. Trottier, Leo (18 June 2016) stated that original-bit coin is a historical repository of Satoshi Nakamoto's original bit coin source code. (Iansiti, Marco; Lakhani, Karim R, 2017) stated that the technology at the heart of bit coin and other virtual currencies, block chain is an open, distributed ledger that can record transactions between

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[4] Vincent Bastid, Aubrey Hawes, & Tushar Chltra (February, 2016). Digital Transformation: The Challenges and Opportunities facing Banks. White paper. Oracle Financial Services Global Business Unit, Efma.

two parties efficiently and in a verifiable and permanent way. In August 2014, the bit coin block chain file size, containing records of all transactions that have occurred on the network, reached 20 GB (gigabytes)(Nian, Lam Pak; Chuen, David LEE Kuo, 2015). In January 2015, the size had grown to almost 30 GB, and from January 2016 to January 2017, the bit coin block chain grew from 50 GB to 100 GB in size.

Figure (2.4) Digital Technologies Hold the Benefits as well as Risk

Complements: Quality of Institutions, Regulation & Skills

With
complements

| Innovation | Efficiency | Inclusion |

DIGITAL
TECHNOLOGIES

| Connection | Inequality | Control |

Without
complements
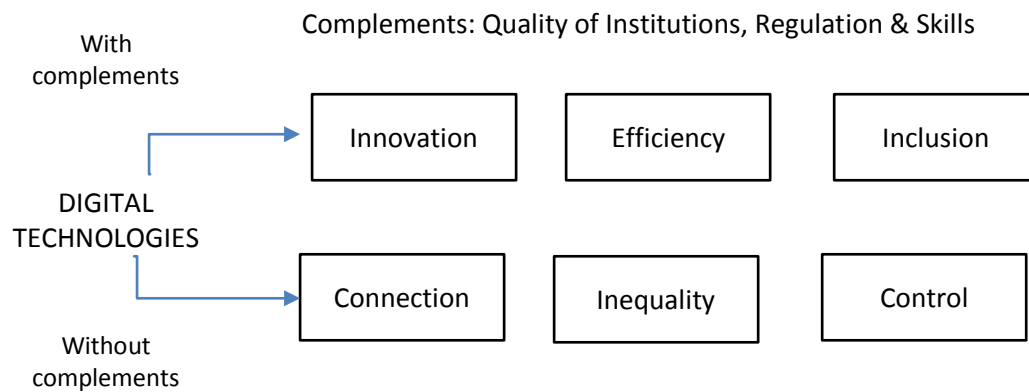
Source: WDR 2016

It is needed of realizing ICT benefits through complements. For the accompanying with risk as digital transforming, policy makers need to act to prevent the risk. Policy guides include:

- Help building a long-term policy commitment
- Preparing for the transformational journey
- Integrating supply and demand side ICT policies
- Organizing and implementing institutional change
- Executing and delivering on a change

Setting policy objectives for a transformational change, the following are the objectives to pursue;

- Sustained economic long-term growth
- Increase competitiveness of nations and industries
- Stimulate innovation, diffusion and adoption
- Create new jobs/business
- Minimize exclusion and poverty,
- Increase equality

- Address population challenges, ageing/youth population
- Increase public sector efficiency
- Address climate change, environment
- Cope with increasing level of urbanization

2.6 Literature Review on Regulatory Effectiveness and Policy in the Era of Digitalization

OECD (2019) describes the regulatory effectiveness and required regulatory policy as the cornerstone of effectiveness and efficiency.

2.6.1 Regulatory Effectiveness

OECD (2019) announces that regulatory effectiveness in the era of digitalization. OECD believes that the evolution of digital economy is the distinct feature of 21st century. OECD (2019) further stated the effectiveness of digital technology which influences on societies and nation economy with many new ways; new communication, new collaboration, new banking products with feature strong service, role of data as driver of economic growth, automation of tasks with artificial intelligence (AI), and emergence of new business models such as platforms. Digitalization is therefore fundamentally transforming the way we live and work together. It has consequences for the well-being and cohesion of society as a whole; as well as deep impacts for businesses in all sectors, through effects on productivity, employment, skills, income distribution, trade and the environment (OECD, June 2019).

While there are many benefits to society by the digitalization, it accompanies with big unwanted opportunities. For that uncertainty, Government proactively seek a deepest understanding of the potential implications for society as well as of the critical challenges to their rulemaking activity. These challenges are i) the pacing problem; ii) designing fit-for-purpose regulatory frameworks; iii) the regulatory enforcement challenges; iv) the institutional and trans boundary challenges.

Regulatory enforcement is one of the challenges for digitalization. OECD (2019) states that digitalization challenges regulatory enforcement by asking the traditional view of liability. In particular, it makes it harder to apportion and attribute responsibility for

damage or harm caused by the use of technology to end users. A specific example is provided by the difficulty to enforce copyright/property rights with the internet offering new ways to distribute content. Another example is the difficulty of attributing liability (to the vendor, the distributor, or the original equipment manufacturer) when AI is involved.

In that development, the role of Government and regulators are important in encouraging developing of digital innovation and in incentivizing this digital innovation technologies for the benefit of society. These development fosters mass public and bank customer interests and bound any possible unintentional negative consequences of these developments by providing general rules that reflect societal values and preferences. However, regulatory frameworks are missing the agility to accommodate the increasing pace of technological developments. Digital technologies also challenge deeply the way governments regulate: by blurring the traditional definition of markets; challenging enforcement; and by transcending administrative boundaries domestically and internationally.

2.6.2 Regulatory Policy and Co-operation as the Cornerstone of Effectiveness and Efficiency

There are the problems arising from transforming digitalization and there is a real risk of getting it wrong. For instance, a regulatory action may not be the best course of action. The traditional regulatory policy tools provide important opportunities to pause, consult, question and test the approaches that may help achieve general policy objectives. They can support governments in choosing between regulatory and alternative approaches to promote digital innovation while mitigating the risks. This can range from explicitly preventing the development and use of digital technologies; to adopting a "wait and see" approach in order to discover which perceived risks materialize; or setting fixed-term regulatory exemptions (such as regulatory sandboxes) for innovative entrants. Given the dynamics of digital transformation, it is likely that the appropriate (mix of) regulatory solutions will require periodic adaptations and constant government monitoring.

More than ever, a "whole-of-government" approach to rulemaking is needed to address the institutional challenges raised by digitalization. In view of their cross-jurisdictional nature, regulating digital technologies calls for increased dialogue and coherence among government bodies. OECD (2019) describes that regulatory co-operation

remains nevertheless challenging because of differing priorities and systems. The regulatory co-operation required to address the challenges of digitalization will need to take into account these political economy factors, as well as make the most of the wide range of possible approaches (unilateral, bilateral, and international

2.7 Conceptual Framework of the Study

Based on the previous literature, the appropriate conceptual framework was developed. Figure (2.5) shows the conceptual framework of the bank stakeholders' perception on operational effectiveness of Government Regulatory at banking sector in Myanmar.

Figure (2.5)Conceptual Framework of the Study

Stakeholders' assessment on
Government Regulations
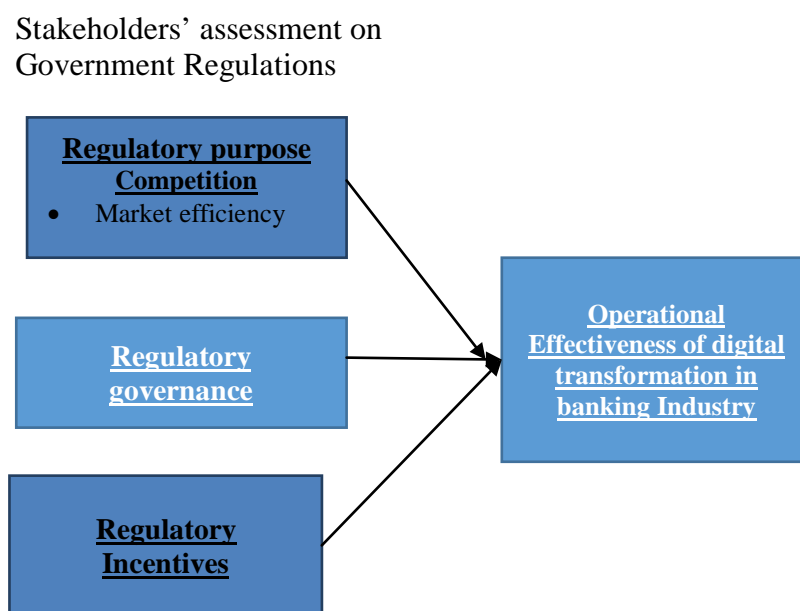
Source: Conceptual framework adopted from Rouse Model 2007

According to the proposed conceptual framework, regulatory purpose, regulatory governance, and regulatory incentives are considered as stakeholders' assessment variables on government policies and regulations in digital transformation which are independent variables of the study. Operational effectiveness of digital transforming in Myanmar banking sector is dependent variable.

CHAPTER III

GOVERNMENT POLICIES AND REGULATIONS FOR DIGITAL

TRANSFORMATION IN MYANMAR BANKING INDUSTRY

In this chapter, it states the government policies and regulations at digitalization in Myanmar Banking Industry. Before stating that, it starts with the history of computerized banking and then stats the central bank option for digital transformation in banking industry, as follows.

3.1   Myanmar Banking History

The Union Bank of Burma was set up by the Union Bank of Burma Act of 1947 on April 3, 1948 and took over the functions of the Reserve Bank of India's Yangon branches (Adopted: https://www.cbm.gov.mm). After Myanmar's 1962 implementation of the socialist economic system, all banks were nationalized. A monolithic bank was established under the 1967 People's Bank of the Union of Burma Act. The Union Bank of Burma Law of 1975 was promulgated after the restructuring of the administrative system in 1972 and the banking system was accepted.

Before the advent of computerized data analysis technology, financial services were computerized for decades, with products such as retail brokerage using digital channels for some 20 years, the industry was delayed by a more radical transformation due to the market advantages of traditional financial services providers (https://www.cbm.gov.mm).. These included the established trust of customers, regulatory barriers to entry in banking and insurance and supervisory approaches that created a bias to internalizing all or most of the value chain. Myanmar has lied in isolation for many decades.

After 1988, Myanma economic system was changed into a market-oriented economy from the planned economic system. The Central Bank of Myanmar Law was enacted on 2 July 1990 to establish the financial system that is in line with the

government-oriented economy, and to encourage the effectiveness of financial activities (Adopted: https://www.cbm.gov.mm).

The government that came to power in Myanmar after the 2010 elections, when the first democratic government period, started an ambitious reform agenda aimed at making the political process more inclusive and the economy more accessible and market-oriented. It has powered Myanmar's reintegration with the international community when the digital reforms began in 2011 (https://www.cbm.gov.mm)...In the telecom sector, the first distinct digital transition is sought by promoting democratically elected government. This remarkable series of events creates new possibilities for the world to leap-frog from one of the least developed economies to a 21st century-equipped low-to-middle-income economy.

Consumers expect more advanced technology brands to operate and communicate with their banks. A digital banking market survey reveals where the gaps are — and what banks can do to meet heightened expectations. Economic reforms have started in 2011, following four decades of national isolation, which has accelerated Myanmar's reintegration with the international community (https://www.cbm.gov.mm)... Continue the extra ordinary set off an extraordinary series of events, including the liberalization of the telecom sector and a democratically elected government.

This creates new opportunities for the country to leap-frog from one of the least developed economies, to a low- to middle-income country equipped for the 21st century (Telenor Myanmar Report, 2017). widespread adoption of digital technologies will provide inclusive and sustainable socio-economic development across all states and divisions as targeted by the government's 12-point Economic Policy. To facilitate Myanmar's digital transformation, the government established the Digital Economy Development Committee (DEDC). by the use of digital technology, creating Myanmar as a digital hub of ASEAN region by upgrading better economic environment and digital technology. The Digital Economy Development Committee is in the process of setting up goals to be achieved by 2020 (The Government's Vision for Digital Myanmar, 2017).

3.2 The Government Vision for Digital Economy Development in Myanmar

The Central Bank of Myanmar (CBM) is established under this Law as a legal entity having perpetual succession, capable of suing and being sued in its own name (CBM Notification 2019).Central Bank of Myanmar is to develop an efficient fast, safe and reliable national payment system. One major objective of CBM includes to preserve and maintain the domestic price stability. In line with this purpose, the Central Bank of Myanmar has issued policies for payment system. In the area of Cash Payment system, policies covered three principal aspects, including fulfilling public needs for currency, ensuring that bank notes are fit for circulation, and taking preventive and repressive measures against the circulation of counterfeit currency. In the area of non-cash payment system, the policies are focused on mitigating risks and improving efficiency of payment system. In general, payment system activities experienced an improvement in line with the increasing public needs for both cash and non-cash payment instruments (Central Bank of Myanmar Report, 2019).

Myanmar has distinct economic reforms which has taken place in the beginning in the year 2011 and that has driven Myanmar's reintegration with the international community. The initial stage of the development of transforming digital economy was caused by the liberalization of telecommunication sector in Myanmar by the democratically elected government. The influence of Government in Myanmar creates new opportunities for the country to leap-frog from one of the least developed economies, to a low- to middle-income country equipped for the 21st century. According to the McKinsey Global Institute, the size of Myanmar's economy is expected to quadruple by 2030.

Myanmar Government also does not mix to facilitate Myanmar's digital transformation, the government formed committee for Digital Economy Development namely (DEDC). During the inaugural meeting of the DEEDC, committee leaders emphasized in the formation with the intention of performing the tasks of effective and successful implementation of national economic policies, provision of governmental supports for the successful emergence of digital economy in the country, development of other economic sectors based on digital economy, development of social affairs, education, health and economy by the use of digital technology, creating Myanmar as a

digital hub of ASEAN region by upgrading better economic environment and digital technology.

The Central Bank of Myanmar Law, and Law & Regulation for Financial Institutions are legal basis for operation of payment system and anti-money laundering law as well. The regulation is designed to safe, smooth and efficient payment settlement and fund transfer (remittance transfer process) as well as to protect the interest of all parties involved in the transfer. Remittance services are subject to Central Bank Oversight. The Central bank of Myanmar has launched an electronic data transfer and has implemented Banking Network for Electronic Fund Transfer (EFT) and reporting system among the financial institutions in 2011.

Figure (3.1) Organization of Banking Regulation Department at CBM
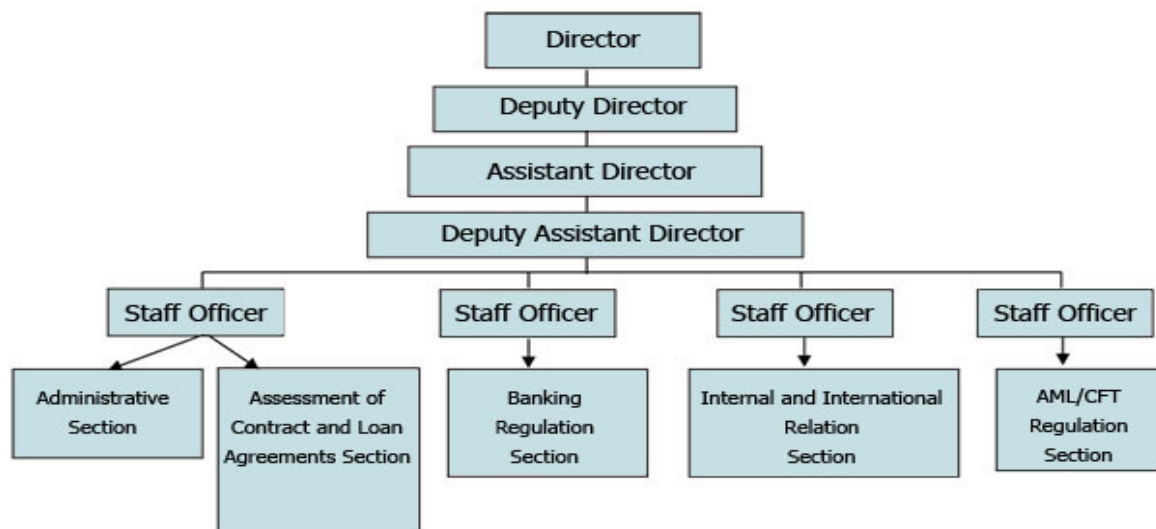
Source: Central Bank of Myanmar (2019)www.cbm.gov.mm

The responsible of Central Bank is to supervise and regulate the financial institutions of Myanmar. The establishment of the Banking Regulation Department was on January, 2001 under the approval of the Ministry of Finance and Revenue to perform the issuance of regulations, instructions and guidelines that are required to comply by the banks and financial institutions (https://www.cbm.gov.mm/).Central Bank is governed by a Board of Directors. Board is formed by nine members appointed by the President with the consent of Pyidaungsu Hluttaw with the Governor of the Central Bank as Chairman, three Deputy Governors of the Central Bank as members, and five other persons of recognized professional appointed by the Government also as members in the

organization. The term of office of the Governor is 5 years and the term of office of the other members is 4 years (https://www.cbm.gov.mm/).

3.3 Activities on Development of Payment System at Myanmar

The Central Bank of Myanmar has laid down the policies for developing an efficient, fast, safe and reliable national payment system as its main responsibility. In the area of cash payment system, the policies covered three principal aspects, including fulfilling public needs for currency, ensuring that bank notes are fit for circulation, and taking preventive and repressive measures against the circulation of counterfeit currency. In the area of non-cash payment system, the policies are focused on minimizing risks and improving efficiency of payment system.

The Central Bank of Myanmar has planned to upgrade the present manual clearing system to Auto Clearing System and to implement the Banking Network for Electronic Fund Transfer (EFT) and reporting system among the financial institutions since 2007.The Central bank of Myanmar (CBM) has launched an electronic data transfer and CBM has implemented Banking Network for Electronic Fund Transfer (EFT) and reporting system among the financial institutions in 2011 In order to accelerate the momentum of payment system development in Myanmar, the Payment System Upgrading Committee was organized on October 12, 2010, so as to study and explore the efficient, appropriate and sustainable domestic and international payment systems, new means of payment instruments and to follow up the international best practice of the payment system.

Myanmar Payment Union was organized by state owned and private banks in 2011. The purpose of MPU is to provide the ATM and POS switching services among the banks.MPU cards have already been issued in September 14, 2012. This endeavor is to reduce the handling of physical currency notes by the Central Bank of Myanmar by assisting to issue debit card and ATMs among the financial institutions. At present days, these networks are linked to ASEAN payment gateway. There is a road map for card issuing and acquiring process. As a result, all bank card holders can withdrawal and check their balance and remittance their fund at any ATM among the banks. MPU will be made the settlement process.

3.4   Nine-Priority Sectors at Myanma Economy for Digital Transformation

There are total nine sector prioritized by Government. They are education sector, healthcare, agriculture, fishery &livestock, tourism & hospitality, manufacturing & SME, financial services, technology sector & startup ecosystem, digital trade, and lastly transportation & logistics (Myanma Digital Economy Development Committee-Roadmap, 2019) (https://www.myanmar.gov.mm/documents/2019-02-7/DEDC/).

There are different strategies in different countries. For UK, digital strategy is seven priorities, which are: Connectivity, Digital skills and inclusion, The digital sectors, The wider economy, a safe and secure cyberspace, digital government, and data (Digital Economy Development Committee, 2019). For Singapore Digital Security, it aims an Intelligent Nation, a Global City, powered by ICT. The three key priorities in digital strategies include: innovation, integration, and internationalization. As a small country, Singapore needs to be well plugged into the globalized economy.

Myanmar is trying to move forwards: in its digital Current Status by taking part of. Digital Transformation and Digital Trade as 133 out of 139 in the World Economic Forum's Networked Readiness Index (NRI) 2016, digital government as 157 out of 193 member states in the 2018 United Nations E-Government Development Index, digital connectivity in the rank with 135 out of 176 countries in the International Telecommunication Union (ITU) ICT Development Index 2017, digital skills and Inclusion in the rank at 148 out of 189 countries in the United Nations Development Programme Human Development Index 2017, digital security in the rank at 100 out of 165 in the ITU Global Cyber security Index, 2017, digital innovation at the rank with 171 in the world out of 190 in the World Bank Ease of Doing Business Index 2019, respectively (https://www.myanmar.gov.mm/)

3.4.1   Myanma Digital Transformation and Digital Trade

The goal of Myanma Digital Transformation and Digital Trade in the year 2020 is aiming to reach 10% and 25% in the next five year of 2025, digital transformation across current businesses. The goal for effective utilization of digital technology by SMEs is also aiming to reach 10% in the year 2020 and 50% in the next five year of 2025 (https://www.myanmar.gov.mm/documents/). With regard to digital financial service transactions, Government also want to penetrate from current transaction with 0.5%, to

15% in the year 2020 and 30% in the next five year of 2025. Government also try to improve ranking in WEF Network Readiness Index 133 in current year, 133 130 and 120 in the year 2020 and 202, respectively (https://www.myanmar.gov.mm/documents/EDC/RoadMap/Websites).

Table (3.1) states the objective to form digital Government, digital skills and inclusion of internet users, digital security, and digital innovation of digital transformation in Myanmar, as follows.

Table (3.1) Myanmar Digital Economy Roadmap

Goal	Current	2020	2025
Digital Transformation and Digital Trade			
Digital transformation across business sectors	-	10%	20%
Effective utilization of digital technology by SME	-	10%	50%
Digital financial service transactions	1%	15%	30%
Improve ranking in WEF Network Readiness Index	133	130	120
Digital Government			
Improve ranking in UN E-Government Development	157	155	134
Digital Connectivity			
Unique mobile subscription	48%	50%	55%
Mobile network coverage in percentage of population	92%	93%	98%
Improve ranking in ITU ICT Development Index	135	130	120
Digital Skills and Inclusion			
Internet users in percentage of population	40%	45%	50%
Qualified tech-related graduates yearly	2,500	5,000	10,000
Number of people employed in the digital economy	-	100,000	300,000
Digital Security			
Improve ranking in ITU Global Cyber security Index	100	97	90
Digital Innovation			
Foreign direct investment in digital industry	6 billion	8 billion	12 billion
Improve ranking in Global Innovation Index		125	120

Source:Digital Economy Development Committee (2019) Web source:

https://www.myanmar.gov.mm/documents/20143/9096339/2019-02-07/DEDC/RoadMap/Websites.pdf

3.5 Central Bank Policies and Regulations for Digital Transformation in Banking Industry

The CBM, as the main regulatory body, will need to play its part to set the tone of relations in the industry and address the growing concerns of the domestic banking sector. The domestic private banking sector too, needs to set aside its discontentment with the country's pace of reforms and to focus on working with the Central Bank to develop pragmatic solutions that plug gaps and strengthen the industry. Settling problems, soothing fears and addressing discontentment issues within the banking industry in the short term will enable the banks to maximize the country's financial opening for the benefit of greater economic growth in the long term.

The functions and powers of the Central Bank include: formulating and implementing monetary policy, determining and implementing the exchange rate policy, advising to the Government in respect of such exchange rate regime, maintaining and managing the international reserves of the State, acting as the sole issuer of and managing the domestic currency, overseeing the financial system in order to maintain its stability, regulating and supervising financial Institutions, overseeing the money market and foreign exchange market to ensure orderly operation in such markets, promoting and overseeing a safe, sound and efficient payment system, acting as lender of last resort for banks, acting as a banker to the Government by maintaining the accounts of the Government, acting as financial advisor and fiscal agent to the Government, acting as a banker for the financial institutions and to foreign governments and international agencies, Opening accounts with and accepting deposits from financial institutions, performing the transactions resulting from the participation of the State in international financial institutions in the banking, credit and monetary sphere and undertaking all the responsibilities in the name of the Government dealing with the aforesaid organizations on behalf of the Government, carrying out such operations as may be consequential or incidental to the exercise of its powers and discharge of its duties under this Law.

The Central Bank is responsible for issuing, refusing and revoking of licensing to the applicant, and the regulation and oversight of these payment institutions for the purpose of security and effectiveness of the payment and settlement system in accordance with provisions under this law and other related laws(source: as shown in CBM Law.

Pyidaungsu Hluttaw Law Section (79). No. 16 / 2013). In order to facilitate the clearing of cheques and other instruments used as means of payment, the Central Bank may, in cooperation with financial institutions, allow the establishment of clearing houses in such places as it shall deem necessary. Persons who engage in payment and settlement operations shall comply with procedures and guidelines issued by the Central Bank from time to time. laws (source: CBM Law. Pyidaungsu Hluttaw Law Section (80). No. 16 / 2013). CBM endeavor to attain the objectives of domestic price stability in terms of promoting monetary stability, enhancing financial system stability, developing efficient payments and settlement system, supporting the general economic policy of the Government conducive to the sustained economic development. To succeed these, CBM autonomy exercises all the powers conferred upon in carrying out the functions under this law.

In the movement of CBM in digital transformation in Myanma Banking and Financing sector, strengthening consumer protection is taken as important area while increasing financial access. To implement successfully, there are the need of financial literacy to educate the people which is also important for empowering consumers and making sure that whether they have understand their rights and responsibilities as users of financial services. For that, regulation is an instrument for reduction of information asymmetry between consumer and service provider, with enhanced transparency requiring fair and easy-to-understand contracts, charges, and interest rates. For that, there is undertaken in consumer protection guidelines which are needed to review as financial services are extended through non-traditional channels. There is also a need to establish customer call center to be effective systems by answering to the receiving complaints, resolving problems, and redressing grievances.

CHAPTER IV

STAKEHOLDERS' ASSESSMENT ON GOVERNMENT POLICIES AND REGULATIONS FOR DIGITAL TRANSFORMATION IN BANKING INDUSTRY

In this chapter, the data were analyzed by using SPSS (23) and the results are presented with two parts. The first is presented with research design and detailed information of respondents, descriptive statistics and reliabilities of the variables. The results of multiple regression analysis on the relationship between the stakeholders' assessment variables on government's policies and regulations and operational effectiveness of digital transformation in Myanmar banking industry are presented in the second part.

4.1 Research Design and Profiles

This study examines the government policies and regulations at digitalization in Myanmar banking industry and analyzes the options of stakeholders' assessment these government's policies and regulations on digital transformation of Myanmar banking industry. As for the stakeholders, survey includes 50 numbers of sample respondents from Ministry of Finance, form Central Bank of Myanmar, authorities from Private Commercial Bank, Mobile Wallet Financial Services, Payment Gateway Service Provider, officers from YSX/Financial Service, ICT Service Company, and Business Firm who are using financial services from banks, are selected by convenient sampling method. Descriptive method was used. Data are both primary data and secondary data. For the primary data collection, information was based upon the survey questionnaire which was developed based on relevant previous literatures. Manor focusing area include government regulatory purpose for competition, regulatory governance, and regulatory incentives factors which all are influencing on Digital Transformation in Myanma Banking and financial system. Respondents are also asked to answer the open question to express in extent to which the current digital banking operational effectiveness by the Government regulatory purposes, regulatory governance level, and incentives to grow digital transformation of financial institutions by the use of Key Informal Interviewing

(KII) method. Output of the data are calculated by the use of excel software. Major literatures are mainly based on Myanmar Digital Economy Roadmap, and the bulletin of Myanma Digital Economy Development Committee (MEDC). The survey results obtained from these respondents are as shown below.

4.2 Demographic Profile of Respondents

The first analysis in the study is focused on the demographic profiles of respondents. At which, it analyzes on gender of respondents, educational level, their working experiences, their current working organization, and position levels.

4.2.1 Gender of Respondents

Gender of respondents are asked whether they are male or female. Table (4.1) and Figure (4.1) are the gender composition of respondents contained in this study, as flows.

Table (4.1) Gender of Respondents

Sr No.	Gender	Total	Frequency
1	Male	32	64%
2	Female	18	36%
	Total	50	100%

Source: Survey data, 2019

Figure (4.1) Gender of Respondents
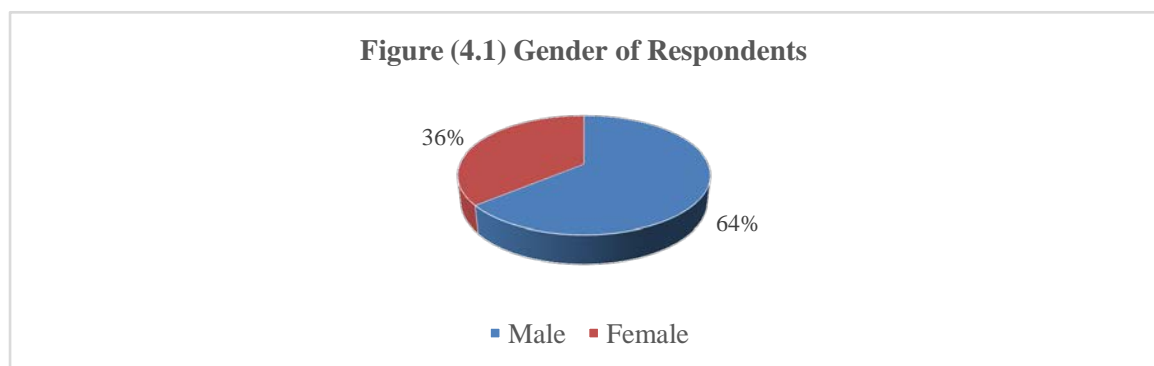
Source: Survey data, 2019

Regarding to the gender analysis, Table (4.1) and Figure (4.1) state that 32 out of total 50 are male respondents and 18 are females. In terms of percent, 64% or majority of respondents are males.

4.2.2 Educational Level of Respondents

Educational Level of respondents are asked by grouping into three: university graduate, post diploma and/or master degree level, and PhD level. Table (4.2) and Figure (4.2) state the result from the analysis on the educational level of respondents, as follows.

Table (4.2) Educational Level of Respondents

Sr No.	Your Educational Level	Total	Frequency
1	University Graduate	9	18%
2	Post diploma/Master	41	82%
3	PhD.	-	0%
	Total	50	100%

Source: Survey data, 2019

Figure (4.2) Education Level of Respondents
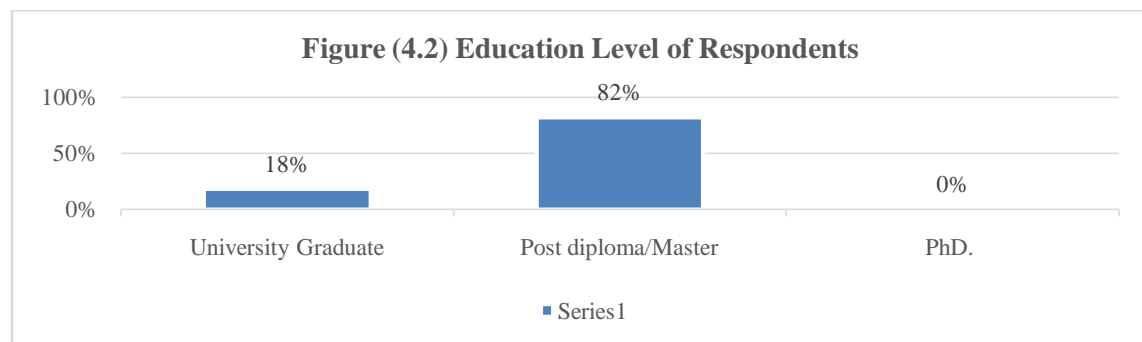
Source: Survey data, 2019

Regarding to the education level analysis, Table (4.2) and Figure (4.2) state that 9 out of total 50 respondents have university degree, and 41 number out of total 50 respondents are post-graduate diploma above level. In term of percent, of sample respondents, 82% of total respondents are post-graduate diploma and above level with maximum percentage and the second maximum composition of 18% is found in university degree level. The higher composition of educated person would be assumed to understand well on survey questionnaire and they could yield more accurate answers to the survey questions.

4.2.3 Working Experiences of Respondents

Working Experiences of respondents are asked by grouping into four: less than 2 year, 3 to 5 years, 6 to 8 years, and above 8 years. Table (4.3) and Figure (4.3) state the result from the analysis on their working experiences of respondents, as follows.

Table (4.3) Working Experiences of Respondents

Sr No.	Your working experiences	Total	Frequency
1	Less than 2 years	-	0%
2	2 – 5 years	-	0%
3	6 – 8 years	9	18%
4	Above 8 years	41	82%
	Total	50	100%

Source: Survey data, 2019

Figure (4.3) Working Experiences of Respondents
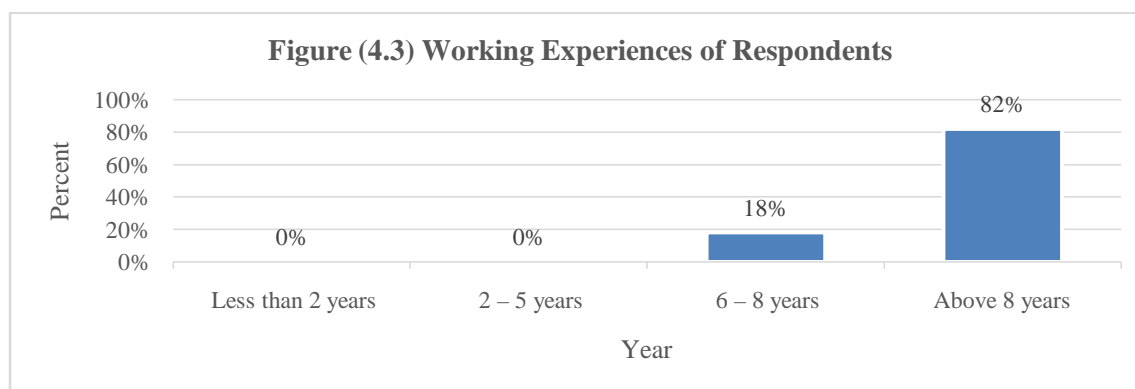
Source: Survey data, 2019

Regarding to the working experiences analysis, Table (4.3) and Figure (4.3) state that no one respondents are lesser than 2-years working experiences, 9 number out of total 50 respondents have working experience from 6 to 8 years, and 41 respondents have working experience above 8 years,. In term of percent, of sample respondents, 82% of total respondents who have working experience above 8 years are found as maximum percentage and the second maximum composition of 12% is found in the respondents with working experience above 6 to 8 years. The higher composition of long working experiences of respondents would also be assumed to understand well on survey questionnaire and they could yield more accurate answers to the government regulatory

purpose, governance and incentives to the effectiveness at digital transformation in banking/financial sector related questions.

4.2.4 Current Working Organization of Respondents

To take part from different level of stakeholders, respondents are asked that which organization they are presenting in the study. From that analysis, current working organization of respondents are found as: Ministry of Finance, Central Bank of Myanmar, YSX, Private Commercial Bank, Mobile Wallet Financial Service, Payment Gateway service provider, ICT Service Company, Business Firm, and from the base of retail customer. Table (4.4) and Figure (4.4) state the result from the analysis on their current working organization, as follows.

Table (4.4) Current Working Organization of Respondents

Sr No.	Your Current Organization	No. of Respondents	Per cent
1	Ministry of Finance	1	2%
2	Central Bank of Myanmar	3	6%
3	YSX	1	2%
4	Private Commercial Bank	12	24%
5	Mobile Wallet Financial Service	3	6%
6	Payment Gateway service provider	4	8%
7	ICT Service Company	5	10%
8	Business Firm	21	42%
	Total	50	100%

Source: Survey data, 2019

Figure (4.4) Current Working Organization of Respondents
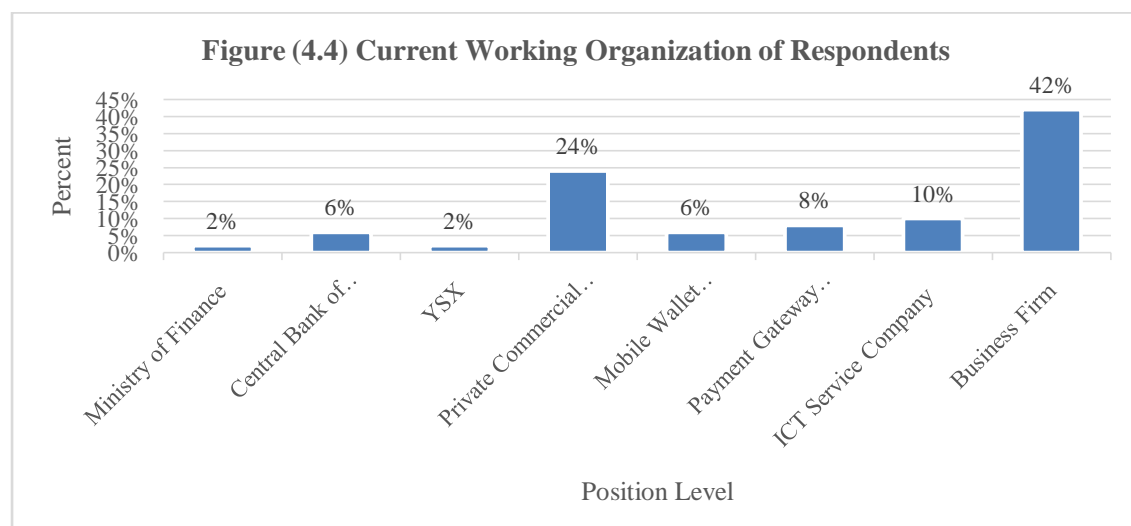
Source: Survey data, 2019

Regarding to the working organization analysis, Table (4.4) and Figure (4.4) state that 1 respondent is from Ministry of Finance, 3 are from CBM, 1 from YSX, 12 from private commercial banks, 3 from Mobile Wallet Financial Service companies, 4 from Payment Gateway service provider, 5 from ICT Service Company, and the rest 21 are from business firms, respectively. In terms of percent, respondents from business firms are composed with the most percentage with 48%, followed by private commercial banks with 24%, and the similar composition of the other stakeholders with almost 6%, respectively. Majority of service demand side and service supply side, as well as other participants of other financial service associations and digital technology providers are assumed to have more meaningful answers from the study.

4.2.5 Current Working Position

Table (4.5) and Figure (4.5) represent respondents' current position level, as follows. For Key Person Analysis, survey focuses only on the position of people which are: Junior Manager, Senior Manager, Dy GM/ GM, Director, CFO, CEO, MD and Business Owner who are stakeholders relating to the financial institution.

Table (4.5) Current Position of Respondents

Sr No.	Your level of position	Total	Frequency
1	Junior Manager	-	0%
2	Senior Manager	10	20%
3	Dy GM/ GM	17	34%
4	Director	5	10%
5	CFO	4	8%
6	CEO	6	12%
7	MD	6	12%
8	Business Owner	2	4%
	Total	50	100%

Source: Survey data, 2019

Figurev(4.5) Current Position of Respondents
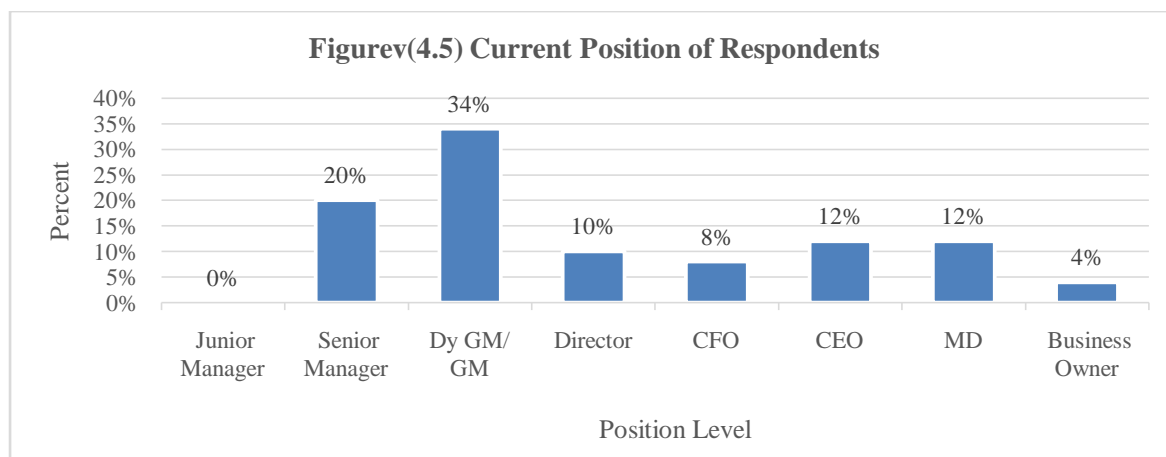
Regarding to the working experiences analysis, Table (4.5) and Figure (4.5) state that one respondent is lower than junior manager position, 17 are in senior manager positions, Dy GM/ GM are at 15 respondents, 7 are at Director position, 2 are at CFO level, 6 are CEO, and the rest 3 are business owners, respectively. In terms of percent, respondents at the senior manager positions are composed with the most percentage with 34%, followed by Deputy GM/GM with 30%, 14% are Director level positions. The participants of key level positions only are aiming to yield more meaningful answers from the analysis.

4.3 Stakeholders' Assessment on Government's Policies and Regulations on Digital Transformation of Myanma banking and Financial Sector

OECD explains the role play of Governments and regulators as an importance in fostering digital innovation and in incentivizing the development of these technologies for the benefit of society. For that important role of Government, stakeholders' assessment on the effectiveness on Government's Policies and Regulations on Digital Transformation of Myanma banking and Financial Sector is further analyzed.

Along with analyzing on respondents for their demographic data composition, stakeholders' option in extent to which effectiveness of Government's Policies and Regulations on digital transformation is made. To understand the respondents' options, respondents are requested to rate with Five Point Likert Scale measurement ranging from

1=strongly disagreed, 2= Disagreed, 3=Neither disagree nor agreed, 4= Agreed, and 5= strongly agreed.

The selected or focus key factors include government regulatory purpose for the effectiveness at transforming digital financial service industry, government governance at this transformation, and its incentives to encourage to the development of transforming digital financial service industry, in Myanma financial industry, which are stated as follows.

4.3.1 Regulatory Purpose

Digitalization challenges regulatory enforcement on that of traditional banking on the notion of liability for the use of technology to end users. There are the challenges to regulatory enforcement and to the design of fit for purpose regulatory frameworks. To understand that current regulatory purpose for the stakeholder engagement, Table (4.6) represents respondents' options upon the Government regulatory purpose in the effectiveness at current digital transformation financial, as follows.

Table (4.6) Regulatory Purpose

Sr No.	Regulatory Purpose (Competition)	Mean	St. Dev.
1	Regulatory aims at market efficiency	4.04	0.75
2	Regulatory aims at consumer protection	3.70	0.91
3	Regulatory aims at affordable and reasonable pricing	3.92	0.75
4	Regulatory aims at consumer welfare	3.70	0.68
5	Regulatory aims at innovation and technological advancement	3.60	0.78
	Overall mean Regulation Purpose	3.79	

Source: Survey data, 2019

By the Table (4.6), the obtained overall mean score 3.79 is higher, and thus, most of all the respondent stakeholders believe that there has moderate level effectiveness by the Government policies and regulations to that of transforming digital banking and financial sector in Myanmar. Among the variables, stakeholders are the most agreeable upon the regulatory at transforming digital banking purpose or aims at promoting current

financial market efficiency (highest mean value 4.04 with standard deviation 0.75). Stakeholders are second most agreeable to that of regulatory purposes also to be affordable and reasonable pricing (higher mean value 3.92with standard deviation 0.75). The least rating by the stakeholders is found as the government regulatory purpose which aims at innovation and technological advancement (also higher mean value3.60,standarddeviation 0.78). Even the least mean value is greater than the normal agreeable level, survey finds as Government regulatory purpose is leading to the effectiveness of current transforming digital banking and financial industry in Myanmar.

4.3.2 Regulatory Governance

Like over the world, Myanma Banking Industry is also trying to response by introducing new talent, processes and technologies while trying to be familiarity with these technologies to customer experience. Transformation of traditional regulation as financial institutions and regulators integrate new technologies and greater data usage into processes, business models, regulatory reporting and oversight. The era of digital transformation has brought many problems, such as the increased threat of cyber-attacks, internal challenges of replacing legacy IT systems and supporting staff, inconsistent risk measures and an inability to aggregate data. New technologies and products are testing the effectiveness of existing processes. It is important to enhance governance and operational resilience to the transformation. Table (4.7) states the analysis on the current regulatory governance at the effectiveness in current digital transformation financial sector, as follows.

Table (4.7)Regulatory Governance

Sr No.	Regulatory Governance	Mean	St. Dev.
1	Rules that restrict power	3.38	0.60
2	Rule-making procedures	3.44	1.03
3	Transparency	3.48	0.79
4	Functionality	3.28	0.57
5	Independence	3.28	0.76
6	Accountability	3.42	0.86
7	Clarity of roles	3.16	0.87

	Overall Mean- Regulation Governance	3.35	

Source: Survey data, 2019

By the Table (4.7), the obtained overall mean score 3.35 is high, and thus, some of the respondent stakeholders fairly agree to that of the effectiveness by the Government governance in digital banking and financial sector in Myanmar. Among the variables, stakeholders are the most agreeable upon the regulatory governance Transparency (mean 3.48 with standard deviation 0.79). Respondents are fairly agreed on that of the government governance on that role as rule-making procedures (with mean value 3.44) and the accountability for regulations (with mean value 3.42). However, respondents are less agreed on not having clarity of roles at regulatory governance required for digital transformation in financial institutions (with lower mean value 3.16). Most stakeholders want governance to have strong governing role on digital banking, however, CBM itself is not a structurally independent regulator, i.e., not independent regulatory authority and organizational separation from the Ministry of Finance.

4.3.3 Regulatory Incentives

The duties and responsibilities of the CBM regulation department is the developing in the bank regulations in supervising and regulating the financial sector in conformity with best practices with regulatory incentives. Table (4.8) shows the extent to which agreeable of stakeholders on regulatory incentives to encourage to effective transformation of digital banking industry, as follows.

Table (4.8) Regulatory Incentives

Sr No.	Regulatory Incentives	Mean	St. Dev.
1	Interconnection regulation between among financial institutions	3.66	0.98
2	Pricing regulation	3.70	0.84
3	Sharing of infrastructure	3.66	1.00
4	Market entry	3.72	1.03
5	Competition	3.72	0.97
6	Resolution of disputes	3.58	0.93
7	Rights of way	3.90	1.04

	Mean Regulation Incentives	3.71	

Source: Survey data, 2019

By the Table (4.8), the received overall mean value 3.71 is higher, and thus, there are agreeable of having regulation incentives to the transforming digital financial industry. Among the regulation incentives, stakeholders are the most agreed on that regulation enforcement which is required for the rights of way at digital payment transformation (highest mean value 3.90). Stakeholders are further strong agreement of regulation incentives in the area of regulatory intervention in digital transforming market entry and prevention of market failure, and increasing in competition at digital payment transformation amongst financial institutions and business corporations (second higher mean value 3.72). Among the variables, stakeholders are least agreed on regulatory intervention required in resolution of disputes at digital payment transformation, as for an incentive to create competitiveness in digital banking sector. Even though, the obtained mean value is high (3.58). And thus, the Government regulation incentives are found as somewhat encouragement to the development of digital financial institutions, in Myanmar.

4.3.4 Stakeholders' Assessment on Government's Policies and Regulations on Digital Transformation of Myanma banking and Financial Sector

Table (4.9) is the summary analysis on the assessment on the Government's policies and regulations on digital transformation in financial sector.

Table (4.9) Summary Analysis on Regulatory Incentives

Sr. No.	Variable	Mean
1	Regulatory purpose	3.79
2	Regulatory governance	3.35
3	Regulatory Incentives	3.71

Source: Survey data, 2019

Table (4.9) shows that the extent to which agreeable of stakeholders is found as the higher perception at Government regulatory purpose (mean value 3.79), followed by regulatory incentives (mean value 3.71), and least perception on regulatory governance

on the current Government's policies and regulations on digital transformation in banking and financial sector in Myanmar.

4.4 Regulatory Operational Effectiveness at Banking Sector in Digital Transformation

While developing telecommunication sector in Myanmar, there are developing IT infrastructure around the Myanmar. Since the higher the connectivity of internet connection, financial organizations are introducing technology assistant new banking and financial services to the customers following to the CBM issued guidelines. Table (4.10) is the stakeholders' agreeable to the extent to which regulatory influencing on operational effectiveness, as follows.

Table (4.10) Regulatory Operational Effectiveness at Banking Sector in Digital Transformation

Sr No.	Operational Effectiveness at Banking Sector in digital transformation	Mean	St. Dev.
1	24/7 hour banking service	4.06	1.11
2	Transaction volume and frequency	3.32	0.89
3	User account security and protection	3.48	0.86
4	Debit & Credit Card transaction	3.76	0.52
	Mean value	3.66	

Source: Survey data, 2019

By the Table (4.10), result shows the higher mean 3.66, and thus, stakeholders are agreed on that of having moderate level influencing of Government policies and regulations on that of digital financing operations. Among the variables, stakeholders are the most agreed on the 24/7 banking service (mean 4.06), whereas, respondents are least agreed on the transaction volume and frequency at the use of online financial transactions (mean value 3.32).

4.5   Consistency of Data of Variables in the Analysis

In statistics, there is the need of consistency of data for computing confidence intervals or making hypothesis test (wikipedia.org/wiki). Reliability refers to the consistency of the results in research. Table (4.11) states the data reliability at the survey questions in a variable, as follows.

Table (4.11) Data Consistency in Study at Banking Sector Digital Transformation

Sr. No.	Variable	Cronbach's Alpha	N of Items
1	Regulatory purpose	.737	5
2	Regulatory governance	.872	7
3	Regulatory Incentives	.961	7
4	Operational Effectiveness	.695	4
	Total		23

Source: SPSS 20 Output, 2019

In the analysis, all the values, except operational effectiveness, are higher than 0.7. and thus, there has consistency of the results in research. (the degree to which all of the items in a variable would yield reliable results.

4.6   Relationship of Government Policies and Regulations to Operational Effectiveness at Myanmar Financial Sector Digital Transformation

Mogull, Robert G. (2004) says that regression analysis is a powerful statistical method that allows researcher to examine the relationship between a dependent variable (often called the 'outcome variable') and one or more independent variables (often called 'predictors', 'covariates', or 'features'). (wikipedia.org). Among many types of regression analysis, the main function is that of they all examine the influence of one or more independent variables on a dependent variable. In this study, key aspects of government policies and regulations are regulatory purpose, governance, and incentives, which all are relationship to the operational effectiveness of performing transforming digital banking and financial sector in Myanmar. Table (4.12) shows the regression analysis of the

relationship between key aspects of government policies and regulations towards operation effectiveness, as follows.

Table (4.12) Relationship of Regulatory Intention to Operational Effectiveness at Myanmar Banking Sector Digital Transformation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.121	.589		1.902	.063		
Regulatory purpose (Competition)	.691**	.150	.658	4.617	.000	.675	1.481
Regulatory governance	.499**	.147	.515	3.390	.001	.594	1.683
Regulatory Incentives	-.458**	.123	-.662	-3.738	.001	.437	2.288
R	.607ª						
R Square	.369						
Adjusted R Square	.328						
Durbin-Watson	1.006						
F	8.968**						

a. Dependent Variable: Operational Effectiveness at Banking Sector in digital transformation

** = Significant at 1% level.

Source: Survey data, 2019

According to Table (4.12), this particular model explains the fair variation about 36.9% percent relationship between independent variables (Government policies and regulations) and dependent variable (Operational effectiveness in digital financial service) because its significant value is less than 0.01 (p<0.01).F value is

The highly significant at 1 percent level and thus, this model can be said valid for the relationship of these independent variables and dependent variable. variable regulatory purpose has the positive sign and significant at 1% level. For that, the 1 unit increase in Government regulatory purpose would lead to encourage 69.1% more on the operational effectiveness.

The variable regulatory governance has also positive sign and significant at 1% level. And thus, the 1 unit increase in regulatory governance would lead more encourage 49.9% more effectiveness in digital banking sector.

The variable regulatory incentives have negative sign and significant at 1% level. And thus, although 1 unit increase in regulatory incentives would not lead to increase more efficiency in current transforming digital banking sector. That is, present government incentives would not be productive of transforming digital banking sector in Myanmar.

In summary, the result shows that all of government regulatory purpose, governance, and incentives have related to transforming digital banking sector. Among them, the higher correlation factors are found as "regulatory purpose" and "regulatory governance", which would significantly increase to transforming digital banking and financial sector of Myanmar in the future.

4.7 Respondents' Own Views on Government Policies and Regulations for Digital Transformation in Myanmar Banking Industry

The Key Informal Interviewing on the stakeholders aims to get the right evaluation on the policies and regulation for digital transforming in financial sector development in Myanmar. Stakeholders are requested to response their answers their perceptions on the regulatory purpose of government at digital transformation, regulatory government effectiveness, and regulatory incentives for the effective implementations on digital transformation especially digital payment system in Myanmar financial industry.

4.7.1 Stakeholders' Option on Regulatory Purpose (Need of Transforming Digital Financial System for Competition)

The era of digital transformation has brought many issues into sharper focus, such as the increased threat of cyber-attacks, internal challenges of replacing legacy IT systems and supporting staff, inconsistent risk measures and an inability to aggregate data. For that reasons, stakeholders express their views as positive views on regulatory purpose, which is needed of Transforming Digital Financial System for Competition in financial services.

Financial institutes, especially banking sector is a data-reliant industry. Banks and financial institutions require timely, accurate and meaningful data. For these data, customers are also expecting user-friendly communication tools when the use with digital

transactions. Investors and the wider market require greater access and transparency. Going forward, banks will have to better manage data and also contend with increasingly stringent demands for data privacy. Significant investment has been made in storage and accessibility, but banks need to focus more on data architecture, analytical capabilities, and development of an integrated data privacy framework with full risk management disciplines.

One respondent, views on the government purpose for promoting financial inclusion to the unbanked people. At present, there are problems arose from customer demand sides and financial providers supply side to financial inclusion. Government policies should target on creating an enabling policy environment for financial inclusion. That is, the development of Government policies should be innovative policies in transforming digital banking industry. Government could not able to welfare payment transaction with limitations of the number of transactions.

4.7.2 Enhance Regulatory Governance and Operational Resilience

New technologies and products are testing the effectiveness of existing processes. Firms need to turn their attention to strengthening operational resilience, improving stress-testing standards, reviewing impact tolerances (particularly as they relate to their customers) and refining performance metrics. Having a robust third-party risk management framework for outsourcing and vendor services is more essential than ever.

Along with the government has created the right conditions for the telecommunication sector to grow, financial institutions are responding to market for improving customer experiences by introducing new, more efficient processes and technologies and strengthen risk management and compliance with their own arrangement for improving customer experience.

Most respondents are stating their option regarding to regulatory governance in digital transforming, as the needs of financial institutions and regulators integrating in new technologies and greater data usage into processes, business models, regulatory reporting and oversight. There are growing numbers of SIM penetration of more than 105% percent, of which 80% are attached to a smart phone. However, there is still a lot of room for growth and particularly for rural, remote and vulnerable populations (The Government's Vision for Digital Myanmar).

Digital transformation in banking sector by the private commercial banks is very hardworking. Government should initiate in this digital transforming by leading to the financial sector. Regulatory should have encouraging to technology innovation which are required for future development in digital banking sector.

Government policies and regulation should be able to protect the customers/consumers and to educate the consumers how to use it.

4.7.3 Effectiveness of Government Regulatory Incentives

For the used of digital payment system in the country, banks alone are not enough to handle for the costly digital infrastructure. Government should issue licenses on reasonable terms for new entrants to the digital financial institutions. For the new comers in the digital financial payment system, regulatory incentives are also important for the sharing of digital infrastructure.

Policy framework for digital economy based on the building resilient infrastructure to promote inclusive and sustainable industrialization and to foster innovation which aims for sustainable development goal of the country. As the Digital Economy Development Committee' policies, government regulatory incentives are crucial for encouraging greater creativity and innovation to contribute to promote to modern economy of Myanmar. Government issued policies are lack of aware not only on business owners but also on public. Government should lead to promote financial literacy for customers' awareness.

One of the views of respondents is stating that a competent and innovative digital workforce that builds digital service and citizen that consume a wide variety digital services are vital components of a digital economy. With the Government incentive, the privatization in banking sector infuses hope for faster economic growth and improving financial status. Regulation should strike a balance between innovation and banker interests.

Policies should encourage the financial organizations to use digital payment platform to facilitate the online sales and ecommerce where buyers and sellers can meet and make transactions.

4.7.4 Operational Effectiveness at Banking Sector in Digital Transformation

Banks and financial institutions are serving 24/7 hour ATM and mobile banking service. However, the limitations are found for the transaction amount and transaction volume at 24-hour financial online service. Government policies and regulatory are found as limitation in its incentives for transforming digital financial industry. Government should review on that limitation and thus, it will be incentive of the development at digital banking industry. However, one respondent response for the restrict in law for digital financial transaction aims at protecting to customers although it is difficult to understand for normal public on that of government policies and regulations on transformation of digital banking.

Bank should have operational effectiveness sat banking sector in digital transformation. Problem to the digital transformation is found as the customers' feelings at unsecure account and protection. Most of users feel as afraid of their account security. One of respondent (business owner) response that wrong remittance to other customer accounts, and fraudulent case, there is weaken misconduct regulation by Government.

Banks in Myanmar currently operating under the traditional way of banking: with physical cash being primary component in everyday transactions that moves towards digitalization, prospects for firms providing digital financial solutions are on the rise.

Government could not manage sharing of digital infrastructure. Government itself should lead core bank solution. There is also inter-banking which is found as weaken status. Government incentive should provide to lead to the operational effectiveness at digital financial sector.

.**CHAPTER V**

CONCLUSION

This chapter presents a discussion on findings of the analysis with suggestions and recommendations, along with needs for further studies relating to government policies and regulation in transforming digital banking sector in Myanmar. .

5.1   Findings

The objective of the study is to stakeholders' assessment at government's policies and regulations on digital transformation and to analyze the relationship between the stakeholders' assessment variables on government's policies and regulations and operational effectiveness of digital transforming in Myanmar banking industry. For the development of national level service sector, this study is relying to the influence of Government rules and regulations as in the macro environmental factor that governing financial sector growth and security of digitalization of financial products that customers have seamless shopping experiences at integrated payment channels with digital technology. Financial institutions have already accepted that transformation into digital will deeply alteration banking and entirely convert the industry's competitive landscape.

Major focusing is based on the Government regulatory purpose, governance and incentives factors which are important to the development of transforming digital banking and financial service sector. Survey was made on the key person who are bank stakeholders answering to the closed questions as well as open questions by means of Key Informant Interviewing (KII) method. Survey selected 50 numbers of Key Stakeholders who are from key position levels at different financial industry (Ministry of finance and Central bank of Myanmar for government body, bank director of one famous private commercial bank as shareholders, B2B bank customer, bank employees (Key person), public organizations (3rd party IT service provider, and audit firm), Wave Mobile Wallet finance service provider, etc. The results collected from these analyses are summarized as follows.

For the digital financial system development, Government is formed the committee name Digital Economy Development Committee (DEDC). The Central Bank is responsible for issuing, refusing and revoking of licensing to the applicant, and the regulation and oversight of these payment institutions for the purpose of security and effectiveness of the payment and settlement system in accordance with provisions under this law and other related laws according to Pyidaungsu Hluttaw Law Section (79). No. 16 / 2013. In the movement of CBM in digital transformation in Myanma Banking and Financing sector, strengthening consumer protection is taken as important area while increasing financial access. For these endeavoring of Government at effective digital transforming, survey is made by classifying questionnaire into three major parts: demographic profiles analysis, Efficiency Assessment Questionnaire (EAQ), and key informant interviewing (KII) section.

By the demographic profile analysis, most sample stakeholders are composed more male composition than females. Educational levels of these respondents are also found as post graduate diploma and master degrees. For that, matured age with educated person would assume to have more understanding on knowledge of transformation digital payment status to yield more meaningful answers.

Respondents' assessment on Government's policies and regulations is analyzed with three variables: (government regulatory purpose, regulatory governance and incentives). Sample stakeholders are rating their agreeable on these factors in extent to effectiveness in transforming digital banking and financial sector. The higher the mean values of all the assessments on government policies and regulations are indicating that these policies and regulations are strongly effectively influence to transforming digital banking sector in Myanmar.

Higher mean value rated by stakeholders at government regulatory purposes is indicating that there is the effective relationship between the purpose of policies and regulations to the development at transforming digital banking industry. Stakeholders are recommending to that of the Government regulatory purposes are aiming to increase market efficiency, to protect customer account, to use at affordable and reasoning digital product prices, to have customer welfare, and finally aiming at innovation and technological advancement.

The higher mean value rated by stakeholders at regulatory governance is indicating that there is the effective relationship between governance of the governance of policies and regulations to the development at transforming digital banking industry. Stakeholders are agreed on that of the regulatory governance is aiming to rules that restrict power to contribute to digital transforming, rule-making procedure roles, transparency of governance, functionality, accountability, independence, and clarity of policies and regulations at transforming digital banking industry.

The higher mean value rated by stakeholders at regulatory incentives is indicating that there is the effective incentives by the rules and regulations which is aiming to encourage to financial sector digitalization. Government rules are found as encourage interconnection between inter-banking acuities, sharing of digital infrastructure, for market entry of new payment digital technology, tend to increase competitions, resolution of disputes in financial sector in rights of ways, which all activities are found as Government's incentives to the development of digital banking sector.

Regarding to comparative analysis on these three regulatory factors, stakeholders are found as higher perception on regulatory purpose and regulatory incentives. Stakeholders are least perception on regulatory governance on current transforming digital financial sector.

Regrading to the analysis on current operational effectiveness, the higher mean value rated by stakeholders are agreed on that of moderate level effectiveness on current digital financial operations, whereas there is some operational weakness in the area such as limitation in transaction volume and frequency and protecting the user account security.

According to the regression correlation analysis, it is found that regulatory purpose has significantly relationship and is the most influencing variable on the operational effectiveness for digital transformation in Myanmar banking industry. The other finding revealed that regulatory governance is significantly relationship and also influencing variable on the operational effectiveness for digital transformation in Myanmar Banking industry. However, regulatory incentives have negative sign and significant on the operation efficiency in current transforming digital banking sector.

According to the overall detail analysis, stakeholder assessment variables on Government policies and regulations can support and promote effectiveness of digital transformation in banking sector in such a way of sharing digital infrastructure, easy to digital financial market entry, easy licensing for digital payment platform, increase digital payment competition, resolution of disputes and increase interconnection like inter-banking clearing cheque, which all activities would help for more operational effectiveness of transforming digital banking and financial system, in Myanmar.

5.2   Suggestions and Recommendations

Myanmar's digital economy has high potential if Government can draw up proper digital policies. Government needs to develop proper policies and needs to implement it. Digital transformation in banking is crucial for its very specific technical development especially for digital payment services. It will have an impact on all aspects of a bank's operations: front-office, treasury, lending, accounting, finance, legal, compliance, international trade payment, and also connection with stakeholders. Regulator should promote competition in developing digital financial banking by issuing relevant licensees with affordable pricing, sharing of network infrastructure, and so on.

For the purpose to the development of digital financial system in Myanmar, Government has a movement in the formation of the committee name Digital Economy Development Committee (DEDC). To be effective at the digital financial system, Central Bank of Myanmar is taking authority role in governing at issuing, refusing and revoking of licensing to the applicant, and the regulation and oversight of these payment institutions for the purpose of security along with incentive activities to the effectiveness of the digital payment and settlement system development in Myanmar. By the analysis on these government regulatory purpose, governance, and incentives functions, the followings recommendations and suggestion would be made, as follows.

Regarding to the regulatory purpose, it is recommended to act regulatory which is very important to have enforcement in transforming traditional banking to digital banking with speeding up manner, since, Myanmar neighborhood countries (China, Vietnam, Thailand, Singapore, etc.) have already using cash less system via digital payment system successfully. For that reason, study would like to suggest for the provision of regulations

for the welfare of the people in terms of promoting financial inclusion by means of digital. banking and finance services.

Regarding to the regulatory governance, it is also recommended that the importance of the regulatory governance, and following this, it has the movement of CBM in digital banking sector to strengthening consumer protection with secure accounts. Government regulatory governance is also required in developing digital financial sector by setting rules that restrict power not taking too long for digital transforming in financial institutions. However, by the study, it could be suggested that governance would have more transparency, functionality and also account ability of that regulatory governance in that transforming digital banking.

Regarding to regulatory incentives, it is also important part to encourage the development of digital banking and financial sector in the private commercial banks in Myanmar. Current survey data are stating the need of improvement at dominant licensees on reasonable terms which is crucial for new entrants to the digital financial sector. Without having core banking at Central bank, private commercial banks have to rely on its infrastructure. For that, it could be suggested that regulatory incentive should also tend to sharing of digital infrastructure. It also would like to suggest that the regulation incentive should lead to develop more digital financial associations in digital transforming market entry. and prevention of market failure.

Currently, financial stakeholders are welcoming on the banking sector in digital transformation which allows 24/7 banking transaction service, whereas, there are requirements at digital operational effectiveness by the respondents. Regulation should review its limitation on frequency and volume in financial transaction. Bank digital banking product and services users are still afraid on that of their account more security and protection via digital transformation technology.

5.3   Needs for Further Studies

There are many factors to development of the digital banking sector: Government rules and regulations, technology advancement, social and culture change, and nation economy. Among these factors, this study only focuses on the influence of Government policies and regulations in the transformation of digital banking industry. Further studies

should be made on the factors like these technology assistants in transforming digital banking. It is needed to further studies at new information technology software like core banking solution, Omni integrated digital banking transaction, Block chain digital payment platform, Crypto currency for peer to peer payment without requiring trust in either party, which are also important and secure digital payment software system. For the limitation of time, budget, and resources, this study is only made on the limited stakeholders in Yangon region. There are many other financial service customers. Further studies should extent to the area like other cities of Myanmar.

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YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF COMMERCE

MASTER OF BANKING AND FINANCE PROGRAMME

"Stakeholders' Perception at Government's Policies and Regulations on Digital Transformation of Myanmar Banking Industry"

Survey Questionnaire

Dear Respondent,

Mingalar par. I am a student of the Yangon University of Economics, studying Master in Banking and Finance Programme. I am working on the thesis on the topic of "Stakeholders' Perception at Government's Policies and Regulations on Digital Transformation of Myanmar Banking Industry".

I would really appreciate if you could spend a few minutes of your time filling in this survey. Your cooperation is greatly appreciated and the obtained information will be treated strictly confidential and anonymously, and only be used for research purpose.

I kindly requested to answer all of the questions to the best knowledge of your understanding.

Thank you for your kindly cooperation,

Aung Thet Mann

Roll No. 2

MBF 5th Batch

Section (I) Demographic Profile

Please tick the box that correspondent to your answers.

1. **Gender**

    ☐ Male

    ☐ Female

2. **Your Educational Level**

    ☐ University Graduate

    ☐ Post diploma/Master

    ☐ PhD.

3. **Your working experiences**

    ☐ 2 – 5 years

    ☐ 6– 8 years

    ☐ Above 8 years

4. **Your Current Organization**

    ☐ Ministry of Finance

    ☐ Central Bank of Myanmar

    ☐ Private Commercial Bank

    ☐ Mobile Wallet Financial Service

    ☐ Payment Gateway Service Provider

    ☐ YSX/Financial Service

    ☐ ICT Service Company

    ☐ Business Firm

    ☐ Other. Please state ---

5. Your **level** of position

    ☐ Senior Manager

    ☐ Dy GM/ GM

    ☐ Director

    ☐ CFO

    ☐ CEO

    ☐ MD

    ☐ Business Owner

Section (2) Please rate your option upon the following statements extend to which your agreeable on the effectiveness at government policies and regulations for digital transforming in banking industry

(1= Strongly Disagreed, 2 = Disagreed, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Sr.	Statement	Significant Level				
Stakeholders' perception on the effectiveness regarding regulatory purpose(Competition)						
1	Regulatory to digital transformation aims at market efficiency in banking industry	1	2	3	4	5
2	Regulatory to digital transformation in banking aims at consumer protection	1	2	3	4	5
3	Regulatory aims at affordable and reasonable pricing	1	2	3	4	5
4	Regulatory in digital transformation aims at consumer welfare for payment transactions	1	2	3	4	5
5	Regulatory aims at innovation and technological advancement	1	2	3	4	5
Stakeholders' perception on the effectiveness regarding regulatory governance						
6	Rules that restrict power not taking too long for digital transforming in financial institutions	1	2	3	4	5
7	Rule-making procedures at regulatory governance	1	2	3	4	5
8	Transparency of regulatory governance	1	2	3	4	5
9	Functionality of regulatory governance	1	2	3	4	5
10	Independence structure at regulatory governance	1	2	3	4	5
11	Accountability for regulations	1	2	3	4	5
12	Clarity of roles at regulatory governance required for digital transformation in financial institutions	1	2	3	4	5
Stakeholders' perception on the effectiveness of regulatory incentives						
13	Interconnection with dominant licensees on reasonable terms is crucial for new entrants	1	2	3	4	5
14	Regulation for pricing is important for the effectiveness regarding regulatory incentives	1	2	3	4	5
15	Regulatory intervention is required for sharing of digital infrastructure	1	2	3	4	5
16	Regulatory intervention is required in digital transforming market entry and prevention of market failure	1	2	3	4	5

17	Regulatory intervention for increase in competition at digital payment transformation	1	2	3	4	5
18	Regulatory intervention is required in resolution of disputes at digital payment transformation	1	2	3	4	5
19	Regulation enforces is required for the rights of way at digital payment transformation	1	2	3	4	5
Operational Effectiveness at Banking Sector in digital transformation						
20	Banking sector in digital transformation allows 24/7 banking transaction service	1	2	3	4	5
21	Speed of transaction volume and frequency	1	2	3	4	5
22	Development in user account security and protection via digital transformation	1	2	3	4	5
23	Both debit &credit cards can perform same transactions	1	2	3	4	5

Section (3) Please state your own views on the effectiveness of digital transformation in Myanmar Banking Industry initiated at:

1) **Government policies and regulation purpose**

_____
_____
_____
_____
_____

2) **Government policies and regulation governance**

_____
_____
_____
_____
_____

3) **Government policies and regulation incentives**

_____
_____
_____
_____
_____

Thank you for your kind participation.

YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF COMMERCE

MASTER OF BANKING AND FINANCE PROGRAMME

"Stakeholders' Perception at Government's Policies and Regulations on Digital Transformation of Myanmar Banking Industry"

SPSS Original Outputs

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.607[a]	.369	.328	.550	2.006

[a.] Predictors: (Constant), Regulatory purpose, Regulatory Governance, Regulatory Incentive

[b.] Dependent Variable: Operational Efficiency

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.148	3	2.716	8.968	.000b
	Residual	13.932	46	0.303		
	Total	22.08	49			

[a] Dependent Variable: Operational Efficiency

[b] Predictors: (Constant), Regulatory purpose, Regulatory Governance, Regulatory Incentive

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1.121	.589		1.902	.063		
	Purpose	.691	.150	.658	4.617	.000	.675	1.481
	Governance	.499	.147	.515	3.390	.001	.594	1.683
	Incentives	-.458	.123	-.662	-3.738	.001	.437	2.288

[a] Dependent Variable: Operational Efficiency