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Application of sustainability and green supply chain management practices in the banking sector in Nepal.

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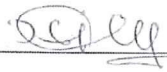

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Preface

This is our thesis report on the completion of the master's degree program in Logistics at Molde University College. Here we have tried to investigate how the banking sector in Nepal is involved in sustainable supply chain management practice. To do that our data has been collected through online surveys and two interviews, moreover, both our survey and interviews respondents are currently working in Nepalese Bank.

Nevertheless, the thesis has dealt with the social, environmental, and economic parts of sustainability. Through the thesis, we have tried to highlight the enabling factors and barriers for the implementation of sustainable practices in banks. What is more, over the months we have learned practical knowledge of the Nepalese context. The experience and knowledge we gained during this writing is much precious for us. Despite our achievement of this report, we however wish to mention that were limited to access our school library for more literature sources that could further enhance the results of this study. The main reason being the COVID-19 pandemic.

We hereby show our gratitude to everyone who supported and guided us throughout us Master of Science journey, and finally advanced thanks for reading the whole report.

Acknowledgment

Our first and big appreciation goes to our supervisor, Olena Klymenko, for her marvelous supervision, guidance, and encouragement. Sincere gratitude is extended to her generous participation in guiding, constructive feedback, kind support, and advice during our Thesis. Thank you very much Olena Klymenko, without you, we could not able to achieve it.

Many thanks to all of the members of staff in Molde University College for their kind support during my Master's Study. Also, we would like to extend our thanks to our two interviewers and survey respondents for their precious responses and support, as well as to all of my friends and classmate for their time, advice, and moral support.

Last, but not least, our warm and heartfelt thanks go to our family for the tremendous support and hope they had given to me. Without that hope, this thesis would not have been possible as well. Thank you all for the strength you gave us.

Abstract

The goal of the study was to investigate how the banking sector in Nepal is involved in sustainable supply chain management practices. Furthermore, the thesis is directed to define enabling factors and barriers for the implementation of sustainable practices in banks. The study used both descriptive and qualitative research design to achieve its goals, which included sending out questionnaires and conducting interviews with banks.

According to the study's findings, government and private banks adopt different sustainable supply chain practices, and the challenges of sustainable supply chain management practices faced by the banking industry in Nepal vary depending on the activities they engage in. It has been shown that by adopting sustainable supply chain management banks raise awareness of environmental and social responsibility, helping to ensure that the next generation acquires a good environment. Both the survey and the online interviews centered on a widely established sustainability concept known as "Triple Bottom Line," which measured social, economic, and environmental activities in a larger context to create higher corporate value. To be more clear on how digitalization and information systems impacted or encouraged SSCM procedures in the Nepalese banking industry, this research project incorporated digitalization and information systems-related questions.

The study stated that incorporating sustainable practices into an organization's operations should be part of the organization's long-term strategy for gaining a competitive advantage over its competitors. As a result, it has been suggested that banks consider fully adopting a sustainable supply chain as a potential benefit.

Keywords: Sustainable supply chain management, Environmental, and Social Sustainability, Green Banking, Digitalization, Information System, Green Banking Practice Awareness, Nepalese Banks.

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CHAPTER ONE

Introduction

The main aim of this chapter is to present the analysis and the thesis' structure. The chapter is divided into six parts. The study's background will be presented in the first section. The problem's statement will be addressed in the second section. The thesis' motivation will be mentioned in the third part. The study's research goals will be outlined in the fourth section. The study's questionnaire will be outlined in the fifth section, and the thesis' structure will be explained in the sixth section.

1.1 Background

Supply Chain Management (SCM) includes the planning and management of all operations involved in manufacturing and procurement. It involves cooperation and communication with channel partners such as vendors, intermediaries, third-party service providers and consumers.(Werner, 2000)The management of a network of interconnected companies participating in the ultimate provision of goods and services or service packages required by end users is known as supply chain management. Werner (2000)Supply Chain Management activities are rapidly becoming an important feature in gaining competitive advantage in today's global markets for most service organizations. From the extraction of raw materials to the end of their useful life, SCM covers the whole value chain and discusses materials and supply management. The principle of sustainability has been recognized since the late 1980s, when the World Commission on Environment and Development (WCED), also known as the Brundtland Commission, released the study "Our Common Future" in 1987. According to the Bruntland and Press (1987), sustainability is described as "development activities that meet current needs without jeopardizing future generations' ability to meet their own needs. The Brundtland report's narrow concept of "sustainable development" was later expanded to include "a obligation of our generation to maintain the resource base in such a way that the average quality of life we ensure will theoretically be enjoyed by all future generations" (Asheim, 1994).

Sustainability has been described in a variety of ways, but all of them refer to the current generation of humans and other species' ability to enjoy social well-being, reap the benefits of a thriving economy, and sustain a healthy environment without jeopardizing future generations' chances(del Amo Sanchez et al., 2010).The consequences of triple bottom lines (3BL): economic, social, and environmental equities, are compiled in the modern concept of sustainability. It has been described as one of the main pillars of sustainable growth, with a focus on social, economic, and environmental aspects to ensure an average quality of life (Kalchschmidt & Syahruddin, 2011).As shown in Figure 1, sustainability can be accomplished when all three aspects of environmental, social, and economic performance are combined to achieve long-term growth and benefits (Carter, Rogers, & management, 2008).The intersection of 3BL factors of supply chain sustainability is depicted in Figure 1 below.

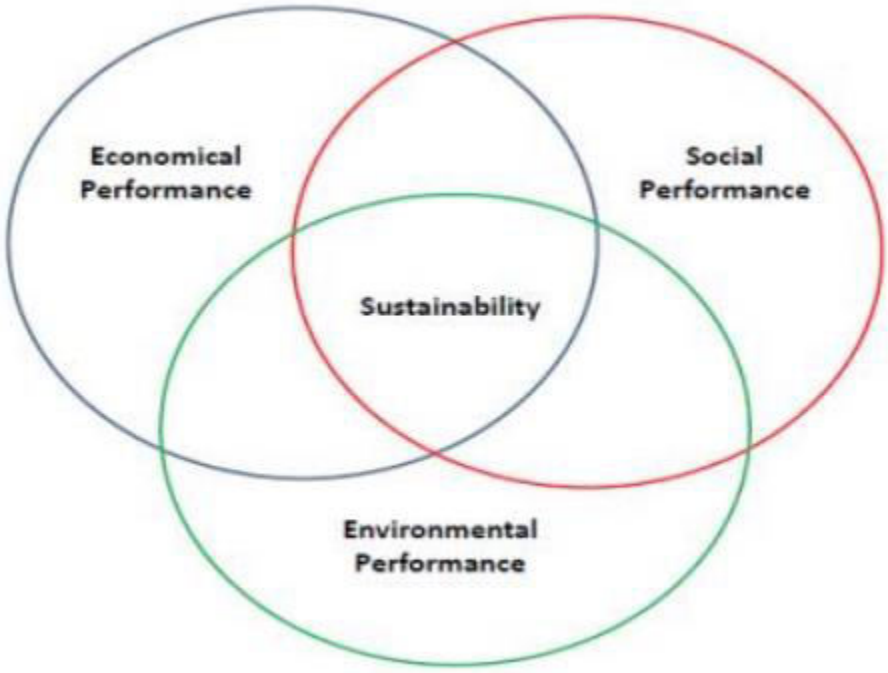


Figure 1: Sustainability as intersection of 3BL Performance (Kalchschmidt & Syahruddin, 2011)

According to Seuring, Sarkis, Müller, and Rao (2008) growing competence in this area by improving the linkages between various components of the sector is critical as Nepal strives for economic growth(Seuring, Sarkis, et al., 2008). With the increased competition in the global market, it has been discovered that business companies have a very short product lifecycle and that supply chain management SCM needs more focus(Seuring, Sarkis, et al., 2008).

The study focuses on Nepalese commercial banks 'sustainability and green supply chain management practices on bank performance. Evaluating commercial bank performance is important for maintaining financial stability, and many central banks and other financial institutions are increasingly using a common framework for assessing financial stability and publishing regular financial stability reports(Singh, Tandon, & Research, 2012). The study's specific goals are to examine sustainability and green supply chain management practices in the banking industry in Nepal, to analyze the effect of SCM on bank results, and analyze the challenges that supply chain management practices face in Nepal's banking industry. In order to analyze and appreciate the application of supply chain management in the service sector, the study used a descriptive research design. Nepal has a total of 'Class A' 27 commercial banks. The study's population included all 27 commercial banks operating in Nepal, as well as five commercial banks as a sample size. (Pakurár, Haddad, Popp, Khan, & Oláh, 2019)

Supply chain management in the Nepalese banking sector performs a range of roles, including obtaining and processing products and services from user departments, organizing the preparation of annual procurement plans as submitted by the respective departments, advertising tenders, and coordinating the preparation of annual procurement plans as submitted by the respective departments. Thagunna, Poudel, and Issues (2013) Order follow-up or processing of goods, supplying schedules to user agencies, preparation of tender documents in conjunction with user departments, preparation of letter of awards, notification and contract agreements, as well as contract management, order follow-up or processing of goods, Market analysis and price surveys on products and services required by the respective financial institution, as well as the upkeep of an updated supplier register and files for performance rating and the preparation of annual reports. Among the things procured by banking organizations are stationery, printing services, cleaning supplies, food, consulting services, legal services, clearing and forwarding services, security services, computer accessories, vehicles and machinery, insurance services, ticketing and travel services (Thagunna et al., 2013).

1.2 Problem Statement

The banking industry's SCM activities have been unable to demonstrate continuity and stability in results(Collin, 2003). They are also inflexible and vulnerable to disruption because they are unable to adapt quickly and appropriately to evolving international protocols, certifications, and

standards. On requirements, and to governmental and regulatory change(Collin, 2003). The lack of appropriate standards and procedures in the banking industry, in particular, has a direct impact on service quality. The banking sector in Nepal is big, and supply chain management practices can help it grow and become more efficient, improve service quality, increase productivity, and gain a competitive advantage.

In Nepal, despite their lack of understanding of the overall definition of "Green Banking," Nepalese people accept that "Green Banking" measures are important for future environmental conservation and sustainable development. However, several banks in Nepal have begun to provide services that promote green banking activities, i.e. they help people save money(Prasad & Upadhyay, 2020).According to the research done on Dairy products of Nepal(Acharya & Basnet, 2009), improving partnership collaboration among supply chain partners is a major concern in supply chain management. In Nepal's dairy industry, the essence of buyer-supplier partnerships has shifted drastically over the last few years. BMSS was advised to form a long-term, more constructive partnership with its supplier. Co-operation between supply chain partners is important to achieve sustainable competitive advantage.

This Study has looked at Sustainability Supply Chain Management practices in the Nepalese banking industry. This research therefore sought to examine the impact of application of supply chain management practices in the banking industry in Nepal. The research questions for the research are:

- What is the level of adoption of sustainability supply chain management practices in the banking industry?
- What are the challenges of sustainability supply chain management practices faced by the banking industry in Nepal?
- What are factors that influenced sustainability supply chain management practices in the banking industry?

1.3 Motivation

The motivation of this thesis is to acknowledge sustainable supply chain practices and in the banking sector of Nepal. The study looked at sustainability supply chain management practices of commercial banks in Nepal. Specific objectives is to: analyze sustainability supply chain

management practices in the banking industry in Nepal, analyzing the level of adoption of SSCM in banks, look into the challenges of sustainability supply chain management practices faced by the banking industry in Nepal.

As Anggraini, Hamiza, Doktoralina, and Anah, (2018) the findings of the report are crucial in understanding the relationship between SCM and financial institutions such as banks. As a consequence, it comes highly recommended that banking executives should work on the SCM method has been enhanced with the production of further values. Customers profit from the practical consequences. Management of banking companies, on the other hand, must provide training and development facilities to various departmental heads for the better integration of SCM and better outcome.

1.4 Research Objectives

The main objective of the study is to examine practices of sustainability and green supply chain management of commercial banks in Nepal.

Here we will try to find to in what extent supply chain has been practiced or adopted in banking sector of Nepal with respect to some independent variable used in practicing supply chain

The specific Objectives were:

i. To analyze the sustainable supply chain management practices used in the banking industry in Nepal

   In terms of sustainability supply chain management practices, we will try to find how widely they have been introduced and implemented in the business.

ii. To analyze the challenges of sustainability supply chain management practices faced by the banking industry in Nepal

Here, Researcher will try to find out in what degree is the company experiencing the challenges as it implements SCM practices. Some of the practicing can be done while doing the research.

1.5 Structure of thesis

In the Chapter two we will demonstrate a historical review of sustainability and green supply chain in banking sector followed by past data collection. Then, we will perform some detailed literature

search on current trend for supply chain practices on banking sector. Likewise, in the chapter three we will give description on our research work. In Chapter four, the methodology and data will be explained and in chapter five we will present and discuss our finding. We then will proceed to make a conclusion and further recommendation in chapter six.

CHAPTER TWO

Literature Review

The purpose of this chapter is to give an overview of the development of supply chain theories and supply chain in banking industry. The theories closest linked to this dissertation and potential supply chains will be discussed as a separate section.

2.1 Supply chain

This area is an outline of different viewpoints of supply chains and supply chain management. It discusses the improvement of supply chains, the related theory as well as the extraordinary highlights of supply chain.

What is a Supply Chain and Supply Chain Management?

There are various definitions for a Supply Chain and Supply Chain Administration. The definition regularly reflects the field from which the address is approached. For example, a manufacturing arranged see will emphasize different focuses than a promoting arranged see. A sensible impartial definition for a Supply Chain has been displayed by Ellram, (1991)

"A network of firms interacting to deliver a product or service to the end customer, linking flows from raw material supply to final delivery"

A similar type of definition for Supply Chain Management has been presented by Jones & Riley, (1985) "*The planning and control of total material flow from suppliers through manufacturing and distribution chain to the end users*" The recent definitions have placed more emphasis on the information flow, for example the definition by Handfield & Nichols Jr, (1999). *"It encompasses all activities associated with the flow and transformation of goods from raw materials stage, through the end user, as well as associated information flow. Material flow up and down the supply chain."*

2.1.1 Evolution of Supply Chain

Over the years, most firms have centered their consideration on the effectiveness and efficiency of separate trade capacities such as purchasing, production, marketing, financing, and coordinating. To capture the collaboration of inter functional and interorganizational integration and coordination over the supply chain and to hence make superior vital choices, a developing number of firms have started to realize the key significance of arranging, controlling, and planning a supply chain as an entirety. In today's worldwide commercial center, person firms not compete as

autonomous substances with interesting brand names, but or maybe as indispensably parts of supply chain joins. (Drucker, 1998; Lambert & Cooper, 2000).

Moreover, Min and Zhou (2002) mentioned that supply chain is characterized by a forward flow of goods and a backward flow of information, as illustrated by Figure 2 (Min & Zhou, 2002)

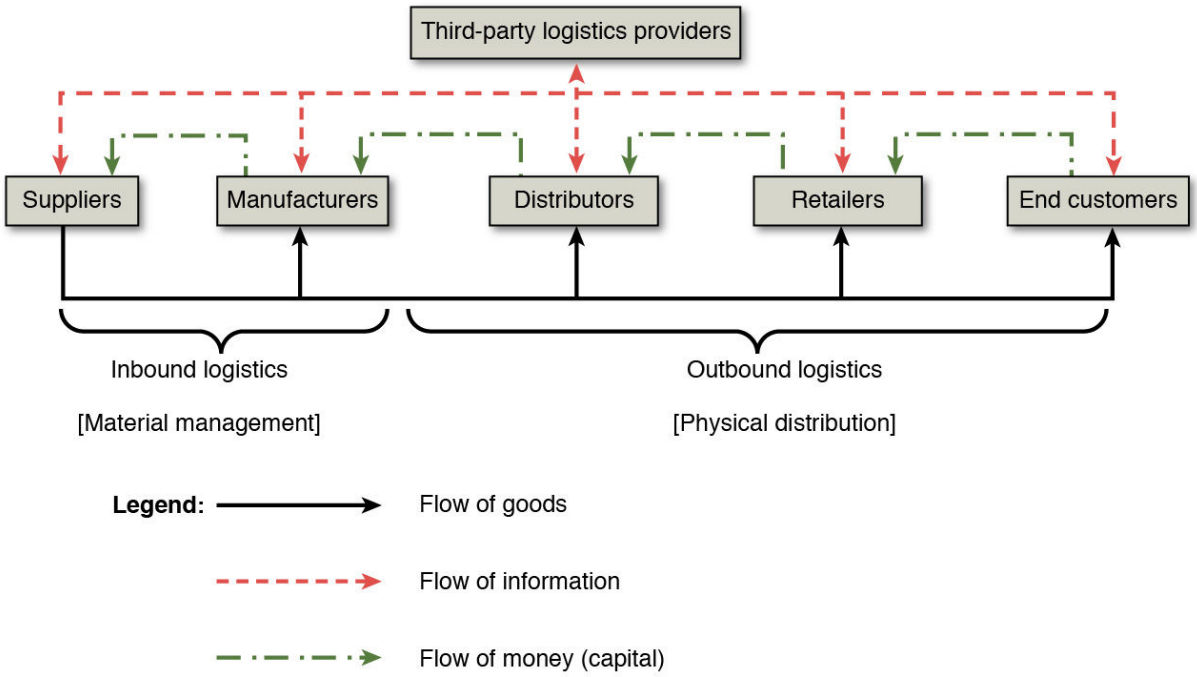


Figure 2: The supply chain process (Min & Zhou, 2002)

Morgan, (1997) mentioned in his article that in the 1990s, the advent of Enterprise Resource Planning (ERP) accelerated the evolution of SCM and the buyer-supplier relationship. According to Sengupta et al., (2006), while EDI - Electronic Data Exchange - systems were primarily concerned with inter - organizational integration, ERP systems were primarily concerned with intra - organizational integration. In the twenty-first century, the evolution continues with the emergence of more advanced IT systems (internet-based solution systems) that solve both inter- and intra-organizational integration.

There are several discussion regarding SCM evaluation, among all of the discussion, however, (Mehmeti, 2016; Mentzer et al., 2001) mentioned that supply chain management has three evaluation phases:

First stage: The creation era started in the 1980s, when the customer and seller discovered the advantages of collaborating together. For the first time in this period, the word SCM is used.

Second stage: The IT systems (ERP, EDI, etc.) are adopted in the second era called The Integration period, which begins in the 1990s. These programs concentrate not only on handling the particular company's resources but also on the interconnected supply chain's resources.

Third stage: The globalization period begins with the introduction of strategies for trade liberalization and the formation of organizations like the World Trade Organization and other global/regional trading bodies.

However, there are several factors that influences the supply chain evolution, among of those, Porter (1994) indicate three reasons to have an impact on the growth of supply chain management.

These elements are:

1. Businesses' emphasis on cutting costs

2. Enhanced rivalry worldwide

3. Businesses' aim to boost productivity and results

The fruitful integration of the complete supply chain handle can bring around a number of bottom-line benefits (Hsiao et al., 2008; Min & Zhou, 2002)

- Improved client benefit and esteem added—Customer benefit can be moved forward through increased stock accessibility, superior on-time conveyance exhibitions, higher arrange fill rates, and lower post-sales costs.
- Enhanced settled capital—Fixed capacity is maximized through a key association and joint arranging that can increment by and large capacity and throughput.
- Utilized asset—Asset utilization can be maximized by expanding stock turns and closely adjusting supply with demand.

Dell’s personal computer (PC) market share in the U.S. grew from 2.7% in 1995 to 24.1% in 2014 (Dominguez, Cannella, Framinan, & Review, 2015). Similarly, Walmart, which happens to be

another supply chain leader, enjoyed the rapid growth of its market share from 6.8% in 1992 to 17.1% in 2004 before declining to 11.4% in 2013 (Foster, 2006; Hortaçsu and Syverson, (2015). Despite these benefits of supply chain integration, firms engaged in this effort must be aware of the various challenges because of the unprecedented number and diversity of products and services available to customers in the era of mass customization.

The bullwhip impact is by and large referred to as a reverse swell impact of estimating mistakes all through the supply chain that leads to increased supply and request misalignment, where orders (seen request) to the upstream supply chain part tend to overstate the genuine designs of end-customer request since each chain member's see of genuine request can be blocked by its quick downstream supply chain part (Lee et al., 1997; Swamidass, 2000) The common side effects of the bullwhip impact incorporate deferred modern item improvement, consistent deficiencies and backorders, visit arrange cancellations and returns, intemperate pipeline stock, erratic generation planning, sped up shipments, and incessant overcapacity issues Lee, (1997). The disappointment to moderate or dispose of the bullwhip impact can disturb the firm's income driver and unfavorably influence the firm's foot line. Agreeing to Hendricks and Singhal (Hendricks & Singhal, 2005), supply chain disturbances driven to:

- Significant diminishment in stock returns relative to their benchmarks (e.g., 33% to 40% lessening over a three-year period)
- Increased share cost instability (e.g., 13.5% increment in share cost instability one year after supply chain disruptions)
- Decline in productivity (e.g., 107% drop in yearly working wage, 7% decay in yearly deals development, and 11% yearly add up to taken a toll increase)
- Debilitating firm exhibitions (e.g., at slightest two successive a long time of lower exhibitions after supply chain disturbances)

Table 1 summarizes the changes in the philosophy, focus, and performance metrics of supply chain management, from the earlier stages to the current era (Christopher & R Towill, 2002).

Table 1: The Evolution of Supply Chain Management

Evolution Stage	Time Period	Philosophy	Key Driver	Key Performance Metric
I	Early 1980s	Product driven	Quality	• Inventory turns • Production cost
II	Late 1980s	Volume driven	Cost	• Throughput • Production capacity
III	Early 1990s	Market driven	Product availability	• Market share • Order fill rate
IV	Late 1990s	Customer driven	Lead time	• Customer satisfaction • Value added • Response time
V	Early twenty-first century	Knowledge driven	Information	• Real-time communication • Business intelligence

Source: (Christopher & R Towill, 2002)

2.1.2 Manufacturing Supply Chain

The distinctions between service supply chains and typical manufacturing supply chains must be emphasized. Sengupta et al., (2006) mentioned that human labour is a significant component of the value delivery process in service supply chains, and while physical handling of a product leads to standardized and centralized procedures and controls in manufacturing supply chains, this is not always possible in-service supply chains since often decisions are made locally, and the variation and uncertainties in outputs are higher due to the human inefficiency. Furthermore, (Morgan, 1997; Narasimhan & Das, 2001) added that in order to get benefit from SCM, increased supply chain integration is its alignment with the strategy of the company highly recommended regardless type of the business. The more strategic alignment, the greater the performance of organizations to adopt management supply activities, have also been shown by Fisher, (1997). The authors demonstrated that integrating purchasing into a company's strategy-making process, as well as implementing purchasing practices, has a major effect on manufacturing efficiency. However, this is focusing on internal integration, whilst another main area for aligning the control of manufacturing clearly lies between internal and external practice. Finally, Morgan, (1997) illustrate that the effect of supply chain integration on business efficiency is influenced by

manufacturing capacities, reinforcing the importance of coherence between external and internal processes.

2.1.3 Service Supply Chain

Lavassani et al., (2008) defined service SCM as: *"the management of information, processes, capacity, service performance and funds from the earliest supplier to the ultimate customer".* Differentiation of duties is an essential message in SCM. Differentiation can be achieved in a variety of ways, through different forms of buyer and supplier relationships (e.g., based on segmentation). Tan, (2001) proposed a service SCM system that depicts seven service processes:

- Flow of knowledge (e.g., demand estimation and information sharing).
- Management of ability and expertise (e.g. investments in organisational processes, assets, and staff).
- Customer relationship management (CRM) is a concept that refers to the management of customer relationships (e.g., customer segmentation and relationship management).
- SRM stands for supplier relationship management (e.g., supplier identification, supplier selection, supplier segmentation and relationship management).
- Control of service delivery (e.g., making promises to customers, enabling service providers).
- Production of funds (e.g., flow of payments between parties).
- Regulation of demand (e.g., forecasting customer requirements)

As the economy transitions from production to services it is necessary to note that the lessons gained in the manufacturing industry can be extrapolated directly to service supply chains. Moreover, According to Sengupta et al., (2006), the services sector and the service supply chain are becoming increasingly important. Their research focuses on the skilled service supply chain and professional service purchasing. It integrates the idea of service efficiency and the capacity to differentiate between services and manufacturing. With capacity acting as a replacement for inventory, service efficiency ensures that the customer provides the expected service. The strategic use of capacity in a service organization promotes organizational agility examine the relationship

between Internet-enabled supply chain integration strategies and success in manufacturing and services sector. Their findings have shown that while increased integration with a supply chain partner usually leads to a higher output for the business, companies within the service sector have been delaying the adoption of integration strategies than manufacturing companies. These results have major consequences for theory as well as for manufacturing and service firms looking to boost their efficiency Cagliano et al., (2006). Services and product customization, building long-term partnerships and covering approaches introduce current SCM strategies that are also the core concept of service sector strategies. These initiatives constitute a key subject for SCM, which is usually taught at business schools in North America Crum et al., (2011). The importance of sharing knowledge with supply chain partners (SHARE) is recognized due to the effect on improved teamwork. SCM efficiency, according to Sengupta et al., (2006), can be due to a match or mismatch between the type of product or service supplied and the supply chain design. Product covers all goods and services, allowing respondents from both the manufacturing and service industries to participate. Long-term relationships (Steyn & Niemann) with supply chain partners also contribute to increased cooperation and administrative productivity Westbrook & Frohlich, (2002).

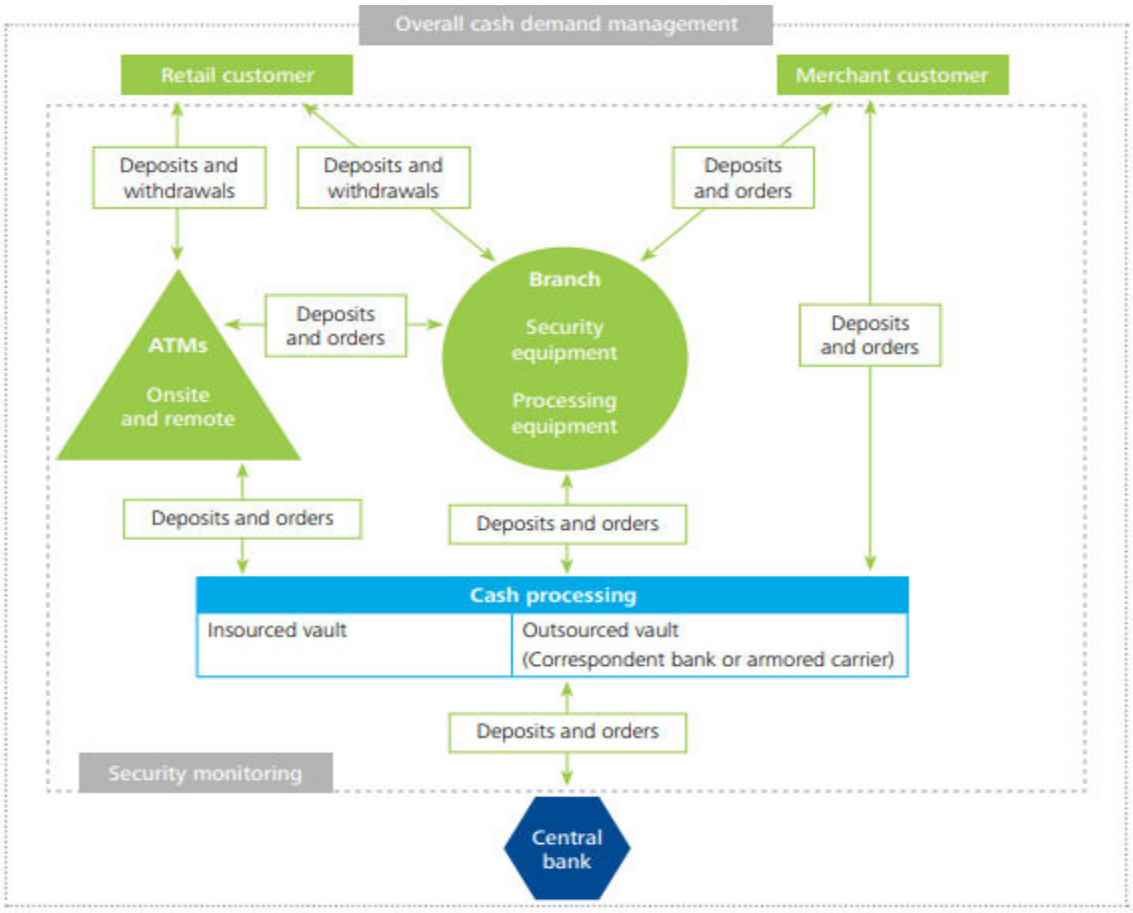
2.2 Supply Chain in Banking Sector

Supply chain management has been less associated with the banking sector as opposed to the manufacturing sector. However, Dewar et al., (2011) argued that supply chain practices are as relevant in the banking sector as they are in the manufacturing sector. This is because the financial services provided by the banks also require the acquisition of resources which are taken through some processes before the provision of the final output in the form of a financial service is delivered to the bank customers. All of these activities of acquisition of resources, conversion processes and final delivery of financial services to the customers by the banks require proper planning, organization, monitoring and control. Hence in this study we look at supply chain practices in the banks from aspects such as acquisition of logistics, inventory management, outsourcing of certain functions, supply chain collaboration or integration, risk management, customer relations and supply chain planning and how they impact the operational, marketing, and financial performance of the firm. Firm performance and measures of it have been looked at from difference perspectives. Fabbe-Costes and Jahre, (2008) and ArzuAkyuz and Erman Erkan, (2010) indicate that the perspectives and measures of firm performance are numerous and lack consensus

in literature. However, generally, firm performance is viewed from the perspective of marketing performance (Karimi & Rafiee, 2014; Kushwaha, 2012), operational (Karimi & Rafiee, 2014; Kushwaha, 2012) and financial performance (Henderson et al., 2012; Hendricks & Singhal, 2005; Wagner, 2005). Arguably, both the marketing and operational performances of the firm are expected to lead to financial performance.

Supply-chain finance may well be one of the earliest commercial-payments activities. It has enabled every major trade and supply-chain flow through time, from trade exchange in early Mesopotamia to receivables credit in the 1800s Industrial Revolution, to letters of credit and even blockchain for global supply chains today "What is supply chain finance?". According to the author Susan Lund, (2020) the industry fulfills banking's basic promise of financing the working capital necessary to run any business. When successfully delivered, supply chain finance benefits the entire ecosystem: it enables corporate buyers to secure inventory by extending payments terms, and it improves certainty on forward orders for suppliers. Banks and nonbank SCF providers generate stable, short duration (and hence lower-risk), often recurring transaction volumes while creating an avenue for broader offerings such as foreign exchange, cash management, and capital-markets products. SCF has only partially delivered on this promise, however. Often it is focused on larger, well-financed multinational corporations and their supply chains, whereas smaller and less well-financed enterprises face barriers to access. Many catalysts—including digital delivery, fintech innovation, industry utilities, blockchain, and API technologies—could stimulate cheaper and more accessible SCF, but change has been slow. Now in 2020, the impact of COVID-19 has contributed to accelerating digital adoption and reconfiguration of trade and supply chains—for example, to improve resilience and diversify sourcing Deloitte, (2020).

As mentioned by Deloitte, (2020) Retail banks work a some of the biggest, most complex and most secure supply chains within the world, transporting and putting away cash over thousands of areas every day. The fetched of working these supply chains extends to investing on all the hardware and administrations required to prepare and convey cash all through the bank's network– from the central bank through to branches/ATMs and eventually to clients. These costs are tall and growing due to two fundamental drivers: the rising request for cash and the expanding utilize of more complex technology across the supply chain.



Source: (Deloitte, 2020)

Figure 3: SCM is Banking Sectors

SCM practices in the banking industry have been unable to display consistency and stability in performance. They have frequently experienced costly discontinuities in the current dynamic markets and vastly changing technological environments. They are also inflexible and susceptible to disruption since they are unable to swiftly and suitably respond to emerging international protocols, certification requirements, and to governmental and regulatory changes.

According to Hughes, (2010) Expansive electronic installment and receipt organize suppliers have a profitable part within the rising supply chain back space, given the synergies between invoicing, installments and fund. These benefit suppliers bring a riches of innovation involvement in installments and invoicing, and as of now appreciate trusted associations with banks. Littler stage suppliers as it were having the capacity to center on a limit viewpoint of the by and large order-to-

pay cycle (such as empowering providers to acknowledge fund offers or reformatting e-invoices). Larger, collaborative stages span the complete budgetary supply chain, covering for case, buy arrange conveyance, receipt accommodation, status upgrades, record coordinating, endorsement workflow, debate administration, installments, settlement advices and supply chain fund.

Supply chain management has historically been aligned with the financial industry rather than the industrial sector, on the other hand, concluded that supply chain activities are just as relevant in the banking sector as they are in manufacturing. This is due to the fact that the financial services offered by banks necessitate the procurement of capital, which are then processed before the final product in the form of a financial service is supplied to bank customers. Many of these operations, including capital procurement, conversion procedures, and final supply of financial services to consumers, are carried out by banks planning, coordination, supervision, and control are all essential. As a result, in this report, we examine supply chain activities in banks in terms Information Technology, Green Supply Chain Management, Sustainability Supply chain.

2.3 Sustainable Supply chain in Bank

For sustainable operations, building a robust and secure supply chain is crucial. The increase in global supply chains and a greater stakeholder awareness led to an increasing focus on sustainable development Björklund et al., (2016), which has been affected by a growing concern about climate change and resource depletion Lam & Dai, 92015). As the result, businesses are moving to a more sustainable business model from a traditional business economic viewpoint, which requires social, economic and environmental grief Azevedo & Barros, (2017). It concerns three common interdependent and inter-related components of sustainability, namely society, the environment and economy, consisting of people, planets and profit (PPP) as originally coined by Elkington (Elkington, 2018; Mills, 1999). The words "sustainable," "environmental," "social responsibility," and "social reporting" are all used interchangeably to describe the same thing. Deegan, (2007) defines the full definition of social relations, including: (a) interaction with a local community; (b) support for community projects; (c) support level for development countries; (d) health and social relationships; (b) support level for community initiatives; and (d) the level of development aid for developing nations.

Needless to mentions that by concerning full definition of social relationship, developing country such as Nepal need to more focus on sustainability for all types of organization to achieve robust

and secure supply chain. Most of the authors describes that sustainability helps to gain band reputation, create corporate social responsibility (CSR), practicing corporate code of conduct etc.

2.3.1 Green Supply Chain and green banking

The concept of Green Banking was developed in the western countries. Green Banking formally started in 2003 with a view to shielding the environment. Then the Equator principles (EPs) were launched and were initially adopted by some leading global banks, such as Citigroup Inc, The Royal Bank of Scotland, Westpac Banking Corporation. In March 2009, Congressman Chis VanHollen of USA introduced a Green Bank Act with the aim of farming a green bank under the ownership of the US government. 'First Green Banking' is the first bank of its kind to promote positive environment and social responsibilities with its base in Eustis and clement Florida USA. After introducing this concept, the initial decision was to minimize the use of paper in banking transactions in order to reduce the need to cut trees for availing raw materials for paper reduction thus minimization.

The word bank, in general, refers to a financial institution that deals with money. According to the author Thagunna et al., (2013), the financial performance of financial institutions is critical to the economy's success. Thagunna et al., (2013) has also mentioned that the financial sector is the economy's backbone. The state of the banking sector will determine the entire scenario of economic activities and the development of a nation. Rai, (2009) has stated that in Nepal, bank output has a direct impact on the economy, and "A" class banks are the key banking categories that are able to withstand the country's economy. Central banks, commercial banks, development banks, investment banks, and cooperative banks are among the various types of banks. Baral, (2005) mentioned that the primary function of these financial institutions is to serve as financial intermediaries, promoting public borrowing and lending. Despite numerous conflicts and political insurgencies, Nepal's financial sector has expanded substantially faster than other sectors. With the growing demand for customers and various services, as well as people's changing lifestyles, a number of banks have emerged in Nepal. According to the authors Pakurár, Haddad, Nagy, Popp, and Oláh, (2019) Commercial banks are major financial institutions that play an important role in any economy by providing capital for the growth of industry, trade, and other resource-deficient sectors to the general public. In Nepal, the role of commercial banks has been expanded to meet the growing demands of the service sector and the economy in general (Baral, 2005).

In banks, SCM activities such as knowledge sharing, quality control, customer service management, customer demand management, and finally flow management are all very visible. Authors Pakurár, Haddad, Popp, et al., (2019) mentioned that Its goals include optimizing consumer service delivery, focusing on a just-in-time method, eliminating duplication, involving all stakeholders in the value creation process, and working closely with suppliers.

As a group of researchers (Chopra &Meindl, 2004; Cohen & Roussel, 2013; Green et al., 2005; Green et al., 2012; Ho et al., 2002) define supply chain management (SCM) as the integration and coordination of business processes, as well as strategy alignment, across the supply chain in order to satisfy the supply chain's end user. Integrated and organized business processes include procurement, production, marketing, logistics and IT. Customer attention, performance, consistency, and responsiveness Zelbst et al., (2010), as well as environmental sustainability, are all strategic imperatives that must be aligned. Moreover, Environmental sustainability is not a corporate imperative but is a supply chain imperative (Collin, 2003; Vachon & Klassen, 2006, 2007; Vasileiou & Morris, 2006).

To prevent sub-optimization at the partner level, the development of environmentally sustainable processes, goods, and services generally requires a collaborative effort by all members of the supply chain Vasileiou and Morris, (2006). Handfield et al., (1997) propose integrating environmental sustainability measures through the value chain. According to Linton et al., (2007), the emphasis of sustainable development has shifted from the organizational to the supply chain level.

However, Green Supply Chain was described by Zhu and Sarkis, (2004) as activities from the green procurement to the integral supply chains, the transfer from a supplier to the manufacturer, a customer and continued to close the loop in reverse logistics. It specifically stated that the GSCM emphasis is not on the integration between the production process and consumer distribution, but also covers the earlier stage of product design before end of use or disposal. Moreover, according to Zelbst et al., (2010), sourcing, manufacturing, marketing, logistics and information technology are included in business processes that need to be integrated and coordinated in search of green supply chains. In addition, consumer attention, performance, consistency, responsiveness and environmental sustainability are strategic constraints that need to be aligned. With competition at the supply chain level and emphasis on changing demands of end users, practices which produce

a competitive advantage at the supply cable level are needed to recognize and implement practices that in turn improve performance for each supply chain Green et al., (2008).

According to Prasad & Upadhyay, (2020), Green banking provides following benefits:

- It helps to avoid as much paper work as possible and rely on online or electronic transactions for processing. Less paper work means less cutting of trees.
- It helps to do an environment friendly business by creating awareness to business people about environmental and social responsibility.
- It helps to save time by using online banking instead of branch banking.
- It adopts and implements environmental standards for lending, which is really a proactive idea that would benefit future generations.
- It gives more importance to environmentally friendly factors before providing loan

Green banks are not only concerned with eliminating carbon-emitting equipment; they also deal with green loans. Green banking professionals should ensure that their loans are made available to industries that do not pollute the atmosphere. However, this would limit transactions, leading to lower efficiency and a corresponding reduction in earnings. The banking industry does not want that, it makes impressive profits. Banks have few investment opportunities and are losing large business customers. https://thehimalayantimes.com/blogs/green-banking

2.3.2 Information System

In today's world, information technologies are critical for business enterprises' development and survival. For the maintenance of critical knowledge and data, all aspects of the market are completely reliant on these. Information systems are used from small companies through big, influential entities such as high street banks and central and local government to monitor their records. Banks, as a service sector, are in desperate need of knowledge UKessays, (2017). Cloud infrastructure and other internet-based information storage technologies have enabled banks to provide state-of-the-art customer experience while maintaining the market competition needed to win new business.

Li et al., (2005) also tried to establish several methodologies for management of the supply chain. Their assessment tool included six dimensions including strategic supplier collaboration, customer connections, information sharing, quality of information, internal lean practices, and postponement. In addition, Solakivi, (2014) attempted to quantify supply chain management and practice using three metrics: logistics outsourcing, supply chain partnership (supply chain integration), and information technology (IT) capacity. In addition, Chen and Paulraj, (2004) assess the supply chain management and operations with these dimensions: reduction of supplier base, long-term ties, coordination, cross-functional teams and participation of suppliers.

The four common efficiency metrics used in the assessment of the MIS returns, according to Gupta and Collins, (1997), are: reduction in operating expenses; increase in profitability; increase in charges percentage total revenue; and improved profit margin as average profits. Mitra and Chaya, (1996) found that IT investments are reducing average costs of production and increasing average overheads in companies. Investments in IT have decreased overall cost in the banking sector by Alpar and Kim, (1990). Harris and Katz, (1991) found that higher expenditures on information technology are related to less growth of insurance operating costs. Scott Morton, (1991), assisted by Hitt and Brynjolfsson, (1996), discovered that IT advantages do exist, but they are not captured by the organization. Therefore, above authors arguments advocating that proper communication will improve the supply chain performance.

Generally, in contrast to the manufacturing sector, supply chain management was less connected to the banking sector. However, Dewar et al., (2011) argued that supply chain activities in the banking sector are as important as they are in the manufacturing industry. This is because the financial services offered by banks actually require the procurement of capital, which must be processed before the final product in the form of a financial service is delivered to bank customers. All of these operations, such as resource procurement, conversion procedures, and bank distribution of financial services to customers, require careful preparation.

Therefore, banking industry might perform green supply chain activities and get competitive advantages for instance E-banking where E-banking and electronic banking are all kinds of remotely carried out banking transactions without visiting a branch. This means for consumers taking acts such as payments of bills, balance checks on their accounts, online transfers of money and purchases of financial instruments using a mobile computer. Bankers will do better by doing

well, strengthening financial supervision by removing paper bills, statements and environmental checks – reducing 17 million trees and preventing 4 billion tons of greenhouse gasses annually Omonge, (2012).

In Nepal, digital banking is a relatively new phenomenon. In the early 1990s, Nabil Bank introduced credit cards, ushering in Nepal's modern banking age. In 1995, Himalayan Bank launched an ATM and a Nepali credit card for the domestic market. Kumari Bank was the first bank in Nepal to offer E-Banking (Internet Banking) in 2002. Similarly, Laxmi Bank was the first bank in the country to offer SMS Banking (Mobile Banking) in 2004 (e-Sewa, 2021).

Green banking also means credit cards, mobile banking, Online banking, recycling and paper use reduction. In Nepal, mobile banking has become common. Apps such as E-sewa and Connect IPS also promote green banking, by reducing transactions across-the-counter. The next way to pay is to use QR codes in the country (REGMI, 2021).

2.3.1.1 Digitalization

Digitalization in banking does not only mean online banking, internet banking, mobile banking or paperless banking rather it is the application of new technologies to transform the existing banking business model into a new banking business model. A model which will itself produce new customer base, unveil new financial services, ensure faster and seamless services to clients with reduced operational cost, zero error, ease of use and apparently, maximum security. Therefore, it's not only a new channel; rather it's a whole new way of transforming existing transaction-based banking into the experience-based banking. So that, banking can be accessed by customers anytime and from anywhere. Now some factors make digitization in banking compelling, which are capturing future customer equity, enhancing internal connectivity, ensuring maximum reach with customer engagement, making banking attractive, ensuring effective decision-making, providing banking anywhere, anytime, Establishing internal e-process etc. (NapelBankersAssociation, 2018).

The rapid progress of information and communication technology has had a huge impact on Nepal's banking business during the previous decade. Through the adoption of various IT solution offerings, banks and financial institutions have improved their services as a financial intermediary. Technology has evolved into a tool that helps banks with their organizational structures, business

strategy, customer service, and other related operations. The Nepalese banking industry has come a great way in the previous 30 years, but we are still unable to do much other than manage the growing volume of cross-border transactions. Digital offers various opportunities in driving financial inclusion, from improving access to financial services to improving tax collection. In case of Nepal the Government is taking measures toward achieving this, such as digitalizing all government transactions to boost the adoption of digital payments. It has also started distributing social security allowances and all other government-to-citizen payments through banks to encourage financial inclusion which can lead the economy to go digital in future to come. ATM network in Nepal is considered among the weakest in the world, with limited presence in remote parts of the country. A robust nationwide ATM and branch footprint is necessary. High transaction fees for banking services (e.g., ATM withdrawals from other banks' ATMs, minimum balance requirements, high charges for online banking, debit/credit cards) are key hindrances for digitalization in banking industry of Nepal (NapelBankersAssociation, 2018).

2.3 Theoretical framework

Theoretical frameworks that describe key antecedents, practices, and routines, as well as their linkages and interdependencies, are frequently proposed in sustainable supply chain management reviews. Most theoretical Sustainable supply chain management studies, according to Carter, Easton, and management (2011) and Brandenburg, Gruchmann, and Oelze (2019), employ popular theories from other disciplines, such as stakeholder theory, institutional theory , and transaction-cost theory, as well as the resource-based view (RBV) and natural resource-based view (NRBV).If the firm's environment remains basically unaltered, the (N)RBV explains that a firm can obtain or retain a long-term competitive advantage through valuable, rare, rarely imitable, and non-substitutable (VRIN) resources. The notion of dynamic capabilities (DCs) was created from the transition of the RBV and NRBV into dynamic settings of complex systems, such as sustainable SCs, for enterprises to obtain strategic temporary or even long-term competitive advantages in dynamic markets (Talay & Ehret, 2018).

2.4 Relevant theories

2.4.1 Resource-based view and the Stakeholder theory.

The development of new ideas, technologies, behaviors, goods, or processes that result in a decrease of environmental burdens while simultaneously enhancing economic performance is

referred to as a resource-based view. As previously stated, the definition of resource-based includes organizational changes, and stakeholders are important organizational elements, according to the authors Carrillo-Hermosilla, del González, and Könnölä (2009). In fact, there have been rising calls for stakeholder perspectives to be integrated into resource-based views (McGahan, 2021). Resources and/or capabilities are one of an organization's core building components . A loose definition of an organizational resource is "everything that may be classed as a strength of the organization and is critical to its success" Freeman, Dmytriyev, & Phillips, (2021). Creating the environment for the most efficient use of an organization's resources could potentially lead to higher time returns Freeman et al., (2021). Capabilities, on the other hand, consider an organization's ability to use its resources effectively and efficiently (Kull, Mena, & Korschun, 2016).Products/services and resources are inextricably linked from the perspective of an organization, as most products/services involve the use of several resources, and most resources can be inputs to multiple products/services. Various stakeholders have a critical role in an organization's ability to reconfigure and realign its competences and resources in order to achieve eco-innovation and, as a result, improved performance Sodhi & Management, (2015). As a result, examining an organization's resource profile might aid in fine-tuning its product-market operations. The resource-based view asserts that an organization's resources can be strategically used to create and preserve a competitive advantage (Chacón Vargas & Moreno Mantilla, 2014; McGahan, 2021). To create a competency, a company can coordinate and cross-functionally integrate the utilization of its resources.

The value (V), rarity (R), imitability (I), and organization (O) of an organization's competencies affect the degree to which it achieves a competitive advantage and thus higher performance (Chacón Vargas & Moreno Mantilla, 2014; Sodhi & Management, 2015). Furthermore, a resource-based view of strategy—a function of stakeholders such as senior management who design strategy in conjunction with the organization's ownership—allows firms to better utilize their resources. The efficient and effective use of a company's valuable, unique resources and competencies can assist the company gain a competitive advantage. This, in turn, may lead to improved performance, which will benefit the organization's shareholders.

2.4.2 Transaction Cost theory

Because of the studies that have been fostered by it Lynch-Wood, Williamson, & Society, (2007), Transaction Cost Theory may be one of the most important organization theories. It is also one of the key views in organizational studies (David & Han, 2004). TCT examines how corporate partners who interact with one another protect one another against potentially detrimental subsidiaries with different affiliations (Schwabe, 2013). It is the most important new institutional theory that emphasizes the decision on the sourcing dilemma, whether to outsource or not. The make-or-buy decision of a company is often referred to as its sourcing predicament (Fredikind, 2014). The external environment's uncertainty, as well as costs, which include Coordination and Transaction costs, are the two main drivers of Transaction Cost Theory (Schwabe, 2013). In order to deconstruct transaction costs, the human actor, defined by bounded rationality and opportunism (Meinlschmidt, Schleper, Foerstl, & Management, 2018), influences uncertainty and costs. People have a limited sense of objectivity, and they may behave in their own best interests rather than that of the firm. For buyer-supplier relationships, either natural or mechanical doubt could be a negative element.

2.4.4 Institutional theory

Institutional Theory provides a theoretical lens through which researchers can identify and investigate factors that promote the survival and legitimacy of organizational practices, such as culture, social environment, regulation (including the legal environment), tradition and history, as well as economic incentives, while also acknowledging the importance of resources (Baumol, Schilling, Wolff, and Strategy, 2009; Glover, Champion, Daniels, and Dainty, 2014; P. M. J. A. s. q. Hirsch, 1975).The term "legitimacy" refers to the adoption of sustainable methods that are deemed suitable and appropriate by stakeholders DiMaggio and Powell, (1983). Institutional theory has traditionally been concerned with how groups and organizations can better secure their positions and legitimacy by adhering to the institutional environment's rules and norms (such as regulatory structures, governmental agencies, laws, courts, professions, and scripts, as well as other societal and cultural practices that impose conformance pressures) (DiMaggio and Powell, 1983).

External social, political, and economic influences influence corporate strategy and organizational decision-making, according to Institutional Theory, as firms strive to embrace or legitimize their

practices in the eyes of other stakeholders (Jennings & Zandbergen, 1995). Ball and Craig (2010) used Institutional Theory to describe how changes in societal values, technology improvements, and legislation affect decisions about ‘green' sustainable activities (P. M. Hirsch & Lounsbury, 1997) and environmental management (Hoffman & Ventresca, 1999),for example, use Institutional Theory to investigate how various organizational methods lead to the adoption of environmental management practices. A core corporation inside a supply chain (Kates et al., 2001) and government legislation are two key factors in launching green changes in laws. Isomorphism in organizational strategies, structures, and processes is created by three types of drives, according to Institutional Theory. These are coercive, normative, and mimetic drivers (DiMaggio & Powell, 1983).

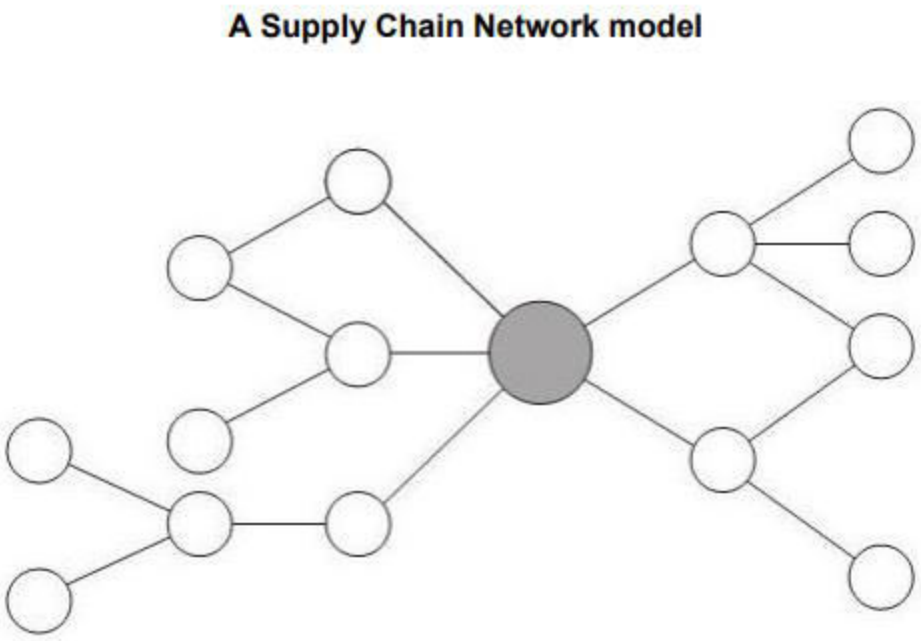
Influences from individuals in prominent positions, in this case within the financial supply chain, are coercive. Environmental management and so sustainability require coercive constraints(Kilbourne, Beckmann, & Thelen, 2002). Organizations with normative driver sensure adhere in order to avoid being viewed as participating in illegal activities (Sarkis, Zhu, & Lai, 2011). Other researcher Ball and Craig (2010) discovered that normative pressures push businesses to become more environmentally conscious, and they argue that institutional research is needed to better understand new social rules (such as ethical values and ecological thinking) and organizational responses to environmental issues. As a result, normative drivers exert influence as a result of a social obligation to conform, which is based on societal necessity or what an organization or individual should be doing (March & Olsen, 2006). Mimetic isomorphic drivers develop when businesses copy the behaviors of successful industry competitors in an attempt to duplicate the path to success and hence legitimacy (March & Olsen, 2006); for example, specialized long-term banking supply for clients. Institutions form the logic by which laws, rules, and taken-for-granted behavioral expectations appear natural and abiding , as well as the logic by which laws, rules, and taken-for-granted behavioral expectations appear natural and abiding (Glover et al., 2014).‘Once institutional logics become dominant, they influence organizational decision-making by directing executives' attention toward the set of concerns and solutions that are consistent with the dominant logic and away from those that are not (Bedaiwy et al., 2004).

As a result, institutions can determine what is suitable or legitimate (i.e., what is acceptable behavior, (Lynch-Wood et al., 2007), making certain behaviors inappropriate or even unthinkable

(DiMaggio & Powell, 1983). This will have an impact on how businesses make decisions. This can reveal the involvement of various parties in the creation of sustainable supply chains, as well as their function in reaching conformance. The institutional approach allows for a more in-depth examination of the role of conformity, regulation, and social factors in shaping organizational behavior (Seuring, Sarkis, et al., 2008). The study investigates the roles of various supply chain actors and their approaches to sustainability, as well as whether or not this is strategic (P. M. Hirsch & Lounsbury, 1997). We do this to see what stakeholders are doing to improve energy efficiency and what they plan to do in the future.

2.4.5 Network Theory

The strategic management of sustainable supply chains is increasingly based on a network view of complex, yet coordinated, integrated processes and collaborative relationships, according to network theory (NT) which is illustrated on figure 4 (Chen & Paulraj, 2004; Christopher, Holweg, & management, 2011; Lambert & Cooper, 2000; Peck & management, 2005). The usage of NT emphasizes the possibility of delving into the complexities of integrating sustainability processes from a decision-making standpoint (Manuj, Mentzer, & Management, 2008). If, as some of the researchers Vurro, Russo, and Perrini (2009) claims, everyone is seeking self-interest in value creation, this adds a new aspect to an already complex and long-term SCM strategy. The question arises as to how a corporation takes the lead in managing concepts and processes, and who benefits the most from sustainable activities in terms of value and power.



Source: Christopher et al., (2011)

Figure 4 : Supply Chain Network model Source

Relationships must be managed by a "systemic, holistic understanding of the network of nodes" based on centrality and density, which is critical for power and decision-making (Vurro et al., 2009).The interconnection of participants along the supply chain is represented by the density of nodes, and the centrality of an organization is reflected by its relative power or status in relation to others. Because centrality impacts the ability to exercise influence, it also leads to increased collaboration and interconnection among partners. Multinational corporations, for example, are increasingly being held accountable for supply chain sustainability challenges (Seuring, Müller, & environment, 2008; Vachon, Klassen, & Management, 2006; Walker & Jones, 2012).

They are strategically situated within the supply network because they have the resources and legitimacy to exert influence over partners, broker supply chain design and governance, and manage integrated processes and practices (Vurro et al., 2009). “Full commitment to process orientation and management is required,” says Steyn. However, if organizations want to achieve long-term strategic supply chain success, they must significantly increase their leadership acumen” (Steyn & Niemann, 2014). The problem today, as stated in the Mondeléz International 2014

(Bakar, Osman, Bachok, Ibrahim, & Mohamed, 2015), is for them to put their plans into action while matching their sustainability goals with those of their partners.

2.5 The context of the study

2.5.1 Nepal

Nepal is an independent nation in South Asia. It is mostly in the Himalayas, but also includes parts of the Indo-Gangetic Plain. It is the 49th most populous nation in the world and the 93rd largest in terms of land area (Whelpton, 2005). It is landlocked, bordering Tibet to the north and India to the south, east, and west, with Bangladesh just 27 kilometers away on the southeastern tip and Bhutan separated by the Indian state of Sikkim(Wright, 1877). Nepal's landscape is complex, with fertile plains, subalpine forested hills, and eight of the world's ten tallest mountains, including Mount Everest, the world's highest peak. The capital and largest city of Nepal is Kathmandu. Nepal is a multiethnic nation whose official language is Nepali (Whelpton, 2005).

A Brief History

The first civilizations in Nepal, which flourished about the 6th century B.C., were limited to the fertile Kathmandu Valley, which now houses the country's capital. Prince Siddhartha Gautama was born in this area around 563 B.C. Gautama Buddha attained enlightenment and established Buddhism (Ruszczyk, 2020). Around the 12th century, Nepali rulers' early patronage of Buddhism gave way to Hinduism, reflecting India's growing influence. While the Gopalas, Kiratis, and Licchavis dynasties extended their rule, it was not until the Malla kings reigned from 1200 to 1769 that Nepal took on the approximate dimensions of the modern state (Wright, 1877).

King Prithvi Narayan Shah, who had fled India after the Moghul conquests of the subcontinent, reunited the kingdom of Nepal in 1768 (Whelpton, 2005). Nepal's first prime minister, wielded absolute power during the mid-nineteenth century, relegating the Shah king to the status of mere figureheads. He established the Rana Prime Ministers' hereditary rule, which lasted for 104 years King Mahendra of Tribhuvan published a new constitution in early 1959 (Upadhyaya, 2000) and the first democratic elections for a national assembly were held. The Nepali Congress Party won the election, and Bishweshwar Prasad Koirala, the party's chief, formed a government and served as Prime Minister. By 1960, however, King Mahendra had changed his mind and dissolved Parliament, effectively removing the country's first elected government (Do & Iyer, 2010).

They eventually mustered the courage to launch a People's Movement in 1990, According to Upadhyaya, (2000) after several years of struggle during which political parties were outlawed. The then-King Birendra approved constitutional changes and created a multiparty parliament with the King as the Head of State and an executive Prime Minister, paving the way for democracy. Nepal held its first parliamentary elections in May 1991 (Upadhyaya, 2000).

Then, on June 1, 2001, a tragic accident claimed the lives of the entire royal family, including King Birendra and Queen Aishwarya, as well as many of their close relatives. Gyanendra, King Birendra's brother, and his family were the only ones who survived. For a time, King Gyanendra followed the elected government, but then abolished the elected Parliament and assumed absolute power (Whelpton, 2005). In April 2006, a new People's Movement was initiated by democratic parties, with the majority of their efforts concentrated in Kathmandu, resulting in a 19-day curfew (Whelpton, 2005). King Gyanendra eventually abdicated his throne and the Parliament was restored. Prime Minister Girija Prasad Koirala and Maoist Chairman Prachanda signed the Comprehensive Peace Agreement (CPA) 2006 on November 21, 2006 :(Upadhyaya, 2000) committing to democracy and peace for the country's and people's development. On April 10, 2008:(Upadhyaya, 2000) a Constituent Assembly(CA) election was held. The newly elected Constituent Assembly proclaimed Nepal a Federal Democratic Republic on May 28, 2008 :(Upadhyaya, 2000) putting an end to the country's 240-year monarchy. Nepal now has a President as its Head of State, as well as a Prime Minister in charge of the country's government.

During its first four years in charge, the Constituent Assembly made substantial progress toward fulfilling its mission of writing a new democratic constitution for Nepal. Whelpton, (2005) The first CA, however, was unable to complete the historic task due to political disagreements on some contentious issues such as federal provinces and government form, and its mandate was naturally terminated in 2012.Whelpton, (2005) CA II was elected in November 2013, and at its first meeting, representatives of political parties set a one-year deadline for finishing the task of writing the new constitution. Wright, (1977) In April 2015, a devastating earthquake with a magnitude of 7.8 struck Nepal, accompanied by many strong aftershocks that resulted in unimaginable loss of life, infrastructure, and property. Wright, (1977) The majority of Nepal's mid-hill districts, including the Kathmandu valley, were devastated. This horrible experience instilled in political parties a sense of urgency to speed up the constitution-writing process so that the political process can come

to a meaningful end and the country can concentrate entirely on post-disaster reconstruction (Whelpton, 2005; Wright, 1977).

After weeks of focusing on the most controversial topics, political parties were able to resolve them, paving the way for the constitution to be finalized. On September 20, 2015: Economy (2008) the new constitution of Nepal was promulgated by a vast majority of CA members. With this historic achievement, the Nepali people's long-held dream of having a constitution drafted by an elected legislative body has finally come true. Elections for the next President, Prime Ministers, and other state offices were successfully conducted in accordance with the provisions of the new constitution (Upadhyaya, 2000).

Economic scenario

Nepal is one of the world's least developed nations, with a quarter of the population living in poverty. Political instability and a difficult business climate prohibit Nepal from diversifying its economy beyond remittances (30 percent of Gross Domestic Product (GDP)) and agriculture. Nonetheless, due to improved political stability, improved energy supply, and reconstruction operation, growth between 2017 and 2019 was significantly higher than long-term averages. Banjade et al., (2008) The economy grew by 7.1 percent in 2019, up from 6.7 percent the previous year, but the growth rate fell to 0% due to sluggish economic development in India and the outbreak of COVID-19. Banjade et al., (2008) GDP growth is projected to pick up to 2.5 percent in 2021 and 6 percent in 2022, according to the latest International Monetary Fund(IMF) projections, subject to a post-pandemic global economic recovery (Banstola et al., 2020).

Nepal's public debt has increased in recent years, reaching 39.2 percent of GDP in 2020, up from 30.1 percent a year ago. Banstola et al., (2020) mentioned that the debt-to-GDP ratio is projected to rise to 43.7 percent by 2021 and 45 percent by 2022, indicating that the current trend will continue. Inflation was expected to rise to 6.4 percent in 2019, up from 4.6 percent the previous year, owing to higher food prices and higher import duties on some agricultural and industrial imports. According to the IMF's new World Economic Outlook, inflation is forecast to stabilize at 6% in 2021 and 5.8% in 2022 (October 2020). (Economy, 2008) In 2020, the current account deficit was USD 0.81 billion, down from USD 2.37 billion the previous year(Ruszczyk, 2020).

In 2019, Pant et al., (2011) decribes Nepali migrant workers sent home USD 8.64 billion, making the nation one of the world's largest recipients of remittances. Nepal lost an average of Rs145 billion (EUR 1,04 billion) in remittances in 2020, a decrease of 14% due to the global economic downturn caused by the coronavirus outbreak, as well as a drop in oil prices (Gilbert & Vines, 2006). In the near term, this trend is expected to continue, with the deficit expected to rise to USD 2.37 billion by the end of 2021. In February 2020, India exempted Nepal from imports of palm oil and palm ole in, a development that is expected to improve Nepal's sales to its largest trading partner, as both goods are its top export earners (Banstola et al., 2020).

Nepal's agricultural sector which accounts for a quarter of GDP but employs 64.5 percent of the workforce in 2021, is highly reliant with industrial production primarily centered on the processing of agricultural products(Economy, 2008). Nepal has significant hydropower capacity, which is largely untapped due to the country's unstable political situation, which discourages foreign investment. Political gridlock, a landlocked geographic area, inadequate power supply, underdeveloped transportation infrastructure, and a challenging regulatory climate that restricts the private sector are all risk factors (Sarah, 2020). Owing to weak risk management practices, poor corporate governance, and high credit exposure, some financial institutions are already at risk of going bankrupt. Despite IMF assistance, the country suffers from severe governance gaps and excessive credit expansion (Banjade et al., 2008; Banstola et al., 2020).

Nepal remains a poor country with a high unemployment rate and is geographically, financially, and economically landlocked (almost 40 percent, but only 1.4 percent in 2019 if informal work is taken into account, though many are underemployed) (N. R. J. G. o. N. Bank, 2020).The majority of Nepal's population relies on subsistence farming, with nearly 5 million citizens suffering from malnutrition, and the country's labor laws are outdated. Last year, the projected poverty rate (the percentage of people living on less than USD 1.90 per day) fell to 8% from 25.2 percent in 2010. The poverty rate of 2020 is 18.7 percentage (Please, 2020).

Demographics

Nepal is located between China and India in terms of geography. With a combined population of over one billion people, these two neighbors are the world's most populated nations. Nepal's population of 28 million people (estimated for 2010) is insignificant in comparison to its neighbors.

Although the Nepalese population is small in comparison to its neighbors, the country's high rate of population growth has been a source of concern(Chalise, 2006).

During the last few decades, Nepal, like many other South Asian countries, has experienced rapid demographic changes. In Nepal, fertility and mortality have been rapidly decreasing in recent years. The average annual population growth rate was 2.25 percent between 1961 and 2001(Adhikari & childbirth, 2010). The population rate has dropped since then. The average annual growth rate was 1.35 percent between 2001 and 2011(Adhikari & childbirth, 2010 Nepal's population is expected to increase from 26.5 million in 2011 to 30.4 million by 2021 and 33.6 million by 2031(Chalise, 2006).

Nepal's population is made up of over 125 caste/ethnic groups(Do & Iyer, 2010). The castes of Chhetri/Bahun, Janajati, Terai castes, Dalits, and Muslims can be divided into five categories. Janajati (36%) is the largest group, followed by Chhetri/Bahun (31%), Terai castes and Dalits (both 14%), and the minority Muslim group (4 percent), (Do & Iyer, 2010). In Nepal Janajati castes are the largest group in four of the seven states, Chhetri/Bahun castes in two states, and Terai castes in one state (Khasnobish, 2016).

In Nepal, the working-age population (aged 15 to 64) has been growing, while the proportion of the young population has been decreasing. Working-age men made up 52.9 percent of the male population and 55.3 percent of the female population in 1991(Sarah, 2020). The male working-age population increased to 57.9% in 2011 (Lamichhane& Society, 2012), while the female working-age population increased to 61.6 percent. The fact that many men leave the country for work is likely to blame for the lower proportion of working-age men to women. According to the latest World Bank survey, Nepal has taken the lead in job creation in South Asia, with an employment rate of around 68 percent (Lamichhane& Society, 2012). This means that 32 percent of the country's working-age population—those aged 15 to 64—is either unemployed or voluntarily unemployed, the lowest rate in South Asia (Khasnobish, 2016).

It is well acknowledged that demographic demographics have a significant influence on customer attitudes and behavior regarding new technology adoption, such as e-banking. Among the most relevant demographic variables affecting e-banking usage are age, gender, educational level, income, and employment.

2.5.2 Banking industry of Nepal

History

Nepal's banking history dates back to 1937 AD, when Nepal Bank Limited was founded as the country's first commercial bank. It was established as a semi-government bank with an approved capital of NRs 10 million in METALLIC COINS(Dangol et al., 2019). In Nepal, banknotes were not introduced until the mid-1940s. The first banknotes were issued by the treasury "SadarMulukiKhana" in the year 1945(Dangol et al., 2019). These notes were signed by a "Khajanchi," the treasury's chief who was also a high Hindu priest. In 1955, the Nepal Rastra Bank Act was enacted in order to improve the banking system, and Nepal Rastra Bank was established as the Central Bank of Nepal in 1956, (Dangol et al., 2019). The Central Bank began issuing banknotes with the signatures of the institution's governors after this date. The banking sector in Nepal was wholly owned by the government until the 1980s, with the Agriculture Development Bank, Rastriya Banijya Bank, NBL, and NRB serving as the foundations of a financial institution (Pant et al., 2011).

With the establishment of Nabil Bank in 1984 and the entry of international banks such as Nepal Arab Bank, Nepal Indosuez Bank, and Nepal Grindlays, the private banking industry began. Nepal's banking sector has faced numerous challenges and roadblocks (Des Chene et al., 1998). It has seen a number of political upheavals and instabilities. But today, it stands more liberalized and modernized (Des Chene et al., 1998). There are various types of banks working in the modern banking system in Nepal. As per the list issued by NRB in July 2020, there were 27 commercial banks in operation, including foreign joint-venture banks, 20 development banks, and 22 finance companies (Economy, 2008; Pant et al., 2011).

Banking Systems

The Nepal Rastra (Central) Bank is the government's central bank and governs the national banking system. The Nepal Rastra (Central) Bank is a regulator that regulates foreign exchange, supervises, tracks, and governs the operations of banking and non-banking financial institutions, sets interest rates for commercial loans and deposits, and sets foreign exchange rates (Khasnobish, 2016). The Nepal Rastra (Central) Bank, as the government's bank, keeps track of all government

revenue and expenditure, issues Nepali bills and treasury notes, makes loans to the government, and sets monetary policy (MUSA).

The Bank and Financial Institutions Act (BAFIA) of 2017 governs commercial lending in Nepal. The BAFIA empowers the Nepal Rastra (Central) Bank to issue guidance on interest rates, interest ceilings, and investment areas to all commercial banks and financial institutions (Khanal et al., 2013).

Rastriya Banijya Bank (National Commercial Bank), which is 100% government-owned, Nepal Bank Ltd., which is 40.5 percent government-owned, and the Agricultural Development Bank, which is also largely government-owned, continue to dominate the commercial banking market (Khanal et al., 2013). These three state-owned banks account for approximately 16% of the country's overall financial assets and deposits. The first two, in particular, have sizable non-performing loan portfolios. Private banks are becoming more powerful and dominant, and most companies now choose to bank with non-state-owned institutions (Slingerland et al., 2009).

Nepal opened its commercial banking sector to international investment in the 1980s. Nabil Bank, Nepal Investment Bank, Standard Chartered Bank, State Bank of India, Bank of Kathmandu, Everest Bank, Nepal Sri Lanka Merchant Bank, Nepal Bangladesh Bank, and Nepal Bank of Ceylon, now known as Nepal Credit and Commerce Bank, are among the joint venture banks that have been founded since then (Slingerland et al., 2009). There are currently 27 commercial banks, 20 development banks, 22 finance firms, 85 microfinance institutions, and one infrastructure development bank in business as of July 2020 (Pant et al., 2011).

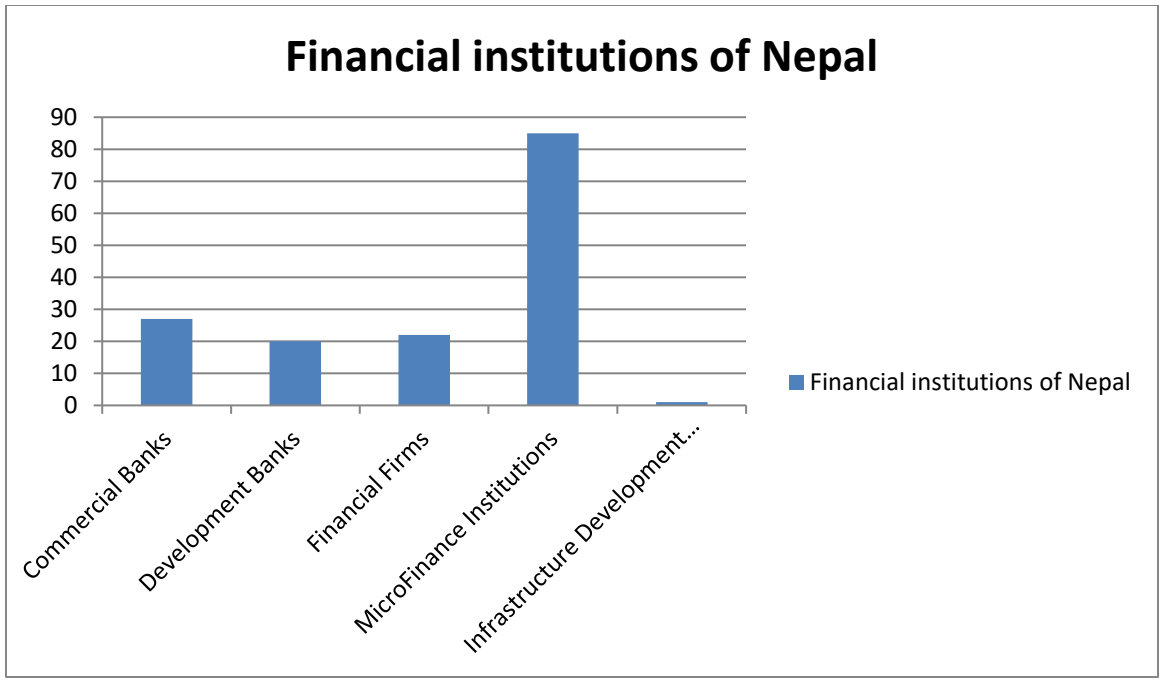


Figure 5 : Financial institutions of Nepal

Source: Pant et al., (2011)

Foreign banks are not permitted to open branches under current banking laws. For transactions and payments, all commercial banks have correspondent banking agreements with international commercial banks. The Nepal Stock Exchange's function was expanded in 1994 when the government allowed private brokers to operate (Vally& Spreen, 2012). In 1996, the Nepalese government declared that foreign institutional investors would be allowed to own up to 25% of the shares of listed companies in certain sectors, such as tourism and electricity (N. R. J. K. N. R. B. Bank, 2020).

2.5.3 Present Situation

The banking sector and its facilities have been fully transformed as a result of the country's adoption of new technologies. Today's banking sector is more organized, modernized, and well-managed than it was two decades ago. Banking apps, ATMs, Internet Banking, Mobile Banking, Debit Card, Credit Card, Prepaid Card, and other banking services are now available in Nepalese banks (Raju et al., 2015.) In Nepal's current banking system, there are different types of banks. The banks are divided into five categories: central, growth, industrial, financial, cooperative, and Micro Credit (N. R. J. G. o. N. Bank, 2020). In Nepal, there are currently 27 commercial banks,

20 development banks, 22 finance firms, 85 microfinance institutions, and one infrastructure development bank, (N. R. J. K. N. R. B. Bank, 2020) Nepal Bank Limited, Nepal's first commercial bank, has the country's largest banking network. When comparing Nepal's modern banking system to its traditional banking system, the latter has begun to develop numerous branches throughout the region (Shrestha, 2019).

2.5.4 Sustainability SCM Practices in the bank of Nepal

2.5.4.1.1 Environmental practices

Green banking is described as the promotion of environmentally friendly practices that assist customers in lowering their carbon footprint through banking operations. Online banking, statements, bill payments, and account opening are examples of these activities. Banks have put money into internal projects to reduce their own carbon footprint (Adhikari & childbirth, 2010). Green banking also applies to activities that take into account both social and environmental considerations and seeks to use IT and banking processes with the least amount of environmental effect possible. It aids in the improvement of bank asset quality. It is a project that uses the internet instead of paper for banking transactions. With the click of a button, you can make deposits, withdrawals, and bill payments (Chalise, 2006).

The comfort factor is very important to Green Banking customers. Checking account balances no longer requires waiting for a bank statement to arrive in the mail. Every day, by logging into one's account, one can check their balance. In addition to checking balances and transactions, anomalies in the account can be detected quickly and dealt with. The best part is that it can be done from any place. Green Banking can be done wherever there is an internet connection.(Chalise, 2006).

Green Banking in Nepal

Even though the overall definition of "Green Banking" is not well understood in Nepal, Nepalese people accept that "Green Banking" initiatives are important for future environmental conservation and sustainable development.

In terms of green banking in Nepal, the banks are not very interested in promoting green banking initiatives and are out of step with global trends. Moreover, Nepal Rastra Bank, the country's central bank, has not established any policies or strategies in the area of "green banking." However, several banks in Nepal have begun to provide services that promote green banking activities, i.e .they support Nepal's "Go Green" philosophy. Some banks also offer a "Green Savings Account,"

which involves the planting of one tree for every account that a customer opens. Not only that, but almost all banks have been urging their staff to use as little paper as possible and to provide their customers with online banking services (Banstola, 2007).

The following steps can be taken by the majority of Nepalese banks to promote "Green Banking":

a. Paperless Banking: All banks have started using computerized branches to conduct paperless banking. The majority of banks are capable of switching to electronic communication and reporting. Customers have been allowed to use e-banking services such as ATMs, debit and credit cards, mobile banking, and online banking.
b. Energy Efficiency: Some banks have implemented energy efficiency measures such as using compact fluorescent lighting (CFL) to reduce energy usage during office hours. For successful energy management, some banks have performed energy audits in all of their offices. They can also use green energy to run their offices and ATM machines.
c. Using the Mass Transportation System: To save money, several banks have provided shared transportation for a group of officials stationed at a single location.
d. Green Buildings: Several banks are designing and constructing green buildings for their offices and employee housing.
e. Lending to Environmentally Friendly Projects: Most banks, including Standard Chartered Bank, Laxmi Bank, Civil Bank, and Nepal Investment Bank, have been lending to solar energy projects, hydropower projects, biogas projects, and other environmental projects to support the “Go Green” philosophy. Laxmi Bank is the first of these banks to support the Go Green idea in Nepal.
f. Lumbini Development Trust (LTD) and some banks (Laxmi Bank, Siddhartha Bank, Bank of Kathmandu, and Nabil Bank) collaborate on Lumbini Development Trust (LTD) conservation and sustainable development projects. The Lumbini Million Tree Project was developed with the aim of planting one million trees by 2020. Similarly, some banks (Rastriya Banijya Bank) fund projects like "Clean Bagmati."
g. Carbon Credits: Several banks have purchased carbon credits to help Nepal's "Go Green" initiative. By purchasing carbon credits, ACE Development Bank becomes the first Nepali business to go green.(Do & Iyer, 2010)

Green finance

The fact that central banks seem to play an important role in supporting green finance by taking climate change and environmental risks into account in their policy decisions can be attributed to a variety of factors. The first is their responsibility as keepers of financial and macroeconomic stability. Environmental risks can have a direct effect on price stability by affecting food and energy prices. Climate change-related floods and droughts can have an effect on agricultural production, which in turn affects food prices. Climate change is also having an effect on energy production practices and, as a result, energy prices. Second, climate change and extreme weather, such as floods and hurricanes, pose a 'physical challenge' to economies (Sarah, 2020). These have the potential to harm the economy by damaging or even destroying individual companies or industries. Basic environmental changes can have an effect on economic and financial stability, as well as the protection and soundness of financial institutions. Since central banks are in charge of maintaining financial stability, they must resolve these threats in their financial stability and macro prudential policy frameworks (Sarah, 2020).

Climate change is a true, rapidly developing, and widespread threat in Nepal. Climate change appears to be having a significant impact on the country's water supplies, especially glacial lakes, as well as hydropower generation. Climate change is expected to intensify floods, landslides, sedimentation, and more frequent precipitation events, putting water storage systems and facilities at risk (Shrestha, 2019).

Despite these grave concerns, Nepal has put little focus on promoting green finance. However, the Nepal Rastra Bank (NRB) recently stated in its 2017/18 Monetary Policy that an environmental and social risk management manual will be created to help banks and financial institutions handle risks. Similarly, one of the goals for achieving Nepal's Financial Sector Development Strategy (2016/17-2020/21)'s vision of "an effective, productive, inclusive, and stable financial sector that contributes to broad-based economic growth" is the development of a competitive financial system with social and environmental responsibility. Demetriades, Luintel, and statistics, (1996) Nepal Rastra Bank is also a member of the Sustainable Banking Network (SBN), a knowledge-sharing network of banking regulators and associations established in 2012 to help financial institutions improve environmental and social risk management and advance green and inclusive lending. Thirteen of the 37 SBN member countries had already implemented green finance guidelines as of January 2017 (Demetriades et al., 1996).

Green finance is a strategy for financial sector and broader sustainable development. There is a need to adopt current best practice in the management of environmental issues, and redefine the banking sector's role in, and ability to address, systemic environmental risk. Subsequently, national strategies and road maps for aligning financial system development with the needs of sustainable development need to be formulated (Getahun, 2015).

2.6 Challenges in bank sustainability and green supply chain

While SCM is a significant part of organizational operational strategies, it is important to note that for different organizations to fully integrate their SCM, they have to make sure that their operations are flexible enough to allow for this integration. Collin (2003) stated that each and every organization has an organizational culture that is unique.

According to Pant et al. (2011) the rise in globalization has increased the importance of Supply Chain Management (SCM). It's true Nepal is facing issues of coordination between the supply chain members. Primary factors are lack of skilled human capital, information, research, poor capital flow and quality of education. Secondary factors are quite well known; corruption, labor intensive industry, unstable government, poor infrastructure and many more. We must view opportunities in every problem, which is integrating the goals from all dimensions. So, the goal is to create an efficient and effective low-cost network of relation between the suppliers, customers and distributors since business has become the strongest point of every nation.

As per Maharjan (2017) it is complex for the developing countries like Nepal. There are very limited customers and the most awful trend in Nepal is that if something attracts the market then everyone is steeping towards it because no one really likes to take risks and this ultimately leads the economy to backfire like America was once hit by real estate business.

With the passage of time, Nepal's banking sector has reached new heights. The working process of banks has changed as technology has progressed. The public's trust and faith in the banking sector has grown over time. However, many problems and challenges in Nepal's banking sector have arisen as a result of changing dynamics (Panta, 2007).

Weak corporate governance

Corporate governance is a set of laws, policies, and procedures that guide and regulate the entire organization. Corporate governance aids in the development of trust and the maintenance of financial stability. In Nepal, the majority of banks neglect corporate governance (Khanal et al., 2013). Every bank has its own board of directors, whose primary responsibility is to set policy and monitor whether those policies are being followed properly. The lack of adequate oversight and inspection by top-level management has resulted in financial statement manipulation and fraud by bank employees in Nepal(Bank, 2018). To avoid corrupt practices and fraud, top-level management should keep a close eye on what is going on in the bank. They should develop and enforce good corporate governance, which is missing in the majority of Nepalese banks.

Lack of adequate and skilled manpower

Banks and other financial institutions in Nepal are expanding at a rapid pace. The bank is expanding across the country, with new branches opening in every corner. As a result, trained labor is in short supply. Vacancies are advertised by all banks on a regular basis. For the bank's branches, a large number of candidates are chosen (Lamichhane& Society, 2012). However, all of the chosen candidates do not have to be qualified. Many of them are unfamiliar with banking practices and procedures. As a result, proper training is needed for this manpower to operate effectively and efficiently. However, it has been discovered that banks are not offering enough instruction. According to the Nepal Rastra Bank (Economy, 2008), 3% of staff expenses should be allocated to employee capacity growth. However, some banks deviate from this law on a regular basis. In addition, many banks are experiencing a manpower shortage, which is causing difficulties for their customers.

Difficulty in rural access

In Nepal, the banking sector faces a number of challenges. We are all aware that many banks are still unable to enter Nepal's rural areas. There is a shortage of resources in rural areas. Because of the lack of facilities and services, many workers choose not to work in rural areas. Monitoring is hampered by a lack of infrastructure. People in rural areas, likewise, are unaware of banking. They have no idea what banking is or how to deposit money in a bank. As a result, they are hesitant to deposit funds in banks. As a result, one of the most difficult challenges facing Nepal's banking sector is establishing a bank in rural areas (Panta, 2007).

Cyberthreat

It has been the backbone of every bank in this age of the internet. This increases the risk of cyber-attacks. We hear about cyber-attacks on the bank's system all the time. Most banks use pirated apps, making it easy for hackers to break in. Nepal, too, lacks cyber laws and robust security measures. Cyberattacks have been a major problem for Nepal's banking sector as a result of all of these flaws (Bhattarai, 2016).

Lack of maintenance and improvement of equipment

In Nepal, all of the banks' machinery, such as ATM machines and note counting machines, is in need of maintenance and development. ATM devices do not always operate in certain locations. Furthermore, the damaged computers are not properly maintained on a timely basis. In Nepal, many banks are still using old computers, which are causing problems(Raju et al., 2015). However, instead of replacing them, they continue to use the same ones. Even bank software is not updated on a timely basis.

CHAPTER THREE

Research Methodology

3.1. Research Design

This master's thesis demonstrates a qualitative research design that is more effective for gaining a thorough grasp of a topic. The qualitative technique is appropriate for doing in-depth and descriptive research in order to comprehend the various facets of the subject under consideration. This method focuses on explaining the dynamics of social relations and is linked to parts of reality that cannot be scientifically quantified (Wray-Lake, Syvertsen, & Flanagan, 2016).As Maxwell (2013) says, qualitative research "deals with the universe of meanings, motives, aspirations, beliefs, values, and attitudes, which relates to a deeper realm of interactions, processes, and phenomena that cannot be reduced to the operationalization of variables" (Maxwell, 2013). This master's thesis was written in the style of a descriptive manner.

This study uses a case study and descriptive research design to conduct qualitative research. When the research topic necessitates the development of descriptive ideas and the establishment of relationships in raw data, as well as the organization of these concepts and relationships into a theoretical explanatory scheme, qualitative research is used (Stern & Reve, 1980). The goal is to investigate sustainable supply chain management practices in the banking industry of Nepal including government and private based banks as well as motivational factors and challenges. We have used primary sources of data acquired through direct interview and survey in some circumstances and we have also used secondary source of data to investigate our problem from published reports, media news, google scholar ,journals, books and reports etc.

Our descriptive research design was beneficial in understanding how Nepalese banking industry involved in sustainability and green supply chain management practices in Nepal's banking industry, we also investigate challenges of sustainable supply chain management practices, and the factors that influence sustainable supply chain management practices in the banking industry.

We were able to research and assess how sustainable practices and green supply chain activities have evolved and developed in Nepal's banking industry by using the descriptive method. The sustainable practices in SCM within the banking industry in Nepal were studied in this master's

thesis using a case-study technique. We chose two different cases that involves government and private bank for our study to defines differences in practices and influencing factors for these two context. It was crucial for us to understand how current practices altered the result as the impact of various stakeholders such as government influence, commercial conflicts of interest, society, and labor unions. It was crucial to learn how they are aware that sustainable supply chain methods benefit not only society but also enterprises' financial productivity. The case study method allowed us to learn about the occurrence in real life, as well as the environmental settings and internal processes that occur while conducting in-depth research in various scenarios. "A case study is an empirical enquiry that analyzes a current phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and the setting are not readily visible," writes (Yin, 2003). "The case study inquiry deals with the technically unique situation in which there will be many more variables of interest than data points, and as a result, it relies on multiple sources of evidence with data that must converge in a triangulating fashion, and it also benefits from the prior development of theoretical propositions to guide data collection and analysis"(Yin, 2003).

3.2 Data Collection

3.2.1 Primary data analysis

Interviews

To gather primary data, we planned to schedule telephone interviews with the management of the selected institutions or send them a semi-structured interview guide via email. We created an interview guide and emailed it to our possible respondents at the banks. Our potential responders refused to react by email since their offices were closed. Primary data was gathered through interviews, through personal experiences and information gained over both bankers' working careers. It also aids in the brainstorming and analysis of case scenarios and circumstances that bankers have directly or indirectly observed (Hadjikhani & Ghauri, 2001). As scholars, we ponder our own personal experiences working in Nepal's banking system. As a result, we were both spectators and practitioners in the banking industry. There was a lot of problem-solving and problem-setting in professional practice. Personal observations were used refer to the gathering of information that is primarily intuitive, implicit, and unconscious. As a result, we took personal

observations as "reflection-in-action" in our research. The only option to acquire accurate data for our investigation was through personal observations. They allowed us to explore nonverbal expressions of feelings, observe who interacts with whom, examine how communications took place, and determine how much time was required to complete various tasks as researchers (Huriyah & AmrohUmaemah). This strategy also enabled us to look into incidents that our potential respondents were unable to discuss with us. Rather than listening to others' explanations, we saw circumstances directly. Personal observations, as researchers De Munck and Sobo (1998) points out, enable researchers to examine backstage culture and obtain a full description of activities, as well as provide opportunities for watching and engaging in unannounced occurrences. Furthermore, participant observations contributed to a deeper comprehension of our two contexts, which increased the research's validity (Laitinen, Kaunonen, & Åstedt-Kurki, 2014).

3.2.2 Secondary Data

The majority of the secondary data was gathered from Nepalese banking sector websites on the internet. Secondary data was used to connect this study to earlier research's theoretical assumptions and verify the theories' relevance to the case. Mertler (2002) claims that, while secondary data collecting is not prevalent in academic settings, it can be a very helpful, time-saving, and easy alternative to standard data collection methods. Data collecting from webs was both cost and time effective, resulting in a rapid turnaround time. As researchers, we were able to access vast volumes of diverse and reliable data thanks to the Internet. The quick collection, economical approach, and endless data that we obtained in a short time period owing to the Corona pandemic were the key benefits of gathering secondary data for this master thesis. We used official statistics, reports, administrative documents, and accounts reports as secondary data. Our primary data, which came from personal observations, was backed up by secondary data. We have access to a vast, broad, and unique data collection as researchers.

3.3 Data Analysis

The data for these two empirical situations was gathered from journal publications, websites, and information available in online reports, and compared across Nepalese banks and through the interviews and surveys. We compared how sustainability practices evolved and their influence on Nepalese banking industries to develop sustainability and green supply chain practices, as well as how sustainability supply chain management practices are adopted in the banking industry and the

challenges that sustainability supply chain management practices face in Nepal. We studied the state of the banking industry in Nepal and compared the histories of two banks using peer-reviewed literature and secondary data from diverse sources. The impact of historical circumstances, legislation, and contemporary events on the development and implications of sustainable practices has also been analyzed.

CHAPTER FOUR

Case Description

The banking systems of the two banks, the Agricultural Development Bank Limited (ADBL) and the Civil Bank of Nepal, are discussed in detail in this chapter. Case A (ADBL) and Case B (ADBL) are the two case situations in this chapter (Civil bank). The central theme of the chapter is sustainability practices in SCM in the banking industry, both government and private, which explains how banks have implemented sustainability supply chain practices, the challenges they have faced, and the importance of including sustainability practices in their industries' supply chains to achieve business goals.

4.1. Case A

4.1.1 Agricultural development bank limited of Nepal

In 2005, the Agricultural Development Bank Limited (ADBL), the third public bank, converted to a commercial bank. The Agricultural Development Bank of Nepal (ADBN) was created in 1968 as the successor to the cooperative Bank with the primary goal of providing institutional finance to improve the production and productivity of the country's agricultural sector (Khanal et al., 2020). In 1973, the Land Reform Savings Corporation joined with ADBN. Following amendments to the Act, the bank was given the authority to extend credit to small farmers under group liability and to broaden the scope of financing to support cottage industries. The reforms also allowed the bank to conduct commercial banking activities in order to mobilize domestic resources (Khanal et al., 2020).

The Agricultural Development Bank Limited (ADBL) is a fully owned subsidiary of the Nepalese government. The bank has been a leading rural lending institution for more than three decades, accounting for more than 67 percent of the country's institutional credit supply. As a result, ADBL's primary operations area is rural financing. Since 1984, the bank has also been engaged in commercial banking activities (Chaudhary, 2018). ADBL is the country's only financial institution, operating through three main windows: development financing, commercial banking, and small business development. By strengthening its network across the entire geographical region of the highlands, hills, and Terai, it contributes more than 79 percent of institution credit to the real populace (Chaudhary, 2018).

It has been supporting to the socio-economic development of the country's rural population since its foundation by offering wide rural loans. It accounts for more than 71% of all institutional credit. Meanwhile, it provides services through three windows, including Development Financing and Banking. It was founded in 1984 with the primary goal of collecting urban resources and mobilizing savings in the form of rural credit in order to meet the need of the rural populace (Bajracharyag, 1990).

4.1.2 Sustainability Supply chain management of the agricultural development bank limited of Nepal

At the moment, ADBL is running three separate operations. They are development banking (credit for rural development), micro financing through SFDPs (credit plus programs directly targeting the poor), and limited commercial banking activities, with the primary goal of channeling urban funds to rural areas for productive reasons(Lancker, Nijkamp, & Appraisal, 2000). Through its Small Farmers Development Program (SFDP), ADBL pioneered microcredit in the country for lending against poverty. The bank created several major products throughout the implementation of the SFDP, including group savings and loans, other savings products, training programs, and, most recently, a "Poor's Institution" to combat the country's endemic poverty(Lancker et al., 2000).

RSPF-APIA is a project of the Nepalese government, funded by the International Fund for Agricultural Development (IFAD), and administered by the Agricultural Development Bank Limited (ADBL). The project aims to promote sustainable and inclusive growth so that impoverished, marginalized, and climate-vulnerable communities can benefit more from economic growth and development (Khanal et al., 2020).

The project's objectives are also in line with the Agriculture Development Strategy's objectives, the Ministry of Agriculture and Livestock Development's (MOALD) long-term vision of "protective agriculture and secured saving," and NRB's ongoing efforts to increase lending to agriculture through its deprived and priority sector lending policies, digitalization of financial services, and financial inclusion road map (Hebblewhite et al., 2014).

In the context of COVID-19, RPSF also helps to national agricultural priorities, both in terms of increasing output for food security and promoting rural economic recovery and creating possibilities for returning migrants. The major facilitators for expanding private investment in

agriculture to meet these goals are widespread access to mainstream financing for investment and other rural financial services (such as payments, insurance, remittances, and savings) (Khanal et al., 2020).

4.1.3 Challenges of Agricultural development bank of Nepal

The Agricultural Development Bank of Nepal is a crucial tool for the government's agricultural development policies in Nepal. The ADBL, on the other hand, is currently mired in a profound financial crisis, hampering its performance, growth, and development (Pradhan, 1989).

To begin with, the ADBL is limited to the issuing of agricultural loans and is unable to function as a viable financial intermediary. Second, the ADBL lends at subsidized interest rates, limiting its profitability and slowing the increase of loanable funds. Third, the ADBL has significant running costs as a result of the enormous quantity of loans it issues. Fourth, extensive agricultural risks have a negative impact on farmers' revenue, resulting in late loan payments. Moral dangers, as well as the ADBL's incapacity to implement its debt collection method, all contribute to low loan repayment (Pradhan, 1989).

Government presence is excessive, and public rural financing institutions work poorly. A significant concern restricting the expansion of Nepal's rural finance sector outreach is the government's heavy engagement in the ownership and management of rural finance institutions. Government ownership has harmed governance, internal controls, and profitability and sustainability considerations (Seibel & Development, 2000). The government's policy emphasis on inclusive finance is critical, given the magnitude of poverty. Rural finance and microfinance are viewed as social benefit in Nepal, and subsidized microfinance programs are advocated. These measures, on the other hand, have produced a skewed environment and disincentives for microfinance institutions to expand their reach (Seibel & Development, 2000).

4.2 Case B

4.2.1 Civil bank limited of Nepal

Civil Bank Limited, Nepal's 30th commercial bank, was founded with the goal of being the most trusted bank by offering devoted services and support to its customers. The bank, which has an issued capital of Rs 2000 million and a paid-up capital of Rs 1200 million, aims to contribute to the nation's growth by providing services and empowerment to patients from all backgrounds of

society (Karn, 2019). The bank aims to succeed and reach higher ground by maintaining and adhering to its corporate values, which include maintaining the highest standards in all relationships with customers, suppliers, the environment, and the community, fostering a climate that encourages innovation and diligence among staff and rewarding accordingly, and operating under the principle of 'Thinking Forward Moving Forward (Karn, 2019).

The bank, which has the purpose of becoming every Nepali's banking partner by providing all types of banking services, aspires to contribute directly or indirectly to the country's economic prosperity by being a significant player with all classes and sectors of society. Prudent expansion, innovation, committed customer service, competitive human resource, and vigilance are among the bank's goals (Dhakhwa, 2011). Civil Bank Limited aspires to be a leading bank in Nepal, offering products and services such as Civil Bank Mero BachatKhata, Civil Bank AmsBuwaBachatKhata, Civil Bank Kishor BachatKhata, Civil Bank Nari BachatKhata, Civil Bank Gold Savings Account, Civil Bank Silver Savings Account, Civil Bank Salary + Account, Civil Bank LaganikartakoKhata, and Civil Bank Bijulee Remit Savings Account (Dhakhwa, 2011).

The bank, which was founded by a group of promoters with strong backgrounds in real estate, financial institutions, business, commerce, and industry, is dedicated not only to providing products and services to the people, but also to performing corporate social responsibility (CSR). It has participated in activities such as distributing food to the Nepal Children's Organization, establishing the "Civil Bank for Society" fund and orphan scholarships, wearing green on World Environment Day, supporting an art exhibition called "Expression of Repression," and assisting an innate artist who is battling cancer (Karn, 2019).

4.2.2 Sustainability supply chain management of Civil bank of Nepal

Green Banks make it easier to fund projects in new markets, regions, and technologies that would otherwise be impossible to fund. The crux of green banking is that it means lower-cost, cleaner energy for users and more investment for private capital providers (Khan, 2020). In Nepal, Laxmi Bank was the first to introduce green banking principles and tactics, and later on, other banks such as Standard Chartered Bank, Civil Bank, and Nepal Investment Bank, among others, joined in, In the face of a changing environment, there are numerous reasons for Nepal to go green. Another way to conduct green banking is to use green checking accounts and credit cards (Khan, 2020).

Customers can use the ATM to check their accounts. They can use online payment, debit cards, and online statements, among other things. Furthermore, some banks offer green credit cards, which allow them to donate funds to an environmentally beneficial non-profit organization when they are used (Ram & Zhang, 2020).

Mobile banking, saving paper, online banking, direct deposits, and other techniques are also available. While the Nepalese financial sector is becoming increasingly digitized, Civil Bank has prioritized the digitization of its work processes and services (Mehta, Sharma, & Finance, 2016).

The bank has prioritized corporate social responsibility (CSR) since its founding, in keeping with its objective to become a good corporate citizen; it invests one percent of its profit on CSR every year, as mandated by the central bank. The bank prioritizes issues such as the environment and education while engaging in such programs (Bista, 2021). Some of the bank's notable CSR initiatives include planting 300 trees in the Pashupatiarea (Temple in Nepal) two years ago to restore the clean green environment and supporting three orphan children of Bal Mandir at Paanchkhal by providing them with free education and covering all of their living expenses from class one until the Secondary Education Examination (SEE). The bank has also prioritized the health sector for CSR initiatives since last year (Bista, 2021).

4.2.3 Challenges of the civil bank of Nepal

The Covid-19 epidemic has also presented difficulties for Civil Bank. The bank's ability to operate smoothly was affected by the four-month countrywide lockdown and prohibitory measures, as well as the pandemic-induced economic slump (Mehta et al., 2016). During the early days of the lockdown, it was difficult to maintain close contact with clients from diverse industries afflicted by the epidemic in order to assist them in reviving (Bista, 2021).

As a result, Civil Bank prioritized the use of digital tools while adhering to strict health safety regulations. Customers may now schedule their place in line for financial services via SMS, thanks to the bank's queue management technology. During the lockout, the bank expanded its digital banking capabilities by launching an online account opening service (Bista, 2021).

CHAPTER FIVE

Findings and Analysis

This chapter deals with data analysis and presentation of results from the data collected using a survey and interview of commercial banks (one private and one public bank). Beginning from presenting the list of motive reasons and the values, this segment of the research shows an in-depth analysis of all research questions. With the help of tables, figures, and statistical results, all research questions are answered.

5.1 Current situation at Nepalese Commercial bank

Sustainable banking is defined as the delivery of "financial products and services, which are developed to meet the needs of people and safeguard the environment while generating profits. Though the government and the central bank are committed to enhancing the digitization of banking services, its pace is slow in Nepal. The financial system is no longer a prerogative of banking institutions due to innovation and the application of technology in delivering products and services. New players such as telecom and Mobile Network Operators (MNOs) have evolved as a strong force in delivering financial services through technology-based products and delivery channels. ATMs, credit cards, debit cards, agent banking, mobile banking, branchless banking, among others, are becoming popular these days to enhance people's access to financial services. (Source: World Bank Report) is mainly attributed to innovation in technology—especially mobile banking, which is helping to rapidly expand the financial services in all parts of the world as well as nowadays in Nepal (Nepal Bankers Association, 2018).

Nepal Rastra Bank knowns as central bank of Nepal introduced regulation for the banking Corporate Social Responsibility (CSR) for the first time in FY 2016/17. In the introductory circle, Banking and Financial Institute were required to create a CSR fund with a minimum contribution of 1 percent of net profit to spend in social projects, direct donation, Sustainable Development Goals (SDGs), and Child Day Care Centre in the following fiscal year. The Banking Finance Institutes are prohibited from using the fund in business promotional activities and individual or political advantage to members of the Board of Directors (Acharya & Basnet). They have to diversify such CSR spending in different geographical areas and among different headings injudicious manner. In addition to that, BFIs are required to prepare and implement a separate

manual incorporating the issues like sector identification, proposal evaluation, fund operation, and management process. They have to disclose information related to CSR funds and expenses from them in annual financial statements (Pant et al., 2011).

Commercial banks are focusing on the "go digital and be safe" concept, this has also been due to pandemic breakout. Go digital concept has been used more used widely in each commercial of the bank of Nepal due to pandemics. In recent years, Nepal has moved toward the digitization of financial services and has witnessed a rise in the adoption of financial technology (also known as fintech). Because of the pandemic, most banks have now adopted QR code-based touchless payment options. This has helped banking sector to reduce cost, increases speed and reduces time duration requirements for performing various activities and functions. Digitalization of services will lead to enhanced customer satisfaction and improved service quality by timely and wider reach of service delivery.

5.2 Finding and Analysis of interview

Numbers of commercial chosen for interview	2
Agriculture Development bank (Public Bank)	The bank has 51% share of Government of Nepal and 49% of general public. It is spread all over the 7 provinces & 77 districts of the nation with its 278 offices.
Civil Bank Limited (Private Bank)	The bank was established with a paid-up capital of NPR 1.20 billion later raised to 2.00 billion by issuing ordinary shares. The bank has 88 branches outside the Kathmandu valley and 27 branches inside the Kathmandu valley.

Table 2: Number of commercial banks for interview

Interview 1 and 2

The first respondent works in agricultural development bank limited as a branch manager (Krishi Bikash bank) which is a government bank. The second respondent worked as a manager in the credit department of the civil bank which is a private bank.

5.2.1 Environmental and Social practices

According to respondents sustainability in supply chain practices in the banking sector means to deal with the awareness and perception of bankers which further incorporates sub-variables like

know-how, training, practices, existing technology, clear concept, readiness to adopt promotion of social responsibility, advocating cleanliness, reducing resource wastage, supported by government laws, and upholds ethics in business in green banking. Nepal Rastra Bank has introduced regulation for banks to contribute a certain percentage of profit to contribute in CSR. This includes plantation, providing dustbin to the municipality, donation. This has to be finally reported to Nepal Rastra bank every year. Interviewer claims that sustainability practice helped banks to create cleanliness inside and outside of banks. Every year bank has to provide a certain percentage of profit as CSR likewise donation to old houses, providing dustbin to public places like tourism area of Nepal, different parks, plantation programs, blood donation programs and many more.

Respondent of private bank claims that bank is providing benefits to their staffs as well like an insurance for them and their family. The use of AC, use of environmentally friendly goods, and recyclable goods in banks have been some of the great steps in maintaining sustainability practices in banks. Others benefits for staff include maternal leave for a pregnant woman is up to 90 days in private banks. Some of the benefits of green banking can be known such as avoidance of paper work; awareness campaigns about the environment, providing green bank at lesser rates, formation of environmental standard policy.

Due to covid-19 only ¼ of staff are allowed to work in a bank. This has been inspected by Nepal Rastra bank. There is a lack of oxygen plant in Nepal due to corona. According to respondents Recently Civil Bank has bought 5 oxygen-producing plants that cost 55,000 Nepali rupees for immediate and emergency use for the staff of banks and family members of banks.

This has been one of the great steps done by civil banks introducing oxygen-producing plants in the bank for immediate and emergency use of staffs of bank and their family members.

According to the interviewee, Agriculture Development Bank has contributed to different social initiatives as a member of society, following the principle that one should offer as much as possible to society. The Bank's corporate social responsibility includes providing financial and material assistance to those who have been impacted by disasters such as natural disasters, fires, and earthquakes, as well as environmental protection, waiting rooms, monastic construction, and maintenance, physical materials for schools, drinking water systems, road construction and maintenance, community building construction, and more. In Maitighar Mandal (symbolic

monument of Nepal), under the Institutional Social Responsibility Program, decorations were made, beds were provided for pupils, and a computer and printer were provided to the kids.

5.2.2 Digitalization of operation

Respondent claims that civil bank uses electronic vault to put documents which helps banks to do regular operational work. This has helped Nepalese banks to manage the waste of paper through paperless transactions, minimum storage, low threat of loss of documents, and for the network is reliable and staffs can get any documents through electronic vault easily.

Nepalese banks have been driven to use different apps as such E-Sewa, smart apps, to transfer money, payments of electricity, payments in hospitals, shopping malls, and even in restaurants. Using various apps in certain has offered a payment discount. Thus, this skim is used for advertising and motivation of using the digital concept in Nepal for customers.

The use of the civil smarts app could help customers to get discounts from different hospitals such as green city, Hams hospital. This concept is also knowns as scan and pay.

According to the interviewee Khalti Digital Wallet (Khalti is a revolutionary way to make payments in Nepal) and Agricultural Development Bank Limited has struck an agreement. It provides the safest and fastest online payment experience for a variety of bills, mobile recharges, DTH payments, money transfers, domestic remittance, shopping, and wallet payments. It is a simple way to send money or accept payments instantaneously to make digital payments easier for its internet and mobile banking users. Customers of the Agricultural Development Bank Limited can now load monies into their Khalti wallet utilizing the bank's mobile and internet banking services, as well as make a variety of digital payments through Khalti's platform. These operations have been possible through digitalization. During the Covid-19 outbreak digitalization has positively contribution to operations as the interviewee claims:

"To Minimize the impact of COVID-19 on livelihoods, resilience and food security on poor and vulnerable rural people and accelerate economic recovery by enabling a substantial increase in investment in the small-scale agricultural sector in supported states and improved access to digital services like use of less paper more of the digital platform for various banking activities".

5.2.3 Motivation factors for sustainability practices in Nepalese Bank

During the data gathering, we have identified the following factors influencing the implementation of sustainability practices: RSPF-APIA, competitors policy, government laws, central bank rules and regulations. The Government of Nepal owns a substantial portion of the Agricultural Development Bank Limited. The bank has been a leading rural lending institution for more than three decades, accounting for more than 67 percent of the country's institutional credit supply. The Agricultural Development Bank was established with the primary goal of providing institutional loans to improve the country's agricultural sector's production and productivity.

According to the respondent, RSPF-APIA is an initiative of the Nepalese government, funded by the International Fund for Agricultural Development (IFAD), and administered by the Agricultural Development Bank Limited (ADBL). The project aims to promote sustainable and inclusive growth so that impoverished, marginalized, and climate-vulnerable communities can benefit more from economic growth and development. The project's objectives also align well with the Agriculture Development Strategy's objectives, the Ministry of Agriculture and Livestock Development's (MOALD) long-term vision of "protective agriculture and secured saving," and NRB's ongoing efforts to increase lending to agriculture through its deprived and priority sector lending policies, digitalization of financial services, and financial inclusion road map. According to the respondent, the bank strives to give its clients with better goods and services at a reasonable cost by utilizing current banking, information, and communication technologies in the most appropriate manner for their needs. However, the majority of their methods are concerned with environmental issues and worker safety. The bank has contributed towards environmental sustainability by using the less paper system as the customers can get the required document from the websites of the banks on which digital signature can be used.

Nepal Rastra Bank is the central bank of Nepal. The Industrial Enterprise Act, 2020 has made mandatory CSR for industrial enterprises of certain sizes and types, while NRB regulations have made CSR activities mandatory to the Nepalese banking industry. Banks are required to create a CSR fund with a minimum contribution of 1 percent of net profit to spend in the specified CSR heads in the next fiscal year. They are also required to disclose information related to CSR funds and expenses from such a fund in the annual financial which is checked by Nepal Rastra Bank.

Another motivation factor of Sustainability practices in banks is Banks has to follow the rules and regulation set by the government such as introducing paperless work- digitalization concept in banks, use of environmentally friendly goods for maintaining standard and cleanliness of banks and environment, a go-green concept in Banks, follows the concept of labor rights.

Interviewee claims that sustainability practices have been raised and aware more due to their competitor's policy as well. As one bank introduces certain strategy other banks have to follow certain schemes to maintain their goodwill.

5.2.4 Challenges in implementation of sustainability practices in Nepalese Commercial banks

This analysis of challenges of practicing sustainability in Nepalese commercial banks is through interviews of public and private. In this part it has been found that some of the major challenges or barriers for sustainability in Nepalese banks are political instability, interfere by regulating bodies (Nepal Rastra Bank) all the decision of banks has to be approved by Nepal Rastra bank, market competition and government laws.

Nepal has been facing this problem fora long. As there is no fixed government in Nepal. Due to unstable government rules and regulations has been changing and introduced frequently in Nepal. This has been a major problem of banks to stay in certain laws and has enforced the laws and regulations frequently.

Both private and public banks is regulated by the Central Bank of Nepal. All the strategy laws that bank has decided need to be approved by regulating body Nepal Rastra bank.

- literacy rate is low which makes customer confused and difficult to cope with the digitalization concept

Nepal literacy rate is 67.9% in 2021. Due to the low literacy rate, many adults are facing problems to cope up with digitalization concept of banks. This has been one of the greatest challenges for banks to deal with customers. This has been problem from banks to make adult introduce and cope up digitalization.

- Market competition due to growth of financial bodies

Except for banks, there are other financial institutions such as co-operate and finance which are growing day by day. Due to low interest rate and easy access of finance and cooperatives, many customers have been attracted to finance and co-operatives than banks.

5.2.5 Benefits of the use of sustainability practices in the commercial bank of Nepal

Some of the benefits have been highlighted below

- Digitalization has helped banks to minimize cost of storage, the paperless transaction has helped reduce wastage of paper, thus, improved environmental sustainability.
- People are motivated to use smart apps which have reduced the flow of customers in Banks and get discount in hospitals, shopping malls, and restaurants.

Online banking is a developing concept; it helps in conservation of natural resources. It saves paper, energy and expenditure of natural resources. It also helps customers to save money by avoiding late payments and also save their time. Customers can check their accounts on ATM. They can avail services including online payment, debit cards and online statements. iii. Use of Green Credit Card: Some of banks use green credit cards; by using it the banks will donate funds to an environment friendly non-profit organization. Banks should purchase recycled paper products with highest post-customer waste content. This includes monthly statements, ATM receipts, annual reports, envelopes etc. By using mobile banking customer can check balances, transfer funds or pay bills from the phone. It also helps to save time and energy of the customers. Most employers will give employees the option to receive their paycheck electronically. It saves time, saves paper and lots of paper work. Online Banking means customers can perform most of their banking related functions without visiting the banks personally. For this customer must possess an internet banking ID, a password provided by the bank in which customer has an account. Online banking includes use of credit cards, debit cards, online bill payment and electronic fund transfer.

Operating bank branches are expensive in emerging and developed markets alike, and the shift to digital channels helps reach more customers at lower costs across markets. The imperative for complete digital transformation from front-end customer channels, through the credit and payments engines, to servicing and processing is greater, though, in emerging markets where financial access is a goal. In wealthier markets, mobile channels and improved processing efficiency are add-on benefits to help meet customer expectations and improve profitability

- Cost reduction (paper and storage cost)
- Waste reduction
- CSR has helped in the development of community and nation
- Healthy and clean working environment
- Goodwill of company and ethical practices in company
- Proper use of code of conduct

Nepal Rastra Bank (regulating bodies of the commercial bank) has introduced regulation for the banking CSR for the first time in FY 2016/17. In the introductory circular, A,B, and C class BFIs were required to create a CSR fund with a minimum contribution of 1 percent of net profit to spend in social projects, direct donation, Sustainable Development Goals (SDGs), and Child Day Care Centre in the following fiscal year.

- Social Projects such as education, health, natural disaster, environmental protection, cultural promotion, infrastructural improvements in rural areas, increasing income earning capacity of socially backward class, consumer protection activities, bus stop waiting shed, streetlights, public toilets, etc.

Financial literacy: Banks are required to spend a minimum of 1 percent of the CSR fund in various financial literacy programs and targeted programs to educate females and the backward class regarding financial services to increase financial access. Direct donation to extremely poor for education and health. Expenses made for the prevention, control, and treatment of employees against COVID19 and similar pandemics.

The commercial bank of Nepal is focusing on other social and ethical activities to maintain friendly environment for staffs. Commercial banks are focusing on using more environmentally friendly staff, use of recyclable goods. Banks have been providing proper training to staff like personal development programs, charity programs, involve in volunteering programs such as awareness programs, health policy.

The interview we took in two different banks of Nepal which is one public and private bank. Both banks are governed by central banks where as public bank share certain percentage with government as well. Agriculture development is empowered to extend credit to small farmers

under group liability and expand the scope of financing to promote cottage industries. The major facilitators for expanding private investment in agriculture to meet these goals are widespread access to mainstream financing for investment and other rural financial services (such as payments, insurance, remittances, and savings). Whereas Civil bank has prioritized corporate social responsibility (CSR) since its founding, in keeping with its objective to become a good corporate citizen; it invests one percent of its profit on CSR every year, as mandated by the central bank. The bank prioritizes issues such as the environment and education while engaging in such programs. The motivation factors and challenges are found similar which has been discussed above. Thus, both banks as now investing in environmental, social and ethical practices, and digitalization.

5.3 Survey Findings and Analysis

Data collection is a systematic process of collecting detailed information about the desired objective from the selected sample under a controlled setting. The collection and use of similar and related data from different sources using different tools, methods, and surveys, and face-to-face interviews with different bank employees. In addition to the primary data collection through two online interviews and google form online survey. The steps in a qualitative study involve data collection and the process of data analysis (Barusch et al., 2011). In this study, data analysis provided a structure to understand the current practicing sustainable and green supply chain management in Nepalese's banking industry. Conducting a survey is an important method to reach and collect data from our target audiences. In addition, it was almost inevitable to survey our master report due to the COVID 19 pandemic. There was a limited scope to get face-to-face interviews or conduct a survey physically. Therefore, our main medium to collect data was online both for interviews and surveys. As we mentioned earlier those two interviews were taken place from two different kinds of banks in Nepal (Private and Public). On the other hand, the survey was created from google form and conducted through personal email from Nepal's banking websites. Although, we have sent an email to over one hundred bankers, both in public and private sector banks who are employed as entry, middle, and top-level management, in Nepal. Although, we have received 46 responses. To mentioned that our survey questionnaire consisted of six parts which include demographics information in the beginning then followed by Adoption of Sustainability Supply Chain Management Practices, Motivation factors for Sustainable Supply Chain Management practices, Adaptation of Sustainability Supply Chain, Digitalization or Information

System used in banks and last part was mainly Challenges faced adopting sustainable supply chain practices, etc.

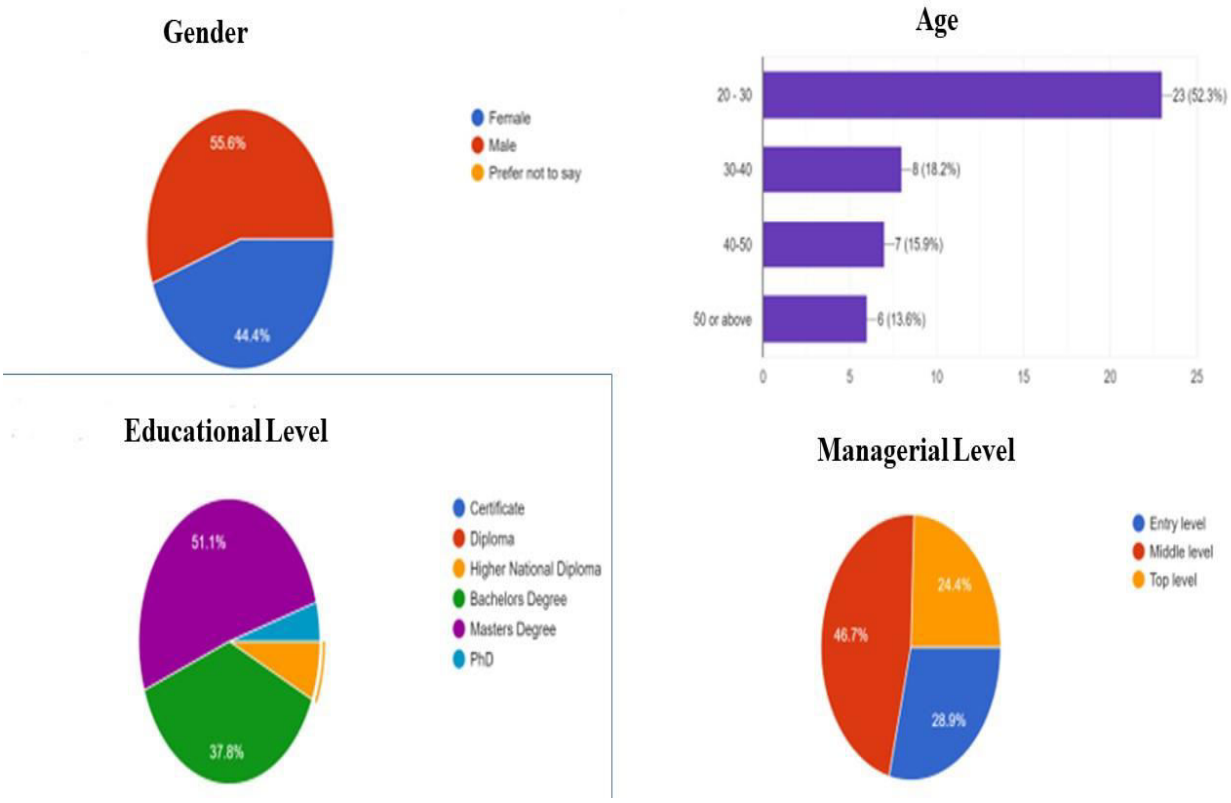


Figure 6: Demographics Information of respondents.

Although, we have sent over hundreds of emails to our target population, however, we have received forty-eight responses which area large enough simple condition to analyze as per rule of thumb, **N ≥30,** where n is our sample size. On top of that, we have had two interviews online using skype with two different bankers that we have discussed and analyzed earlier part. However, based on our survey demographic reports, we have seen more than 50% of our respondents have a master's degree and almost most 40% of them have bachelor's degrees with almost equal participation of men and women respondents. What more, from the demographics data, we have also noticed that the younger generation is mostly concerned about sustainability and green logistics compared with an elderly person that might be the reason that above 50 % of our respondents are in ages group 20 -30 and also mentioned that almost half of the survey participants

are middle-level managerial level, another half equally consists of top and entry-level managerial bank's officers.

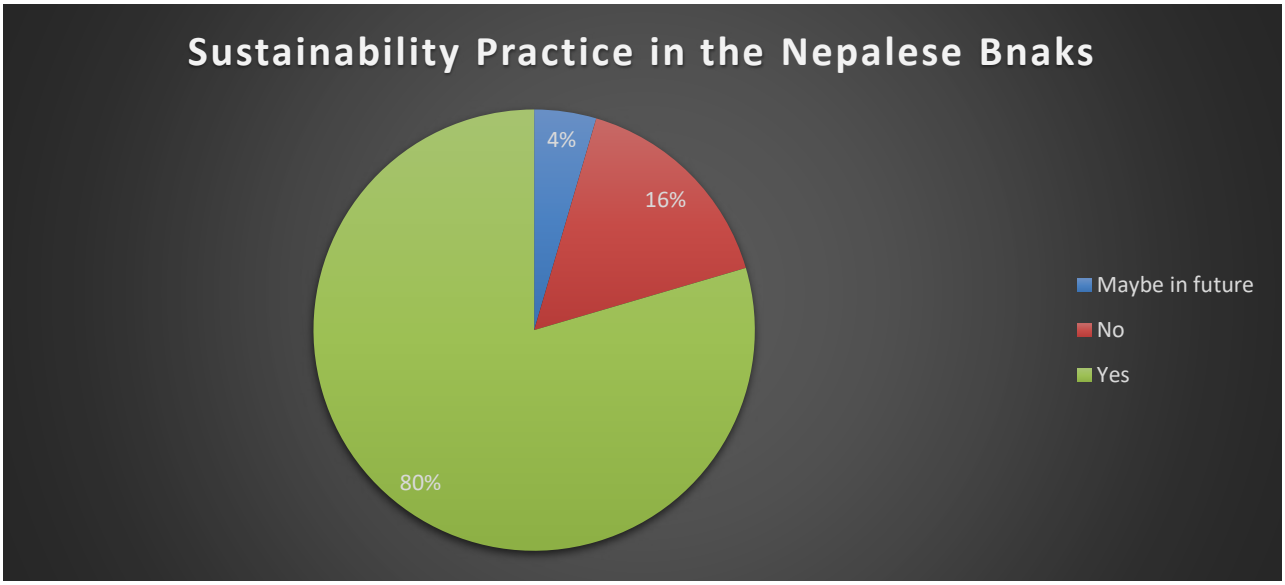


Figure 7: Sustainability Practices in the Nepalese Bank

Based on our survey data, it has been noticed that 80% of current bank has practicing Sustainability on their operation and 16% of them said they do not have any ideas regarding this mater and 4% of our survey participant believe that they are going to practice sustainability in near future.

As we mentioned earlier that our survey questionnaire has six parts, each part consists of linear scale types of questions, 1 to 5 is the scale range whereas 1 is a very small extent and 5 is for very great extent scale and one open-ended question. Therefore, in the following section, we are going to analyze and discuss each part of the questionnaire rather than an individual question. However, we have included all survey report in our appendix sections, there you are able to find all individual results of each part as well analysis the excel workbook. We also assume that it will be more insightful analysis if we aggregated each part of the questions and analyzed it. We want to begin our survey analysis part with the adaptability of SSCM practices in Nepal's banking sectors so that a general overview has been shown.

Adoption of Sustainable Supply Chain Management Practices

As we mentioned earlier that questions will be analyzed in groups rather than individuals to get proper insight ideas and comparison. Therefore, we have asked a total of four questions regarding the adaptability of sustainable supply chain practices in part B (see Appendix). Bellow figure has shown the result of our respondents.

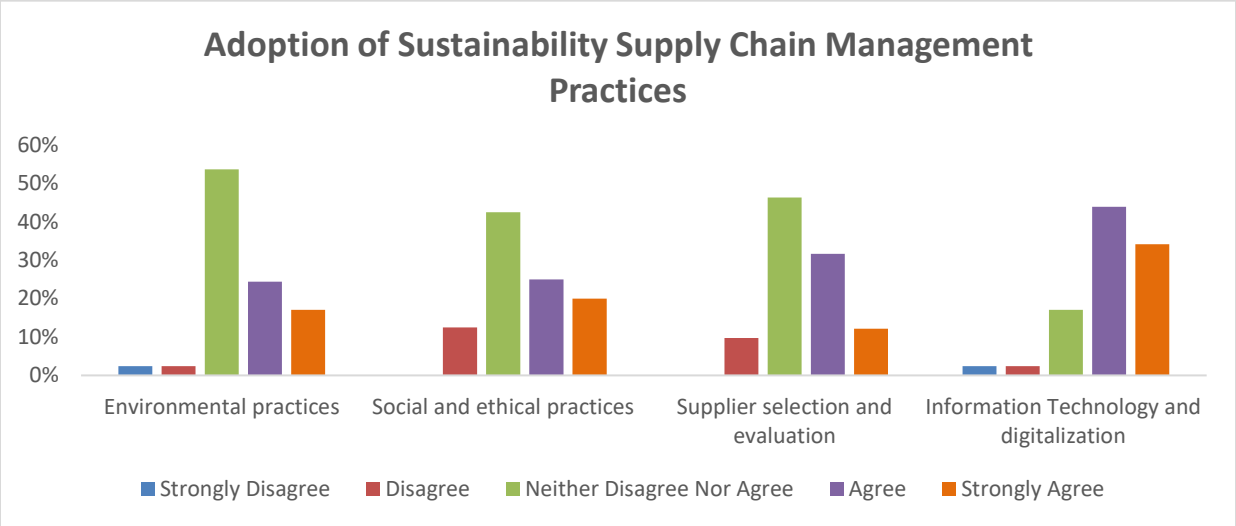


Figure 8: Adoption of SSCM practices

It has been noticed that almost 40% of respondents strongly agreed and around 50% agreed that adaptation of sustainable supply chain relay on information technology and digitalization of baking process. On the other hand, below 5% of participants disagree about information or digitalization played an important role to adopt sustainability practices whereas below 20% neither disagree nor agree that information technology and digitalization played significant roles in the adaptation of SSCM practices. In addition, more than 50% of our survey participants also neither disagree nor agree that practicing environmental-related products has a significant contribution to adopting SSCM in the banking industry in Nepal. On the other hand, around 40% of participants believed that practicing environment concepts has impacted-related on SSCM and again below 5% did not agree that environmental practice impact on SSCM. However, selecting supplier based on previous sustainable performance and social and ethical practices has almost the same results from our survey respondents. In both scenarios, more or less 10 % did not agree that both situations can impact the adoption of SSCM practices, whereas around 50% of survey participants neither disagree nor agree with the facts. On the other hand, an average of 40 % of respondents somehow

agrees that selecting suppliers and performing social and ethical practices are related to adopting SSCM concepts.

Motivation factors for Sustainable Supply Chain Management practices

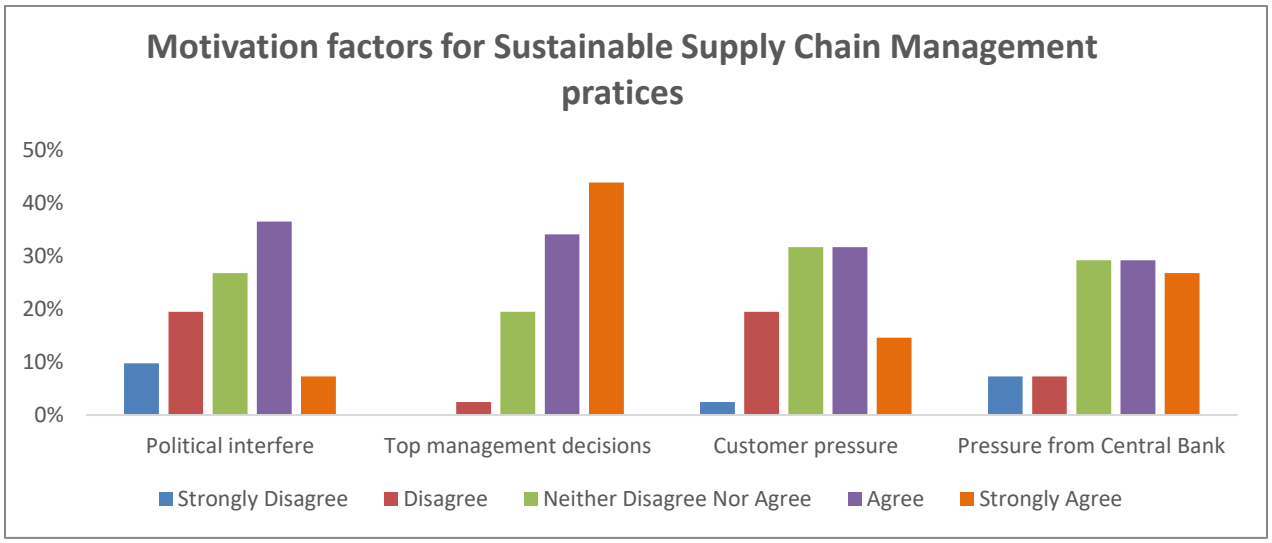


Figure 9: Motivational factors for SSCM practices

In the motivational factors, we have asked four questions which are mostly related to how do Nepal's bankers encourage themself to implement sustainable related approaches. Therefore, pointing out facts for practicing SSCM in banking sectors in Nepal will be more understandable. Among four questions, it has been shown that top management decisions have a big impact on practicing SSCM where almost 75% of the participants agreed that top management decisions are related. On the other hand, there was a mix of responses regarding political interference to implement SSCM in Nepal's banking sectors. Around 30% of our respondents do not agree about political interference and the rest of them, below 30% did not want to comment about it and around 60% agreed that political interference has direct motivational consequences of implementing SSCM. From figure 8 both regarding consumer pressure and pressure from the central bank around 30% of survey contributors neither disagree nor agree about it and above 50% agreed that pressure from the central bank has a significant role to play in SSCM practices. For consumer pressure, aggregable around 40 % and however, only 2% gave their decision on strongly disagree regarding consumer pressure and SSCM practices from motivational factors.

Adaptation of Sustainability Supply Chain:

In our survey questionnaire, an adaptation of sustainability in supply chain management has been asked into three phases which were environmental, social, and economic activities. By asking each phase, we tried to figure out to what extend sustainability related to environmental, social, or economic value and what Nepal's bank achieved by adopting SSCM. By asking environmental-related questions, we have noticed that figure 8 although there is almost every question has few disagreements about environmental activities but most of the respondents believe that environmental activities have direct impacts on adopting SSCM.

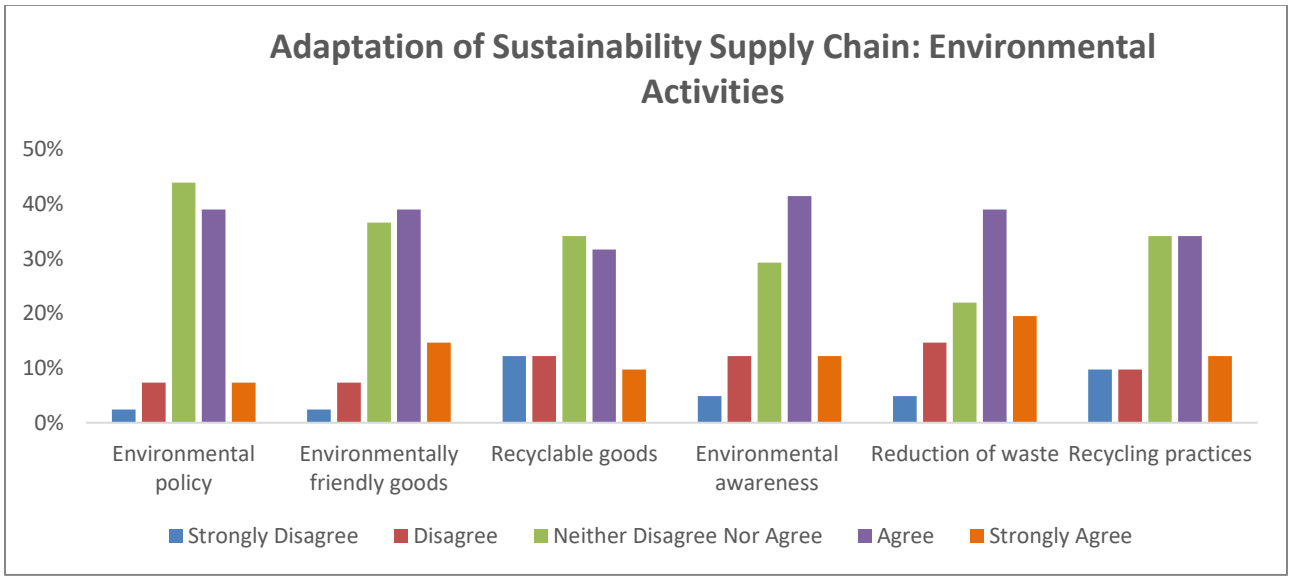


Figure 10 : Adaptation of SSCM in Economic Performance

Moreover, around 40% of survey participants only agree that all the environmental activities are related to adopting SSCM in Nepal's banking sectors. And strongly agree percentages are around 20% for both environment-friendly goods and reduction of waste, just above 10% for both environmental awareness and recycling practices, and below 10 % for both environmental policy and recyclable goods. However, around 40 % of survey respondents have given their opinion on neither disagree nor agree regarding environmental policy, environmentally friendly goods, recyclable goods, and recycling practices. Few respondents disagree and strongly disagree that environmental activities are related to the adaptation of SSCM in Nepal's banking industry but that percentages are not above 10 %.

Adaptation of Sustainability Supply Chain: Social Activities

Figure 11 : Adaptation of Sustainability Supply Chain: Social Activities

Comparing environmental activities with social activities, Nepal's banks are adopting or engaging with more social activities than environmental activities. Whereas most of Nepal's banks are actively engaged with training for staff and charity programs found in figure 9 and 10. Almost 50% of respondents agreed that their banks are involved with those activities. On the other hand, Nepal's banks also believe that their local community, human and labor rights practices, and adopting health policy are also parts of adopting SSCM, and those percentages are right below 40%.

Adaptation of Sustainability Supply Chain: Economic Performance

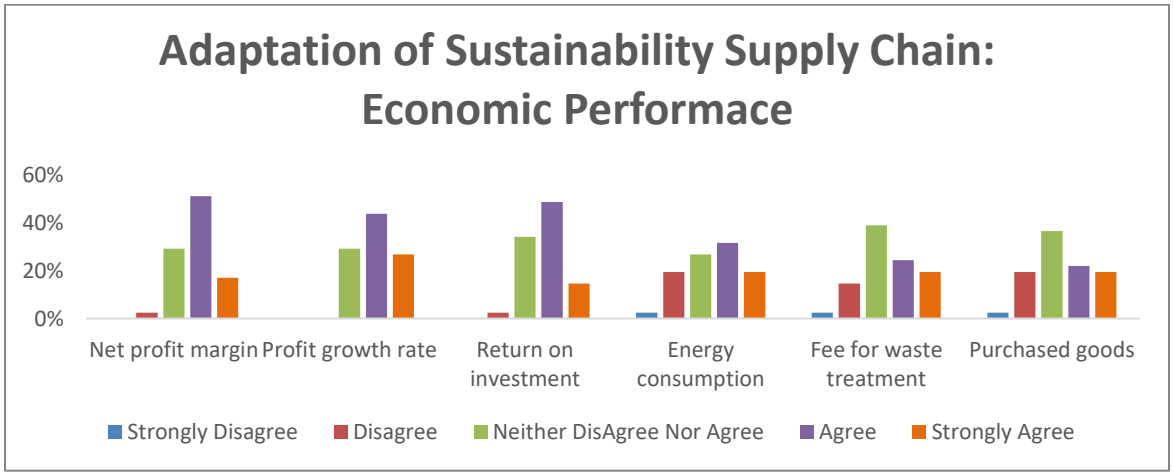


Figure 12 :Adaptation of Sustainability Supply Chain: Economic Performance

In terms of economic performance, it has been easily noticeable that Nepal's banks are having a positive impact on practicing SSCM. Moreover, by adopting SSCM, banks are gaining more net profit margin, profit growth rate, and return on investment. On the other hand, survey participants have mixed opinions regarding reducing energy consumption, the fee of waste treatment, and purchased goods.

Digitalization or Information System used in banks

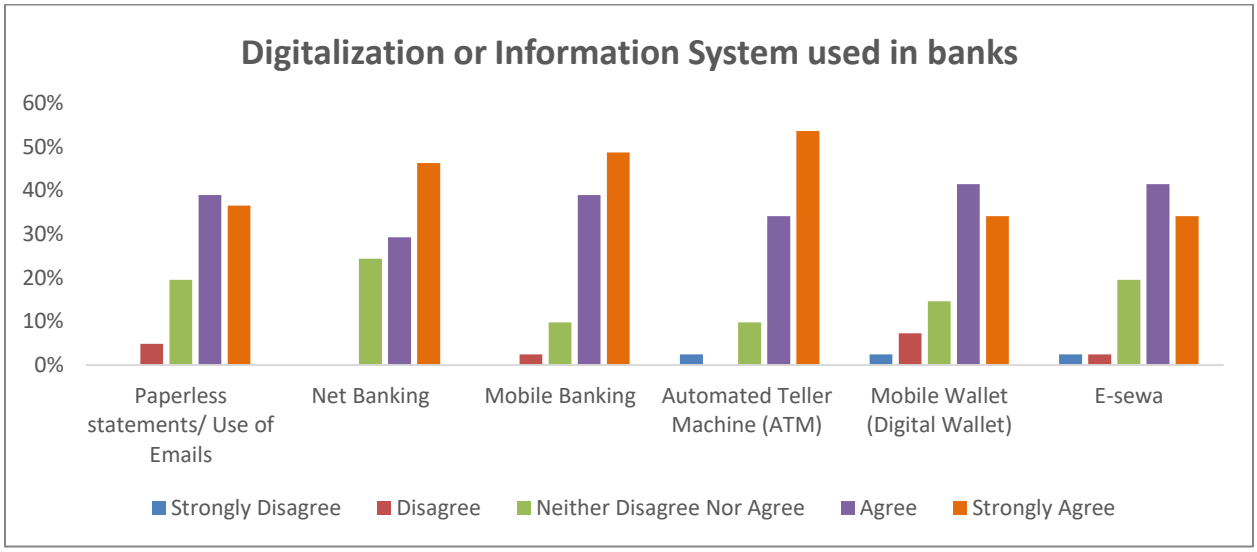


Figure 13 : Digitalization or Information System used in banks

It is obvious that nowadays digitalization or information systems have a direct impact regardless of the size and types of business operations. The same thing goes for the banking and finance sectors as well. And Nepal's banking also tries to adopt current market trends concerning digitalization. In this regard, almost 80% of our participants agreed and strongly agreed that there is direct involvement between SSCM and adopting digitalization and information systems.

5.4 Summary

Based on our two interviews and survey, it has been shown that the Nepalese banking sector implementing more focus on digitalization which enables them to operate the supply chain more sustainable and environmentally friendly manner. Although there is concern that hinders the overall growth of SSCM based on our respondents, for example, most of our survey participants commented on open-ended questions that lack proper human skills, internet and infrastructure

facilities, lack of funding and governmental bureaucracy system are the main factors to not achieved their target goals regarding SSCM. However, Nepalese banks are highly motivated to acquire required SSCM and to obtain those requiring level of SSCM, they are mainly motivated by social, economic, and environmental factors. Nepalese bankers highly believed that some banks are getting more competitive advantages over others by engaging with social activities which made them sustainable in the long-run Such as The Agricultural Development Bank Limited has access all over Nepal, basically rural areas by engaging social awareness programs, on the other than The Commercial bank of Nepal mainly focus on their concern regarding urban areas and gain competitive advantages by implementing fintech technology and proving training their employees. It is also noticed that those banks are practicing SSCM in Nepal, obtaining more ROI and profit margin and reducing the cost of recycling and energy consumption. Although, our survey questionnaire has been sent to several banks in Nepal without knowing their identities and positions, But it was surprising that most of our survey respondents are young generation and they are more concerned about supply chain sustainability than the elder generation. So, it has been anticipated that the Nepalese banking industry will implement more SSCM activities by inspiring young talents who have a tremendous interest in sustainability and environmental-related concerns.

CHAPTER SIX

Conclusion

We had as the main aim in this research to investigate the sustainable supply chain practice in the Nepalese Banking industry. To do that, we had conducted an online survey among all Nepalese Banks and two online interviews in two different Banks in Nepal. Both our survey and the online interviews had covered a widely accepted sustainability concept called "Triple Bottom line" that focused on social, economic, and environmental activities to measure their performance in a broader perspective to create greater enterprise value. On top of that, our research project has included digitalization and information systems-related questions to be more concise on how it impacted or motivated SSCM practices in the Nepalese Banking industry. Although, in countries like Nepal, the concept of sustainable supply chain management is not as mature as in developed countries. Therefore, Nepalese banks have to face tremendous barriers to implementing SSCM, for instance, lacks adequate knowledge and fund, proper guidelines, bureaucracy processes, unstable economy, and political unrest are the main hindering factor to consider. Despite the fact of such barriers, most Nepalese banks are continuously implementing SSCM practices on their services and gaining positive results in all excepts in their operation process. As SSCM usage grows, economic gains are expected to accrue not just in the short term, but also in the long term through the establishment of competitive advantages. Although voluntary adoption of SSCM has a negligible influence on competitiveness, it has a considerable beneficial impact on economic performance, supporting the relevance of participating in SSCM practices to a significant amount for enterprises that have freely embraced them.

Aiming to find sustainability practices in the literature, this thesis embarked on an empirical investigation to figure out what are the main motivational factors to adopt sustainability practices. The approach was to study sustainable supply chain management practices with regards to social, economic, and environmental motivational factors in the Nepalese.

6.1 Key Findings

The findings we were able to make are of utmost importance firstly because while searching for literature for this master's thesis, we rarely found articles related to sustainable supply chain management practices in Banking sectors, although the concepts of sustainability are much more

common in the manufacturing industry. And thus, we think our work is of valuable importance as it might help other bank who are not considering adopting SSCM in Banking as well as financial institution. Although we have focused two different types of medium to obtain data, but the overall contribution is almost same from both from Online interviews and Online survey. The following findings have been obtained are proving below.

Firstly, it has been noticed that 80% of the Nepalese banks are somehow practicing sustainability in their operation process to obtain competitive advantages over their competitor. On the other hand, only 16% of them are not considering adopting sustainability in their supply chain practices.

In addition, Nepalese banking industry also followed the core principle of sustainability that are social, economic, and environmental aspects which is also known “Triple Bottom line”. Although all those aspects are thoroughly implemented of banking industry in Nepal. However, the degree of implementation is very bank to bank, but most of the bank are mostly focusing economical perspective rather than social and environmental aspects. And it has been shown that those who implementing sustainable supply chain has more increased revenue and social engagement than who did not practicing yet.

Furthermore, Social factor are getting more prioritize then environmental practice, for instance, educating citizen, staffs training, community contribution and charity program are top of the lists and most of the banks in Nepal are actively contributing existence in social both for financial and ethical reasons.

Moreover, top management decision and pressure from central bank are the highest motivation facts to implementing sustainable supply chain management in Nepalese banks. Even though political decision or customer pressure are less motivational facts but still have significant influence to practicing sustainable supply chain management.

What is more, for adapting sustainable supply chain in banking industry, most of the bank are increasingly focus on digitalization and information technology rather than environment and social and ethical practices. Anyway, making process digital make them more efficient of using energy and enable to produce less carbon emission on earth.

Finally, it has been found from both our survey and interviews that all of our bankers strongly believed that digitalization and information technology have a significant impact to implementing sustainability in Nepalese banking industry.

6.2 Key motivational factors

Sustainability has been used to all kinds of business regardless their size and operation. Moreover, all developed countries have been implemented the core concept of it long time ago, However, the concept sustainability is relatively new in developing countries like Nepal compared with developed countries such as USA, Canada etc. And implementing sustainability in banking sector in Nepal has started lately. However, the progress of implementing sustainability has grown faster. There are several motivational facts behind this. For example, fintech technologies make banking services more easy, reliable, and secure than before. By using fintech, banks are consuming less energy, using more recycling products, making work automated and even educating both stuffs and consumer about their services faster that has significant influenced in both short- and long-term to achieve bank's mission and vision. On the other hand, Sustainability basically focuses on three core areas which are society or people, economic and environments which is also called "Triple Bottom Line". By adopting sustainability (social, economic and environment) practices, firm can achieve competitive advantages over their competitor that lead them to earn more revenue, reduce costs etc. that also lead to gain long term sustainable position for the bank.

Another motivation factor of Sustainability practices in banks is Banks has to follow the rules and regulation set by the government, central banks such as introducing paperless work- digitalization concept in banks, use of environmentally friendly goods for maintaining standard and cleanliness of banks and environment, a go-green concept in Banks, follows the concept of labor rights.

6.3 Barriers

In our survey, although, we did not ask any scale-based question as we ask with other motivational factors, but we did ask couples of open-ended questions where our participants suggested (See appendix) the possible barriers that hindered adaptation of sustainable supply chain management. In addition, during both interviews, several questions have been asked to figure out what the main barrier to is not implementing sustainability in banking sectors. Suggested facts are following.

Adequate knowledge: Most of our participants mentioned that lack of proper training for stuffs and end consumers could be able to target achievement, although adoption has been done and service is there, but consumer need to visit the branch to get same services.

Infrastructure Limitation: Internet availability is still not all over the Nepal and most of the bank has implemented automated digitalization service fast. However, those services could not be able to use by end-user, especially those are living in remote areas.

Lack of Funding: As you know that Nepal is an economically unstable country therefore, they require more fund to ensure basic banking service are made all of the citizen by ensuring enough branch and ATM booth in every conner of the country. On top of that, implementing sustainability added extra pressure on funding.

Bureaucracy and political systems: Developing countries such as Nepal is facing extra burden to adopt sustainability in their supply chain management, for example to adopt a new systems or technology banks need to take permission from authorize body and after then they can implement that technique or process. And their entire processing system are not digital. Therefore, it takes more time then developed countries.

6.4 Theoretical contribution

The study has contributed to the field of sustainable supply chain management in the context of banks by shedding light at Nepalese context. We provided an empirical data that give deeper knowledge and understanding of the current sustainability practices in public and private Nepalese banks. Furthermore, the study shows that digitalization plays an important role in sustainability transition of banking operations.

In this study the theories that are mentioned are stakeholder theory, institutional theory, and transaction-cost theory, as well as the resource-based view (RBV) and network theory.

A resource-based perspective refers to the development of new ideas, technologies, behaviors, items, or processes that reduce environmental burdens while simultaneously improving economic performance. The transaction cost theory (TCT) investigates how corporate partners engage to shield one another against potentially harmful subsidiaries with differing affiliations. Institutional Theory provides a theoretical lens through which researchers can identify and investigate factors

that promote organizational practices' survival and legitimacy, such as culture, social environment, regulation (including the legal environment), tradition and history, as well as economic incentives, while also acknowledging the importance of resources. And the density of nodes represents the interconnection of participants along the supply chain, and the centrality of an organization is expressed by its relative power or status in comparison to others. Because centrality affects one's ability to wield power, network theory predicts more collaboration and interconnectedness among partners. Finally, in our case the institutional context is highly important in influencing green and socially conscious activities in banks.

6.5 Managerial implication

According to this study, SSCM practices have a direct or indirect positive impact on banks' sustainability performance, both commercially, socially, and/or environmentally. This highlights the critical importance of SSCM in achieving higher long-term performance.

As a result, banks must progressively integrate sustainability considerations into their supply chain strategies, not merely to meet legal and regulatory requirements. The development of both internal and external social responsibility in the supply chain necessitates trust-building and communication. Corporate social responsibility to the local and global populations that surround the banking industry, as well as its long-term viability Banks can form alliances or collaborate with other institutions to make SSCM procedures easier and more efficient. For instance, a cooperation or partnership aimed at providing education and training to those working in SSCM, or a collaboration with institutions to establish an effective SSCM system.

6.6 Limitations

As imitations and criticism of this research work, we have the following observations to make. Firstly, we think that our data could have a possibility of being biased since we only had access to two bank representatives to talk to regarding their point of views of sustainability. Although, both of our interview representatives are middle level management posts. Therefore, getting top level and entry level interview opinion are missing. However, we were able to get opinion from all level of employees during the survey but we did not have any access with broad level management.

Also, due to the coronavirus pandemic, we couldn't have physical access to library sources which we were already currently working with and thus we think we lost relevant information which might have been important for this research.

Moreover, we had limitations in accessing some other online articles which we deemed relevant since these articles were not in English. In some cases, we had to use google translate and such articles have also been referenced.

Furthermore, we have not visited any breach or premises during the research. As a result, due to the COVID-19 situation, there might be some information which might be misleading or misunderstanding for lack of proper face to face meetings.

Finally, although we have included the consumer pressure to adopt sustainability, but we could not conduct any survey where consumer provide their own opinion. Therefore, we must rely on the banker's opinions rather than actual consumers.

6.7 Future Research

There are several ways in which this research can be expanded. First and foremost, this research could be done by doing market research where both end user and service provider will be able to give their feedback. This would be enabling the researcher to potentially measure the consumer demand satisfaction level regarding sustainability. Also, including banks from other developing countries the research could perhaps benefit from investigating which countries adopting sustainability practices, thus using this information to guide policymakers in bank, during the process of designing or implementing environmental related policies. In addition, the sample can be enriched with other financial institutions and explore what are the implications of certain laws or regulations for banking and other non-banking financial institutions.

In terms of measure adaptation in sustainability, another way to further this research is. First, it would be highly rewarding to conduct another survey of the same entities at a different point in time, for instance, another snapshot of practicing sustainability practices after a given number of years. This would enable the researchers to identify any changes during this period, and if there was any progress in terms of adopting sustainability of those institution. Further studies could investigate sustain ability practices in the banks from the perspective of different theories.

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APPENDIX

Interview guide "Sustainable supply chain management practices in banks"

1. Can you explain how is the current situation in the bank?
   What does it mean for you by sustainability? Or sustainability practices? Explain, please
2. How is your bank involved in sustainability?
3. What is motivating your bank to work with sustainability?
4. How do you work with sustainability at the strategic (policy) level?
5. How environmental and social sustainability is taken into the operations? Please, give some examples if possible
6. What are the challenges for implementing sustainable supply chain management? Why?
7. What effect How does sustainability supply chain le practices have on social and environmental factors affect performance?

7.8. How does sustainable practices What are the connection between can affect your company in short-term organizational efficiency and long-term period supply chain success?

8.9. How does customer behavior affect sustainability in your bank?

9. What are the green supply chain management (GSCM) practices in your bank?
10. How do the use of Green Supply Chain Management (GSCM) activities contribute to the law's name implementation affected the use of Green Supply Chain Management (GSCM) activities contribute to?
11. How do you work with environmental and social practices for sustainability in your bank?
12. How do you work with sustainability at the strategic level? Explain, please

13.11. How does the sustainability supply chain help in business opportunities and boost competitiveness?

14.12. How is the outbreak of the Covid-19 affecting the operations? How do you handle the outbreak of COVID-19?

15.13. How is the outbreak of the Covid-19 affecting the work on sustainability in your bank?

Survey Questionnaires

Sustainable and Green supply chain practices in banks of Nepal
Questionnaires

* Required
1. Email *

Dear Respondents
These are the some questions which will help in our Master thesis. These questions are related to sustainability and green supply chain practices in Nepalese Banks. Thank you for support!

Part A: Personal Profile

2. 1) Gender:

Mark only one oval.

Female Male
Prefer not to say

Other:

3. 2) Age

Check all that apply.

20 - 30
30-40
40-50
50 or above

4. 3) What is your level of education?

Mark only one oval.

Certificate Diploma
Higher National Diploma Bachelors Degree Masters Degree
PhD

5. 4) How long have you served in this organization?

Mark only one oval.

Less than 2 Years 2- 5 Years
6- 10 Years

11 and more Years

6. 5) Which management level do you fall under?

Mark only one oval.

Entry level Middle level Top level

7. 6) How many employees does your firm have?

Mark only one oval.

25-50

51-100

101-250

More than 500

8. 7) What does "sustainability" means for your company?

Mark only one oval.

Environmentally conscious practices Social and ethical practices Economic performance
All above

9. 8) Does your Company involved in any Sustainability practices ?

Mark only one oval.

Yes No
Maybe in future

10.

9) If not, are you considering to engage in sustainability practices (environmental and social) in the next 5 years?

Mark only one oval.

Yes No
Maybe

I don't Know

If yes, Please answer following questions.

Part B: Adoption of Sustainability Supply Chain Management Practices
6) In terms of sustainability supply chain management practices, assess how widely they have been introduced and implemented in your business. Use the scale 1 – 5 where 1 = Very small extent; and 5 = Very great extent.

11.

Environmental practices

Mark only one oval.

1 2 3 4 5

12. Social and ethical practices

Mark only one oval.

1 2 3 4 5

13. Supplier selection and evaluation in terms of sustainability performance

Mark only one oval.

1 2 3 4 5

14. Information Technology and digitalization to support sustainability in the company

Mark only one oval.

1 2 3 4 5

Part C: Motivation factors for Sustainable Supply Chain Management pratices
8) To what degree is your company influenced by these factors for practicing sustainability? Use the scale 1 – 5 where 1 = Very small extent; and 5 = Very great extent.

15. Political interfere

Mark only one oval.

1 2 3 4 5

16. Top management decisions

Mark only one oval.

1 2 3 4 5

18. Pressure from Central Bank

Mark only one oval.

1 2 3 4 5

Others(stakeholders influences or any other international or national organization influences): Specify

Part D: Adaptation of Sustainability Supply Chain
Please indicate the extent to which you perceive that your company has implemented each of the following practices of sustainability?
If your company isn't involved in any sustainability practices, suppose your company is involved

in sustainability. Please indicate the extent to which you perceive that your company would implement the following. Use the scale 1 – 5 where 1 = Very small extent; and 5 = Very great extent. .

Environmental Activities Environmental Activities

21. Use of environmentally friendly goods

Mark only one oval.

1 2 3 4 5

22. Use of recyclable goods

Mark only one oval.

1 2 3 4 5

23. Environmental awareness among suppliers and staffs

Mark only one oval.

1 2 3 4 5

25. Recycling practices

Mark only one oval.

1 2 3 4 5

26. Any other Implementation (Please Specify)

Social Activities

27. Organize proper trainings for staffs

Mark only one oval.

1 2 3 4 5

29. Health policy establishments

Mark only one oval.

1 2 3 4 5

30. Use of code of ethics

Mark only one oval.

1 2 3 4 5

31. Proper human and labor rights

Mark only one oval.

1 2 3 4 5

33. Contribution to the local community

Mark only one oval.

1 2 3 4 5

34. Any others (specify)

Economic Performance
Suppose your company is working on sustainable practices. To what extent do you perceive that your company would achieve the following? Use the scale 1 – 5 where 1 = Very small extent; and

5 = Very great extent.

35. Net profit margin increased significantly

Mark only one oval.

1 2 3 4 5

37. Return on investment increased significantly

Mark only one oval.

1 2 3 4 5

38. Decrease of cost for energy consumption

Mark only one oval.

1 2 3 4 5

39. Decrease for fee for waste treatment

Mark only one oval.
1 2 3 4 5

41. Any other (Please Specify)

Part E: Digitalization or Information System used in banks
10) To what degree following digitalization practices has been adopted by your banks for sustainability supply chain? Use the scale 1 – 5 where 1 = Very small extent; and 5 = Very great extent.

42.Paperless statements/ Use of Emails

Mark only one oval.
1 2 3 4 5

43. Net Banking

Mark only one oval.
1 2 3 4 5

44. Mobile Banking

Mark only one oval.
1 2 3 4 5

45. Automated Teller Machine (ATM)

Mark only one oval.

1 2 3 4 5

46. Mobile Wallet (Digital Wallet)

Mark only one oval.

1 2 3 4 5

47. E-sewa

Mark only one oval.

1 2 3 4 5

48. Any other digitalization practices (specify)

Part F: Challenges

49. 11)What are the challenges faced by your company while adopting the sustainability or green supply chain?

Benefit

50.

51. What are the benefits get your company from sustainable or green practices?

Is there any benefits for your company from sustainable or green practices?

Mark only one oval.

yes No
I don't know

52. Do you want to be informed of survey results?

Mark only one oval.

Yes No

53. Write down your email:

Thank you for your respondents!

Survey Excel analysis

Adoption of Sustainability Supply Chain Management Practices												
	1	2	3	4	5	Total	1	2	3	4	5	Total
Environmental practices	1	1	22	10	7	41	2.44%	2.44%	53.66%	24.39%	17.07%	100.00%
Social and ethical practices	0	5	17	10	8	40	0.00%	12.50%	42.50%	25.00%	20.00%	100.00%
Supplier selection and evaluation	0	4	19	13	5	41	0.00%	9.76%	46.34%	31.71%	12.20%	100.00%
Information Technology and digitalization	1	1	7	18	14	41	2.44%	2.44%	17.07%	43.90%	34.15%	100.00%
Motivation factors for Sustainable Supply Chain Management pratices												
	1	2	3	4	5	Total	1	2	3	4	5	Total
Political interfere	4	8	11	15	3	41	9.76%	19.51%	26.83%	36.59%	7.32%	100.00%
Top management decisions	0	1	8	14	18	41	0.00%	2.44%	19.51%	34.15%	43.90%	100.00%
Customer pressure	1	8	13	13	6	41	2.44%	19.51%	31.71%	31.71%	14.63%	100.00%
Pressure from Central Bank	3	3	12	12	11	41	7.32%	7.32%	29.27%	29.27%	26.83%	100.00%
Adaptation of Sustainability Supply Chain												
Environmental Activities	1	2	3	4	5	Total	1	2	3	4	5	Total
Environmental policy	1	3	18	16	3	41	2.44%	7.32%	43.90%	39.02%	7.32%	100.00%
Environmentally friendly goods	1	3	15	16	6	41	2.44%	7.32%	36.59%	39.02%	14.63%	100.00%
Recyclable goods	5	5	14	13	4	41	12.20%	12.20%	34.15%	31.71%	9.76%	100.00%
Environmental awareness	2	5	12	17	5	41	4.88%	12.20%	29.27%	41.46%	12.20%	100.00%
Reduction of waste	2	6	9	16	8	41	4.88%	14.63%	21.95%	39.02%	19.51%	100.00%
Recycling practices	4	4	14	14	5	41	9.76%	9.76%	34.15%	34.15%	12.20%	100.00%

Adoption of Sustainability Supply Chain Management Practices												
	1	2	3	4	5	Total	1	2	3	4	5	Total
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Information Technology and digitalization	1	1	7	18	14	41	2.44%	2.44%	17.07%	43.90%	34.15%	100.00%
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Reduction of waste	2	6	9	16	8	41	4.88%	14.63%	21.95%	39.02%	19.51%	100.00%
Recycling practices	4	4	14	14	5	41	9.76%	9.76%	34.15%	34.15%	12.20%	100.00%