

# **AGENT BANKING AND ITS EFFECT ON FINANCIAL INCLUSION IN NEPAL**

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## **RECOMMENDATION**

# **CERTIFICATION**

## DECLARATION OF AUTHENTICITY

I, Prajwol Shakya, declare that this Graduate Research Project is my own original work and that it has fully acknowledged any information or documents endorsed from other sources. I also agree that if at any time this work has been submitted for any other degree or professional qualification except as specified, any credits awarded based on this material can be revoked.

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Signature

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Date: .....

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## LIST OF ABBREVIATION

AML	Anti-Money Laundering
ATM	Automated Teller Machine
BAFIA	Banks and Financial Institutions Act
BFI	Banking and Financial Institutions
BLB	Branchless banking
CFT	Counter Financing of Terrorism
DFS	Digital Financial Services
DOI	Diffusion of Innovation
DTH	Direct to Home
FINGOs	Financial Intermediary Non-Government Organizations
FSDS	Financial Sector Development Strategy
GDP	Gross Domestic Product
GPRS	General Packet Radio Service
ISP	Internet Service Provider
IVR	Interactive Voice Response
MFC	Master of Finance and Control
MFIs	Micro Finance Institutions
MNO	Mobile Network Operators
MoF	Ministry of Finance
NCHL	Nepal Clearing House Limited
NGO	Non-Government Organizations
NRB	Nepal Rastra Bank
NTA	Nepal Telecommunications Authority
PIN	Personal Identification Number
POS	Point of Sale
PSP	Payment Service Provider
RegTech	Regulatory Technology
SMS	Short Message Service
SPSS	Statistical Package for Social Scientists
UNCDF	UN Capital Development Fund

## **EXECUTIVE SUMMARY**

Financial inclusion is an initiative that aims to provide financial access to a large portion of the unbanked population at a low cost to support economic growth and reduce poverty and social inequality. It will also develop the ability to manage and save money, as well as the skills and knowledge to make sound financial decisions. Bank's interaction with their customers is shifting from operations-centric to customer-centric. Furthermore, the delivery of banking services has been shifted from physical brick-and-mortar branches toward branchless channels. Hence, agent banking has emerged as a popular modern mechanism for providing branchless financial services.

Agent banking is a modern concept that aids the formal banking sector to increase the usage of financial services among financially excluded people using information and communication technologies such as mobiles, ATMs, and POS, where agents are usually located in retail outlets such as pharmacies, grocery stores, retail outlets, and gas stations. Traditional banking may struggle to reach customers in emerging economies and rural areas. Thus, agent banking may be the most efficient option to extend financial inclusion. However, there is a deficit of studies from the viewpoint of agent banking and financial inclusion. Therefore, the purpose of this research is to assess the influence of agent banking on financial inclusion in Nepal.

An analytical framework has been developed based on past studies and a literature review to meet the objectives of the study where agent banking is determined by geographical coverage, security, liquidity, cost, and technology of the agent banking. This research is quantitative research which is achieved through primary data, collected from an online survey with a structured questionnaire circulated to commercial banks and their branches in Bagmati Pradesh which has successfully adopted and implemented the agency banking model via e-mails. The convenience non-probability sampling technique was used for the selection of the respondents totaling 86 respondents out of which 53 responses were obtained.

The researcher used a quantitative approach with a survey method conducting descriptive analysis, regression, and correlation analysis through SPSS. Questionnaires with Likert

model scoring were used to collect the data. The result of the analysis shows that each variable i.e., geographical coverage, security, liquidity, cost, and technology of agent banking are effective variables for the study. However, geographical coverage is the only variable that enhances financial inclusion and has a positive and significant effect on financial inclusion.

The study concludes that geographical coverage of agent banking is the most important indicator of financial inclusion since individuals can access financial services easily at nearby local outlets. The researcher recommends the agents to install metal grills and CCTV cameras as security measures. In addition, the findings imply that agent banking technology should be updated to new technology for providing services which will improve both safety and convenience.

Hence, the study concludes that the agent banking model is a game-changer in terms of financial inclusion. Agent banking has the potential to increase the level of financial inclusion, and all players, including agents, clients, banks, and regulators, should support and encourage it. Moreover, commercial banks, agents, and regulators should provide individuals with financial education in order to improve financial literacy, comprehend the operations of the agents, and ensure the protection of money.

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

Financial inclusion is an initiative that aims to provide financial services to the low-level population, particularly the least privileged and low-income members of community at a reasonable cost (Munoru, 2016). Financial inclusion is a process that assure easy availability, usage, and access to the formal financial system for all citizens of a nation (Pant, 2016). Financial inclusion is defined as the capability of an individual, family, or group to obtain a comprehensive variety of formal financial services that are convenient, responsibly delivered, and competitively priced. People who do not have this ability are generally referred to as financially excluded (Mbugua & Afande, 2015).

Financial inclusion is a critical component of poverty reduction and economic growth. The World Bank (2018) articulates financial included individuals and businesses have access to appropriate and affordable financial products and services that are provided responsibly and sustainably. Financial inclusion is a critical global goal that governments, international development agencies, academics, and the corporate sector have put at the top of their agendas. The world bank hopes to make financial access universal to enable the less fortunate and rural poor to rise out of poverty by assisting them in building dignified lifestyles. Furthermore, a well-examined financial inclusion program can also assist the rural poor to establish and develop businesses (Pant, 2016).

Financial inclusion allows the poorest and most vulnerable members of society to escape poverty and eliminate social inequality. It will enable people to have the ability to manage and save their money to make sound financial decisions. It will unlock potential and empower men, women, and entire communities, promoting investment within the community and re-energizing the economy as a whole (SEPA for Corporates, 2015). Financial inclusion encourages people to save, which improves capital formation in the country and boosts the economy (Khanvilkar, 2015).

In Nepal, a variety of financial outreach projects are underway as a part of a long-term development goal to improve from a least developed country to a middle-income country by 2030, as well as to achieve the UN Sustainable Development Goals. After recognizing the significance of the financial inclusion policy for the country, the Nepal Rastra Bank (NRB), in collaboration with the government of Nepal, implemented a variety of policy models aimed at improving financial inclusion. Among them were the Grameen Bank Model, Wholesale Micro Finance Model, Directed Lending Model, Project-Based Micro Credit Model, FINGOs Model, and Cooperative Model. Furthermore, the Banks and Financial Institutions Act (BAFIA) is a central path toward greater financial inclusion. NRB has made it mandatory for class A, B, and C financial institutions to provide low-cost funds to Micro Finance Institutions (MFIs), thereby improving access to financial services in underserved areas (Pant, 2016).

On April 25, 2015, a large earthquake struck central Nepal, injuring and killing thousands of people as well as causing significant damage to property and physical infrastructures such as roads, water supply, and electricity. The financial industry came to a halt which had a significant impact on the quality and availability of financial services. For this, the UK aid Sakchyam Access to Finance Programme teamed with seven significant commercial banks to develop the 'Sakchyam Earthquake Response Programme' to transmit relief money in a timely and transparent manner (Sakchyam, n.d.). The introduction of agent banking services at that time was very crucial in providing quick access to financial services in remote areas (Khalti, 2019).

Financial access has been increasing with the expansion of financial institution branches. Financial institutions, on the other hand, remain concentrated in urban or semi-urban areas, where geographical access is simple and easy. It is difficult to provide essential services such as electricity, telecommunications, and banking in these areas because many communities are still unbanked. As a result, agent banking has been encouraged to meet the payment requirements of those who do not have access to banking services (Pant, 2016).

Technology plays a critical role in the process of financial inclusion. It is the most important driver of financial inclusion, ensuring that people have access to financial

services wherever they are and whenever they need them (Fanta & Makina, 2019). Technological advancements, new products and services, and innovative business models have accelerated the change in Asia's financial inclusion ecosystem. The advancement in technology and digital transformation has made financial inclusion viable (Pant, 2018).

New developments are constantly expanding the traditional boundaries of banking. Similarly, the interface between banks and their customers is shifting from operations-centric to customer-centric. In addition, the delivery of banking services has shifted from brick-and-mortar branches to branchless channels such as Automated Teller Machines (ATMs), internet banking, and mobile banking. Consumers and businesses expect quick access and user-friendly services from their financial institutions. Hence, banks are exploring new technologies for mobility and customer convenience as the key to their success. Agent banking has emerged as a popular modern mechanism to facilitate financial services in developing countries (Sakchyan, n.d.). Agent banking refers to the use of technology to conduct financial transactions electronically and remotely. Customers can access financial services without visiting bank branches since third-party resources act as the financial services providers (Subramanian, 2013).

Mahmood and Sarkar (2015) defined agent banking as one of the tools for bringing an enormous number of financially excluded people into the formal financial system. Agent banking is gaining popularity in many developing nations because it is thought to increase the usage of financial services among financially excluded people. Agent banking is a new concept that can assist the banks in reaching out to the marginalized people through their agents, who will provide a variety of financial services to local residents with logistical support provided by the bank's nearest branch. Agents are appointed in areas where a full-fledged branch of a bank is not feasible.

Agent banking (also known as branchless banking or business correspondents) is a low-cost way for a bank to expand its branch through the use of authorized agents. This enables banks to provide low-risk services to customers in remote and rural areas where traditional bank branches are difficult to operate (Novatti, 2019). It is commonly referred to as Branch Less Banking (BLB) when banks use agents to deliver services. The model attempts to reduce delivery costs and reach clients who are now outside of traditional banking. For

BLB, mobile phones and card networks are often used (Pickens, Porteous & Rotman, 2009). Agent banking refers to the delivery of financial services outside of traditional bank branches through the use of information and communications technologies and non-bank retail agents via mobile, ATMs, or Point-of-Sale (POS) where agents are usually found in retail locations such as pharmacies, grocery stores, retail outlets, and gas stations (Peake, 2012).

Aggarwal and Klapper (2013) report that traditional bank branches are not a profitable and viable solution to financial inclusion in rural regions as the volume and value of transactions are too small. Thus, agent banking services provide low-cost financial services to rural poor communities by leveraging mobile technology and an existing network of local retailers. The agency banking model enables financial institutions to spread their services to regions where large portions of the population are unbanked and branch establishment takes significant capital. Agent banking has lately been acknowledged as a feasible and beneficial approach for bringing formal financial services to rural regions in numerous developing countries, particularly in Latin America, with varying degrees of success. Many nations have used the agency banking model to extend financial services, including Brazil, Pakistan, India, Philippines, Uganda, Kenya, Malaysia and South Africa (Nisha, Nawrin & Bushra, 2020).

Agent banking is a mechanism for bringing banking to the customer's doorstep rather than the traditional method of the customer seeking out the bank (Subramanian, 2013). Agent banking service is a concept introduced to provide easy and convenient financial access apart from regular bank branches. Under this, local merchants or service recipients are contracted as agents on behalf of the bank in areas where the bank's services are unavailable. The agent delivers services to the locals by using the bank's machine (POS, magnetic card or smart card), which includes opening an account, depositing money, withdrawing money, paying remittances, and providing small loans. Class A commercial banks and Class B development banks have the permit to offer branchless banking services under NRB guidelines. However, only commercial banks have provided such services (Khabar, 2017).



In the context of Nepal, agent banking services are regarded to be less expensive and faster than traditional banking services. Such financial services were widely used to transfer funds in villages during the 2015 earthquake. Agent banking services provide banking services to backward, remote, and inaccessible people. A bank must spend a significant amount of money on construction to expand a branch; however, banks have deemed this service effective because it saves them money on physical development while delivering branchless banking services. In Nepal, agent banking services have played a significant role in improving financial literacy (Khabar, 2020).

In Nepal, digital financial inclusion has the potential to be a game-changer for micro-and small businesses, as well as unserved and underserved low-income households. As digital channels cut travel costs, promote transparency, and increase access to formal financial services that assist individuals break the cycle of poverty and create inclusive economic growth. Agent banking could be an unexpected profit mechanism for the banking industry (Pant, 2016). As a result, the impact of agent banking on financial inclusion in Nepal is being highlighted. Agent banking is a new banking product that enables those who live in remote areas and do not have access to bank branches.

## **1.2 Statement of the Problem**

Agent banking can be more accessible and cost-effective than physical brick and mortar bank branches as it reaches poor-earning and impoverished individuals to save, borrow, and gain a financial return. It is important to the general population since it increases the safety of their cash and is more beneficial than keeping money at home and travelling with it. Access to digital technologies, particularly the internet, mobile devices, and biometric authentication, allows the unbanked to take advantage of a variety of financial services like online banking, mobile banking, and digital credit (Haider, 2018).

Financial inclusion is bridging the cash-to-digital payment gap. Clients are linked to a digital payment system that allows them to send money to friends, family, and colleagues quickly and affordably (Radcliffe & Voorhies, 2012). Digital business is all about the creation of new business designs by merging the physical and digital worlds. Many low-income and middle-income earners will be included in the financial inclusion domain as a

result of the expansion of digital business and the usage of digital technology applications by all aspects of human society (The Economist Corporate Network, 2016)

In Nepal, the distribution of Digital Financial Services (DFS) is challenging due to geographical diversity, low population, poor connectivity, and infrastructure-related challenges. The vast majority of the people in a developing country are financially disadvantaged. DFS has the potential to change this environment by providing specialized and inexpensive services to Nepalese people who are economically disadvantaged (UNDCF, 2015).

(Khalti, n.d.), states that with the increasing penetration of mobile internet, availability of smartphones and rapid growth of social media, more people are preferring digital technologies, switching from cash and checks to cards and mobile payments. People in Nepal have also begun to use digital wallets and e-banking services to pay their electricity bills. As a result of the mobile banking facility, the unbanked and underbanked can be conveniently served. Traditional banks may struggle to reach customers in emerging economies and rural areas; therefore, agent banking may be the most efficient option to extend financial inclusion. However, there has been little research conducted in this field, which can be ascribed that the model is new and the implications it may have on financial inclusion and performance will take time to reflect. This study aims to add knowledge in the area of agent banking and its effect on financial inclusion in Nepal.

Therefore, the research deals with the following issues:

- i. Is there any effect of agent banking on financial inclusion in Nepal?
- ii. To what extent do geographical coverage, security, liquidity, cost, and technology of agent lead to financial inclusion?

### **1.3 Research Objectives**

The general objective of this study is to examine the effect of agent banking on financial inclusion in Nepal. The specific objectives of this study are:

- i. To assess the effect of geographical coverage of agent banking on financial inclusion.

- ii. To analyze the effect of security of agent banking on financial inclusion.
- iii. To analyze the effect of liquidity of agent banking on financial inclusion.
- iv. To analyze the effect of cost of agent banking on financial inclusion.
- v. To assess the effect of technology of agent banking on financial inclusion.

#### **1.4 Research Hypothesis**

Hariharian and Marktanner (2015) defined financial inclusion as access to formal financial services like credit, savings, and insurance opportunities. In their study, they found that financial inclusion is a critical component of any country's economic growth and development, contributing significantly to GDP, capital formation, and intermediation, as well as creating employment possibilities. Through its extensive geographical coverage, Barasa (2013) determined that agent banking had played a crucial role in expanding the penetration of financial services in unbanked regions. Moreover, Wainaina (2011) reports that agent banking enhances access to a comprehensive variety of financial products in a less formal environment. The survey also showed that the agency banking model had assisted clients in becoming financially stable. The researcher also opines that, in order to access financial services, one should travel a long distance which is one of the causes of poor financial inclusion in rural regions.

Afande and Mbugua (2015) describe geographical coverage as the potential of bank agents to deliver financial services locally to clients. They also argue that the greater geographical coverage of agent banking is an important indicator of financial inclusion. Muasya and Kerongo (2015) indicated that financial services have been unreachable to the rural populace, due to distance and lack of awareness. However, Cheston (2016) found that Indian banks provide location convenience, which increases usage and reduces the cost of accessing and managing new clients. Thus, the following hypothesis is proposed:

*H1: Geographical coverage of agent banking enhances financial inclusion.*

Security is a major concern in agent banking, particularly when dealing with cash. When agents collect large deposits late at night, they either hold the money in their residence or a small vault in their outlet. This approach is likely to include robbery and other threats. To address the issue of security, the bank may request the agents to appoint security

employees or select powerful agents with large vaults (Banerjee, Alam, Mehdee, Hossaina & Khan, 2017).

Bill and Melinda Gates Foundation (2014) explains that one of the key issues for users is the security and safety of mobile payment transactions. Moreover, Subbarao (2009) states that payments such as wages and salaries, pensions, social security transfers, subsidies, credit guarantee funds, and other allowances can now be transferred quickly and conveniently using mobile and online transfers minimizing fraud, pilferage, leakages, and most importantly, the cost-of-service delivery for both users and providers of financial products and services. Thus, the following hypothesis is formulated:

*H2: Security of agent banking enhances financial inclusion.*

Agents are the touchpoints where clients can transfer funds into and out of the system. Agents are sometimes referred to as cash-in and cash-out outlets. When a customer approaches an agent with the desire to withdraw significant cash, it is common for the agent to be unable to match the client's demand. This causes dissatisfaction, which is one of the reasons why the adoption of these frameworks is slower than usual (Central Bank of Brazil, 2007).

Lehman (2010) notes that agents will not deliver excellent services to clients unless they are continuously monitored to ensure that they are liquid, consistently branded, and adhere to the prescribed business standards. Ndegwa (2017) found that the liquidity of agent banking was statistically significant since agents were found in retail locations, thereby making financial liquidity shortage a non-issue. The availability of liquidity increases the client's confidence in the model. Thus, the following hypothesis is proposed:

*H3: Liquidity of agent banking enhances financial inclusion.*

A study by CGAP (2011) shows that one of the most significant impediments to financial inclusion is cost: both the expenses to banks involved in servicing low-value accounts and expanding physical infrastructure to remote rural regions, as well as the cost to clients in remote regions in terms of money and time. Targeting impoverished clients in provincial regions is frequently too expensive for budgetary reasons since numbers and volumes do not cover the expenses of a branch (Kitaka, 2001).

Tarazi and Breloff (2011) states that clients benefit from cheaper transaction costs, extended opening hours, and shorter queues than in branches. In addition, access to bank services through agents in retail outlets provides clients with a one-stop-shop for banking and retail purchases (Ignacio, 2009). Furthermore, agent banking services are more usable to illiterates and underprivileged, who may be intimidated by bank branches (Beck, Demirgüç-Kunt & Levine, 2007). Thus, the following hypothesis is formulated:

*H4: Cost of agent banking enhances financial inclusion.*

Technology drives all aspects of agent banking. The transactions can be executed by mobile phone, POS system, or online banking, which must be reflected immediately on the bank's side in the core banking system (Keeler, 2011). Individuals, companies (organizations), as well as government agencies can use electronic transfer channels to send direct payments into beneficiary's accounts without passing through a conventional bank (Subbarao, 2009).

The lack of technological equipment will result in poor service delivery. Molla (2013) notes that the success of agent banking is determined on the agents ease of banking. Khalti (2018) states that technology plays a critical role in removing geographical barriers and boosting financial inclusion. Consequently, the following hypothesis is formulated:

*H5: Technology of agent banking enhances financial inclusion.*

## **1.5 Significance of the Study**

This study helps to find out the effect of agent banking on financial inclusion. This study also focuses on the importance of agent banking in remote areas for accessibility and adaptability to formal financial services. This study serves as a future reference for researchers, scholars, and students who may aspire to conduct research in the same or similar field. This study aims to inform the public and all the players (agents, customers, banks, and regulators) about the impact of agent banking on reaching the unreached segments of society. Since agent banking is relatively new concept in Nepal, this research will assist to identify issues that may arise during and after implementation. This will assist commercial banks in developing policies and procedures to address such issues to fully maximize the potential of this innovation. Moreover, the government and other commercial

banks also stand to benefit from this study as they would be able to understand the accessibility and adaptability of formal financial services. This would indeed help to come up with marketing strategies on how to improve or promote more financial inclusion. In addition, the research findings will contribute to the body of knowledge since agent banking is a relatively new concept, which is constantly growing, and the empirical literature is also limited. This study aims to address the gap in the banking literature by adding actual data to the existing body of knowledge in agent banking in Nepal.

### **1.6 Limitation of the Study**

The study is very important as much study have not been made in the past in case of agent banking. None of the study can go beyond the boundary of some limitations; even though utmost care is exercised in all aspects of this study certain limitations have been perceived and are acknowledged herewith. However, the study may not cover entire aspects.

The following are the major limitations of the study:

- Due to lack of information, knowledge and awareness regarding agent banking, it was difficult to communicate between the bank personnel.
- There is no any article, policies and guidelines published by NRB regarding agent banking, hence the truth of research is based upon the available data from the BLB department.
- Only 15 out of 27 commercial banks in the country actively operate agent banking services, so it is not significant enough to give a conclusive result.
- Lack of relevant literature particularly in Nepalese perspective is another limitation of this research.
- The generalizations yielded from the study area may not be equally valid every time for the agent banking in Nepal.
- The model used in this is limited to regression. Simple statistical tools are used in order to avoid complexity.
- Although there are various methods of financial inclusion, this study is mainly concerned with the agent banking.

## **1.7 Organization of the Study**

The study consists of five chapters. They are as follows:

- i. The first chapter includes the introduction and consists of the background of the study, statement of problem, research objectives, research hypothesis, significance, limitation, and the organization of the study.
- ii. The second chapter deals with the review of past studies and literatures for current study. Different research works related to agent banking (branchless banking) and its impact on financial inclusion are discussed in order to prepare a base for the study. Further, the chapter consists of research gap and theoretical framework defining each dependent and independent variables based on previous literatures.
- iii. The third chapter discusses research methods used for the study. It comprises of research design, population and sample, data collection method, instrumentation, reliability analysis of the data and methods of analysis.
- iv. The fourth chapter deals with the analysis and the results of the study. It comprises of various tables and figures intended to answer the objective and research question of the research.
- v. The fifth chapter is the last chapter, which draws conclusion derived from the entire study, and it will present the discussions and the implications of the study.

## **CHAPTER II**

### **RELATED LITERATURE AND THEORETICAL FRAMEWORK**

The second chapter reviews related literature and establishes the theoretical basis for the study. The theoretical literature section looks at the evolution of the Nepalese banking industry including the notions of agent banking and financial inclusion. This study is based on the hypothesis that agent banking has an impact on financial inclusion. To accomplish the study's goal, the empirical literature on the independent and dependent variables is examined through a rigorous examination of previous studies, highlighting findings, conclusions, and suggestions from previous research and studies on agent banking and financial inclusion. This chapter concludes with the development of a conceptual framework and discussions of variables.

#### **2.1 History of Banking in Nepal**

Banking history in Nepal can be defined as a part of the country's progressive and systematic growth in the financial and commercial spheres (Sahayogee, n.d.). It all began with the founding of Nepal Bank Limited, the first commercial semi-government bank using metallic currency, in 1937 AD. Later in the year 1955, Nepal Bank Act was formulated for a better banking system and in 1956, NRB was established as the Central Bank of Nepal (Khalti, 2018). As per the list of banks and financial institutions published by NRB in Mid-Oct 2021, there are a total of 27 commercial banks, 18 development banks, 17 finance companies, and 69 MFIs (NRB, 2021). People's payment habits have been drastically altered as a result of the rise of the banking sector, as they now prefer to carry plastic money in their wallets rather than hard currency and queueing in banks to withdraw money (Khalti, 2018).

The first federal budget for the fiscal year 2018-19 promises to digitize government payments and tax collection, as well as kick off an overly ambitious effort to register bank accounts for every Nepali citizen within a year. The overarching goal of this strategy is to increase financial inclusion (people having access to financial services through formal



financial institutions such as savings, payments, and transfers, as well as credit and insurance). In particular, moving away from cash and digitizing government payments and revenue collection allows the government to not only decrease costs and boost efficiency but also reduce the number of unbanked people, thereby increasing the level of financial inclusion (Shrestha, Joshi & Dongol, 2018).

Since the early 2000s, governments, international development agencies, academics, and the private sector have prioritized financial inclusion to provide the unbanked population with basic economic self-determination tools such as savings, credit, insurance, payments, money transfer, and financial education. As a result, underprivileged and rural poor people can start their businesses through micro-financing. In the context of Nepal, the NRB has made financial inclusion a strategic goal by focusing on financial literacy and providing access to financing through banks and financial institutions. To promote financial inclusion, the NRB established policy models such as the grameen bank model, directed lending model, wholesale micro-finance model, financial NGOs model, project-based micro-credit model, and cooperative model in collaboration with the Nepalese government (Khalti, n.d.).

In Nepal, with the advent of mobile and online banking, the banking industry took a swift leap. Due to the evolution of high-tech and easy accessibility of the internet, people are best utilizing the banking services which had greatly fostered e-banking. Moreover, credit/debit cards, e-banking, mobile banking, and digital wallets have all emerged gradually eliminating the inconvenience of carrying cash and checks. Furthermore, financial technology has developed digital wallets, which are gaining popularity for online payments of utility (such as electricity, water, Direct to Home (DTH), ISP bills, booking movie tickets, hotels and flights), insurance, education fees, health services, top-up, online shopping, money transfer, and many more (Khalti, 2018). In addition to this, Nepal Clearing House Limited (NCHL) launched connect IPS, an e-payment system that facilitates online fund transfer, government revenue payment, credit payment, and payment processing all of which are conducted directly from or to bank accounts (NCHL, n.d.)

As per the World Bank Global Findex Database 2017, the sole reason for 20 percent of Nepalese (adults) for not opening a bank account is that the banks are too far away. In

Nepal, it is neither feasible nor profitable to open a bank branch in each village. So, to access financial services to rural people, agent banking is gaining popularity. Agent banking is a relatively new electronic banking product where customers can open bank accounts, deposit, transfer, withdraw, and pay for goods and services through a POS machine managed by a bank or its banking agent. Agent banking is a quick and cost-effective way to supply banking services to people in rural places, which helps to alleviate poverty and improve people's lives (Khalti, 2019).

The NRB licenses four classes of financial institutions in the financial sector: commercial banks (A class), development banks (B class), finance companies (C class), and MFIs (D class). To promote and accomplish greater financial inclusion, the NRB has allowed Class A, B, and C financial institutions to use digital banking services and designate agents to reach out to financially excluded sections of the population (Micro Save, 2014). NRB guidelines allow Class A commercial banks and Class B development banks to offer branchless banking services. However, only commercial banks have offered such services thus far (Khabar, 2017).

Financial access has increased with the expansion of financial institutions and their branches. Regardless of the increase in the number of BFIs and their branches, financial institutions remain concentrated in urban or semi-urban with easy geographical access. Agent banking has been encouraged in Nepal to meet the payment demands of those who are unable to access the financial system. Similarly, to facilitate payments at a retail location, mobile phone-based payment methods have been encouraged (Pant, 2016).

However, Sakcham (n.d.) mentions that most of the banks in Nepal use BLB points with the primary motive of opening accounts, and collecting deposits and withdrawals. In addition, to attain profitability and self-sustainability BLB points should offer additional revenue-generating services like loans and remittances. To increase the revenue stream, several banks have begun to cross-sell additional financial services such as loans, remittances and utility bill payments through agents. Agents have been offering loan facilities by referring to bank branches as they do not have the required credit analysis skills.

Digital technology had been recognized as a turning point in many industries. The financial sector can assist in achieving financial inclusion with the emergence and adaptation of digital financial technology as innovative tools and technologies are being developed while enhancing speed, reliability, and efficiency. People in rural areas now have easier access to financial services with digital financial services, thereby eliminating the need for physical bank branches (Khalti, 2018).

## **2.2 Models of Agent Banking**

Banks in collaboration with telecom firms, internet service providers, and a huge network of bank-hired agents, have developed several agent banking distribution channels around the world (Nisha, Nawrin & Bushra, 2020). For example, Brazil, Colombia, Kenya, Peru, and India have previously implemented agent banking as a means of financial inclusion. Brazil follows a bank-based agent banking model however, the non-bank-based agent banking model has just started to emerge. Colombia only allows bank-based agents to conduct business, and non-bank-based agents are not permitted under existing legislation. Peru uses an agent banking model that is based on banks. Kenya follows mainly the non-bank-based agent banking model. India follows both the bank-based agent banking model and the non-bank-based agent banking model (EFInA, 2011).

Veniard (2010) found four different types of acknowledged agent banking models:

- i. POS-enabled bank agent (a bank-managed agent who adopt a payment card to determine clients);
- ii. Mobile phone-enabled agent (a bank-managed agent who uses a cell phone to identify clients);
- iii. Mobile wallet (a telecom-managed agent that uses a cell phone to identify clients and offers mobile wallets that are backed by bank deposits); and,
- iv. Bank provided account linked to a mobile wallet (this is a bank account connected to a mobile wallet. The bank does not manage the agent and the telecom receives a fee for deposits and withdrawals)

(Njunji, 2013) justified agent banking by three theories.

i. Bank-Focused Theory

The bank-focused theory emerges when a traditional bank employs non-traditional low-cost delivery channels to provide financial services to its existing customers. Examples range from use of ATMs to online banking or mobile phone banking to offer users with minimal financial services. This method is additive in nature and can be viewed as a small expansion of traditional branch banking.

ii. Bank-Led Theory

The bank-led approach differs from traditional branch-based banking as customers execute financial transactions through retail agents rather than through bank branches or bank personnel. In the most basic version of the bank-led theory of agent banking, a licensed financial institution (typically a bank) delivers financial services through a retail agent. That is, the bank develops financial products and services but is distributed through retail agents who handle all or most of the customer interaction.

iii. Non-Bank-Led Theory

The non-bank-led model involves a bank playing a minor role in the day-to-day account management. In this model, the bank's role is often limited to the protection of funds. Account management is managed by a non-bank that interacts directly with customers. Customers under this theory do not deal with a bank, nor do they maintain a bank account. Instead, customers deal with a non-bank firm such as a mobile network operator or prepaid card issuer and retail agents serve as the point of customer contact.

In addition, Achugamonu (2017) clarifies two major models of agent banking in Nigeria:

i. Bank-led model (This is generally agency arrangement where bank act as a principal in forming agent banking relationships)

ii. Non- bank led model (This is generally agency arrangement in which parties other than banks may serve as principal in forming agent banking relationships)

## **2.3 Theoretical Review**

The agent banking concept is a relatively new innovation that was first introduced in Brazil in the first decade of the 21<sup>st</sup> century. Thus, the amount of study done in this field is limited. The theories that underpin research in the field of agent banking differ from those produced in the fields of finance and accounting. However, it is assumed that when deciding on the adoption of the agency banking model, commercial banks must have considered issues relating to groundwork in building clients, satisfying the clients, minimizing operating charges, and maintaining a competitive advantage over their competitors. Therefore, the theoretical review in this research will focus on three theories: agency theory, the diffusion of innovation theory, and financial intermediation theory.

### **2.3.1 Agency Theory**

Commercial banks have realized that bringing financial services to the rural community through their traditional branches is not feasible. Therefore, they've enlisted third parties (retail outlets) to act on their behalf and provide fundamental banking services like opening accounts, deposits, and withdrawals. The agreement between banks and local outlets forms an agent-principal relationship where the banks act as principals and the local outlets serve as agents (Munoru, 2016).

Since, Jensen and Meckling (1976) introduced agency theory in its contemporary form, as it had been the topic of substantial investigation. They defined an agency relationship in their research of agency theory as an agreement in which one or more people (principals) employ a different person (agent) to execute services on their behalf and delegate some authority to the agent. If both the agent and principal goals are to increase profits, the agent may not always act in the best interests of the principal. By giving proper incentives to the agent, the principal may regulate divergences from his interests. The principal-agent relationship is formed when commercial banks adopt the agency banking model and hire numerous agents. The commercial banks must sufficiently reward the agents through different commission plans. Due to the fair salary and commissions, more individuals will want to work as commercial bank agents.

Nurcan (2005) states that an agency relationship arises when at least one principal enlists the help of another person to carry out an administration task on their behalf. The meetings anticipate that the relationship will lead to an efficient work division in the hopes of gaining a net benefit. Agency theory is applicable to this research as it recognizes the importance of the agent in pursuing financial inclusion. According to the notion, the delegation of responsibility by the principal aids in the promotion of a productive and efficient economy. Agency theory discusses the principal-agent conflict that emerges in the interaction between a principal and an agent in a business or economic activity due to the unaligned goals of the principal and agent (Eisenhardt, 1989). The underlying premise of this theory is that the interests of the principles may differ from those of the agents, resulting in a conflict that must be resolved. The owners are referred to as principals, and the managers are referred to as agents (Mulili & Wong, 2010).

Bizah, Gumbo and Magweva (2017) found that moral hazard and the adverse selection problem are two major issues that arise when agents undertake tasks on behalf of their principals.

Moral hazards can be faced by the principal when agency theory is in practice because of differences in the interests and the cost which principals have to pay to align the interest of managers with them (Waller, 2004). In this case, the agents may not put their best effort into the task assigned by the principle. For instance, the agent may become careless by failing to inspect the money they collect for deposits and, as a result, may accept counterfeit notes. Hence, the majority of agent contracts attempt to induce optimal behavior from agents by holding them accountable for all losses caused by their negligence.

However, agents might be discouraged when they are paid a fixed commission. In order to minimize losses, the financial institution must urge the retailer to work in its best interests. In this instance, the principal often gives remuneration based upon the number and value of transactions (pro-rated commissions) that the agents have carried out. This will encourage agents to put extra effort into their duties so as to earn higher commissions.

The adverse selection problem arises when there is information asymmetry between the principal and the agent. In this case, the agent will have access to more information than

the principal and will choose not to share it with the principal. In rare situations, the principal may make an incorrect decision based on the information provided by the agent.

Agency theory analyzes and solves problems between principals and their agents. Problems arise in corporations when agents fail to accept responsibility for their decision unless they own stocks in the organization (Wheelen & Hunger, 2002).

### **2.3.2 Diffusion of Innovation (DOI)**

The DOI theory was proposed to describe how a concept or product obtains momentum and spreads or diffuses within a certain community or social system (Rogers, 2003). The DOI theory investigates how creative ideas are passed down from generation to generation. According to the DOI theory, an invention is continuously transmitted through numerous channels among people who have the same social beliefs (Echchab & Hassanuddeen, 2013). The dispersion of innovation theory examines the rate at which new advancements spread and how and why they spread, intending to determine the factors that influence the selection of new data innovation advancements (Monyoncho, 2015). The DOI theory aims to explain and illustrate the methods through which digital financial services innovations are adopted and implemented.

There are five key elements that drive innovation adoption and each of these factors is present in the five adopter categories to varying degrees (Rogers, 2003):

- i. Relative advantage: The degree to which a new concept, program, or product is regarded to be superior to the one it is intended.
- ii. Compatibility: How effectively the modification aligns to the beliefs, standards, and demands of the potential users.
- iii. Complexity - How complex it is to grasp and or apply the innovation.
- iv. Trial- The ability to test or experiment with an innovation before adopting.
- v. Observability - The degree to which the modification produces tangible outcomes.

Rogers' diffusion of innovations theory is useful for investigating the efficiency of agent banking as a financial inclusion technique because agent banking can be considered an innovation in itself. Additionally, Sohail and Al-Jabri (2012) indicate that the DOI theory is a most familiar approach that has investigated factors influencing an individual's

decision to accept new technology or innovation. DOI is an approach that attempts to explain why and how quickly new concepts and technologies circulate across civilization.

### **2.3.3 Financial Intermediation Theory**

The agency banking models also borrow the distribution channels from marketing theory. A distribution channel is a means by which a company can distribute its products to consumers. The agency banking model is a means of providing banking services to clients. As a result, it functions as a delivery channel. Agent banking services are provided by an intermediary (the retailer) who undertakes duties in support of the financial institution in order to overcome the challenges associated with serving low-income clients with low transaction volume and value (Bizah et al., 2017).

Financial intermediation is the process of connecting lenders (individuals and corporations with extra funds looking to invest) and borrowers (those with a deficit looking for finance). Due to information asymmetry and significant transaction expenses, it is practically absurd for lenders and borrowers to meet face-to-face. As a result, financial intermediaries such as banks, insurance firms, mutual funds, and pension funds serve as a vital link between lenders and borrowers. Agent banking is thus driven to connect lenders and borrowers to reach the objective of financial intermediation (Munoru, 2016).

Allen and Santomero (1996) suggest that when markets are perfect, resource allocation is efficient, and intermediaries have no role to play in boosting welfare. However, financial intermediation will always be required since markets have flaws and information asymmetry.

### **2.3.4 DFS Ecosystem**

The DFS ecosystem mostly includes:

- i. Clients that use the services,
- ii. Service providers who supply and support the infrastructure required to deliver services, and
- iii. Policymakers who create laws and regulations.



The primary regulators for DFS in Nepal are the NRB, Nepal Telecommunications Authority (NTA), Consumer Protection Council, and Competition Protection and Market Protection Board (Wechsler, Gurung & Perlman, 2018).

#### **2.3.4.1 NRB**

The NRB regulates banks and other financial institutions such as non-governmental organizations, licensed cooperatives, citizen investment trusts, insurance companies, employee provident funds, and securities markets. It has launched a Regulatory Technology (RegTech) to offer information and statistics on financial access and usage in order to aid regulatory authorities, infrastructure providers, and financial service providers in developing data-driven programs and policies to bring financial access to rural regions. The Nepalese government has also committed to actively promote DFS and other electronic payment systems, particularly in the aftermath of the 2015 earthquake (Perlman & Gurung, 2018a).

#### **2.3.4.2 Ministry of Finance (MoF)**

The MoF developed the Financial Sector Development Strategy (FSDS) 2015-2020 to increase access to finance, thus leading to increased financial inclusion. It promotes the establishment of financial institutions in underprivileged communities, boosting agent banking and mobile banking, as well as the implementation of microcredit and financial literacy programs (Pant, 2016).

#### **2.3.4.3 Nepal Telecommunications Authority (NTA)**

NTA is the country's regulatory body for telecommunications. It grants operator licenses, establishes equipment and service standards, assures the quality of services offered, and resolves disputes between providers and customers. It also provides policy advice to the government on telecommunications issues (NTA, 2021).

It has no authority over non-bank Payment Service Providers (PSPs) that are not Mobile Network Operators (MNOs) but provide financial services through mobile networks. Mobile phone handset registration using IMEI numbers became necessary in April 2016, allowing handsets and transactions to be linked to an identity. This can potentially

compliment the Anti-Money Laundering (AML) and Counter Financing of Terrorism (CFT) goals of the NRB (Perlman, 2018c).

#### **2.3.4.4 Consumer Protection Council**

The Consumer Protection Council was created by the Consumer Protection Act to develop policies and make recommendations to the government in order to protect and promote consumers' rights and interests. The council is in charge of informing customers dealing with their rights, cost, and the quality and quantity of goods and services available. The council also provides compensation for harm and injury that is likely to be caused to consumers (Ministry of Law & Justice, 2018).

#### **2.3.4.5 Competition Promotion and Market Protection Board**

The Competition Promotion and Market Protection Board promotes healthy market competition. It advises the government on competition policies and develops public awareness about the benefits of fair competition in the economy (Government of Nepal, 2007).

### **2.4 Empirical Studies**

Hossain, Al-Amin and Toha (2021) investigated the impact of agent banking provided by commercial banks on financial inclusion based on agency theory considering the purposive sampling method. The researcher conducted a quantitative study on 19 commercial banks that are providing agent banking services in Bangladesh. The study found that using agent banking for account opening, deposit, credit, and inward remittance by customers has a significant and positive relationship with financial inclusion. Hence, the study concludes that financial inclusion and agent banking have a strong positive relationship.

Pervin and Sarker (2021) studied the evolution and prospects of agent banking in Bangladesh based on a descriptive analysis concentrated on the improvement of agent banking in Bangladesh and the future of agent banking. The researcher used the SWOT analysis approach to analyze the strengths, weaknesses, opportunities, and threats of the agent banking business. The researcher focused on the operation of agent banking, particularly on how and what kinds of services are provided by the agents, how they

mobilize funds by offering different kinds of services, and how the economy gets better from this service. Ebong and George (2021) note that banks must innovate in order to make a greater contribution toward financial inclusion. According to them, leveraging digital innovations in services such as payments and digitizing alternative channels like agent banking are likely to increase efficiencies in physical channels and the provision of banking services, thereby increasing the overall reach and penetration of banking.

Rahman (2019) conducted a study on the prospects and challenges of agent banking on financial inclusion in Bangladesh to explore how far banks have progressed in achieving financial inclusion through agent banking, as well as the challenges encountered. For this, quantitative research methods were employed that focused on commercial banks providing agent banking services. A self-administered questionnaire was distributed to agents, bank employees, and customers to collect data. There have also been certain problems, such as rapidly processing credit files, gaining consumer trust, and maintaining an internal relationship between the agent and the branch. The study's findings revealed that liquidity, geographic coverage, prices, and security of agent banking services all had a significant and positive relationship with financial inclusion. The study also concluded that broad geographical coverage by agent banking is the best way to increase financial inclusion.

Ozili (2018) states that digital finance through fin-tech providers has a positive impact on financial inclusion in emerging and advanced economies. Also, the ease that digital banking gives individuals with little and fluctuating income is often more beneficial to them than the greater cost of obtaining such services from traditional regulated banks. Lotto (2016) discovered that agent banking had simplified banking services by reducing the distance that customers must travel to access a service point, and that the liquidity crunch is not a major issue because the agent's operations are constantly evaluated and monitored to avoid cash shortages and minimize security risks by the parent banks. The study also discovered that agent banking had lower expenses than traditional banking services. However, Micro Save (2014) found that cash and e-money requirements are higher in the morning, and cash liquidity is handled by reaching out to friends, family, or neighbors to meet immediate financial needs. In addition, the survey discovered that there is a minimal

investment in agent training and marketing. Furthermore, there is a lack of assistance for agents when they encounter a technical issue, as server downtime is a common issue.

Haider (2018) looked at how people's livelihoods are supported by modern financial technologies. Accessibility to digital technologies, particularly smartphones, internet access, and biometric authentication, enables a broader area of financial services for the unbanked, including online banking, mobile phone banking, and digital credit. Individuals in developing nations who are poor or impoverished can save and lend through formal financial institutions, receive capital appreciation, and smooth their consumption with digital financial services that are easier and more affordable than traditional banking services.

In order to analyze the significance of agent banking services in fostering financial inclusion in Kenya, Ndegwa (2017) studied the potential of agent banking as a financial inclusion approach in commercial banks by examining how geographical coverage and liquidity affect agent banking. The study adopted a cross-sectional survey design with a self-administered questionnaire to collect data from 38 administration managers and supervisors of the commercial banks in Kiambu which had embraced the agency banking model. Data were analyzed using descriptive (frequency distribution and percentages) and inferential statistics (regression). At a 95 percent confidence level, geographic coverage was the most essential benefit and thus the most important driver of financial inclusion. The research suggested that banks should attempt to provide additional services through agent banking in order to enhance financial inclusion, particularly in rural regions.

Bizah et al. (2017) state that agent banking is a driver of financial inclusion in Zimbabwe because financial institutions use agent banking services to increase the country's level of financial inclusion. Moreover, the study provides insight into the agent banking model and also highlights its advantages and disadvantages. As a result of its ease and cost-effectiveness, agent banking can be used to push financial inclusion in Zimbabwe.

Agufa (2016) examined the effect of digital finance on financial inclusion in the banking industry in Kenya and noted that digital finance has no impact on financial inclusion in Kenya's banking sector because banks use digital financial services to reduce operating costs associated with opening and operating branches to improve their profitability and

financial performance, and not to foster financial inclusion. On the other hand, Munoru (2016) indicated that financial inclusion and agent banking had a strong positive association.

Sakchyam (n.d.) access to finance Nepal, conducted a study on a brief on branchless banking initiative and found that BLB points are the only outlets providing financial services in many of the locations as bank branches in rural areas are often located in town centers. Thus, BLB points in remote local markets play an important role in serving an unserved and underserved population in many parts of the country. The study was carried out in collaboration with 14 commercial banks undertaking BLB initiatives in Nepal. In order to get an overall view of the banks' BLB activities, the study included objective (quantitative) as well as subjective (qualitative) questions. According to the study, BLB points are an important component of bank branches that can help them expand their reach and sustain themselves, as well as highlight some issues and challenges. such as:

- As BLB points operate heavily through internet connectivity, which is particularly poor in the hilly and mountainous regions, which leads to higher rates of transaction failures, resulting in poor services and poorer client satisfaction.
- As BLB points involve cash transactions, there are certain security issues. There is a risk of theft or robbery of cash either at the BLB point itself or while traveling to the nearest branch.
- As BLB points are located far from the monitoring branches, BLB agents have to travel to the nearest branch to manage and maintain an adequate level of liquidity to continuously serve the local customers.

Afande and Mbugua (2015) conclude that geographic coverage of agent banking is the best predictor of financial inclusion and insufficient liquidity was not a deterrent because agents were inspected and supervised to ensure that cash shortages were unusual. Moreover, security concerns were minimal as physical security features such as metal grills and CCTV had been implemented by agents. Furthermore, Ndegwa (2017) also found that geographical coverage has the greatest important advantage and is thus the most essential driver of financial inclusion, while liquidity availability is another benefit of agent banking. Ferdous, Mosharrafa and Farzana (2016) explored agent banking in Bangladesh - a new

era in financial institutions that increases client's easy access to finance and banks profitability. This service opens a new era for financial organizations, which in turn has a huge influence on the country's economy.

Lotto (2016) researched to examine the determinants of bank agent that promotes financial inclusion in Tanzania. The study is quantitative in nature and the data were collected through administered questionnaires and interviews. In this study, only bank agents who are engaged in agent banking for the period of at least two years were considered and hence the study was conducted among three banks in Tanzanian. As a result of this research, it is concluded that the wide geographic coverage of agent banking is a better promoter of financial inclusion as it decreases travel expenses and other inconveniences such as time wasted in long queues at bank branches. As a result, the agency banking model is a success in terms of accelerating financial inclusion.

Hedge and Kotian (2016) studied agent banking for the poor as a part of financial inclusion. A semi-structured questionnaire was used to collect primary data, which was then given to 300 respondents in South Canara and Udupi districts. Books, journals, dissertations, periodicals, and the internet were used to gather secondary data. Data collected were analyzed through descriptive statistics. According to the findings, savings, consumption, and standard of life have all increased, resulting in a rise in the use of financial goods. According to the report, customers lack of trust and confidence is also a barrier to adopting BLB alternatives. However, the study shows that BLB has a favorable impact on financial inclusion.

In Nigeria, Achugamonu (2017) investigated agent banking and financial inclusion. The study used a random sample method to distribute 275 questionnaires to bank employees and managers, as well as agent bank owners and authorities, and the data were analyzed using a multivariate regression approach. Furthermore, an ANOVA test was used to determine the model's significance, and it was discovered that there is a substantial link between agent banking services and financial inclusion. Furthermore, there is a significant relation between agent banking's financial development operations and financial inclusion. Furthermore, the geographical coverage and services of agent banking have the strongest relationship to financial inclusion.

Munoru (2016) studied the effect of agent banking on financial inclusion in Kenya to analyze and evaluate whether financial services provided by agents had an impact on financial inclusion in Kenya. The researcher analyzed the variables using secondary data in a time series format without modifying or tampering the data in order to better explain the impact of agent banking on financial inclusion in commercial banks. Between 2010 and 2014, 13 commercial banks that had used the agent banking services for at least one to five years were reviewed and a financial inclusion report was obtained. The results of inferential analysis, correlation, and regression analysis show that there is a strong positive association between agent banking and financial inclusion.

Mahmood and Sarker (2015) published an article titled inclusive growth through branchless banking: a review of agent banking and its impact to understand the role of branchless banking in inclusive growth in many nations as well as prospects for using branchless banking to address financial access barriers in Bangladesh. The researcher gathered data from secondary sources (various publications) and found that agent banking is an important instrument for a country's inclusive growth.

Afande and Mbugua (2015) examined the role of agent banking services in promotion of financial inclusion in Nyeri town, Kenya to evaluate how geographical coverage, security and availability of liquidity of agent banking have promoted financial inclusion. The researcher used a descriptive research design to collect data from branch managers and appointed agents of Equity Bank, Kenya Commercial Bank, and Co-operative Bank. The researcher analyzed the data using descriptive and inferential statistics. The study's findings showed that geographic coverage, security, liquidity, and costs of agent banking services all had a significant and positive relationship with financial inclusion. The study concluded that the wider geographical coverage of agent banking is the best indicator of financial inclusion. Furthermore, the study suggested that agent outlets should be increased in order to provide more services and expand geographical coverage, as well as those agents should be thoroughly verified and regulated to minimize liquidity shortages and security issues.

**Table 2.1***Empirical Literature Review*

<b>Author (Year)</b>	<b>Methodology</b>	<b>Findings</b>
Afande and Mbugua (2015)	Both primary and secondary data were used and then analyzed using descriptive and inferential statistics.	The findings of the study indicated that, geographical coverage, security, liquidity, and costs of agent banking have a positive and significant relationship to financial inclusion.
Mahmood and Sarkar (2015)	The study used secondary data such as journals and case studies.	The research concludes agent banking as an important tool for a country's inclusive growth.
Lotto (2016)	The study was descriptive in nature based on primary source collected through 150 administered questionnaires and interviews from 3 banks.	This result resulted that agent banking had reduced overcrowding in banking halls and appraised geographical coverage positively. According to this study, agent banking's increased geographic penetration is a stronger booster of financial inclusion.
Munoru (2016)	Secondary data in a time series approach (2010-2014) Inferential, correlation and regression analysis were analyzed.	From the findings, it is evident that agent banking has a strong positive relationship with financial inclusion.
Agufa (2016)	Secondary data collected (2011-2015) from 12 commercial banks which were fully functioning and used. ANOVA, regression, and correlation for analysis.	Negative correlation with financial inclusion. Insignificant negative relationship between agent banking and financial inclusion. No significant relationship between financial services and financial inclusion.



Hedge and Kotian (2016)	Primary data and Secondary data. Data collected were analyzed through descriptive statistics.	The study concluded that savings, consumption and standard of living has increased leading to increase the use of financial products. The study clearly indicates that BLB has positive impact on financial inclusion.
Achugamonu (2017)	Primary data collected through 275 questionnaires and analyzed using multivariate regression, ANOVA test, reliability test.	The study concludes that there is a significant relationship between agent banking services and financial inclusion. Geographical coverage of agent banking have the most significant relationship with financial inclusive growth.
Ndegwa (2017)	Cross sectional survey data collected through 38 administration managers and commercial bank which have adopted agency banking model. The data were analyzed through descriptive methods and regression.	Geographical coverage of agents influences financial inclusion and ensures sufficient liquidity among outlets. Costs of agent banking, security concerns, geographical coverage and liquidity have significant impact on financial inclusion in commercial banks.
Rahman (2019)	Both quantitative and qualitative (mixed methods) approach. Descriptive analysis was used to explore the extent to which banks have been able to explore financial inclusion through agent banking and its challenges.	Liquidity, geographic coverage, costs, and security have a positive and significant impact on financial inclusion. The study found that expanding geographical coverage through agent banking is the most effective strategy to increase financial inclusion.

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Hossain et al. (2021)	Secondary data collected from 19 commercial banks (2016-2019) with at least 5 years of adoption of agent banking services in Bangladesh. Descriptive, regression, correlation, heteroscedasticity were analyzed by Gretl 2019.	There is no relationship between cash deposit, loan disbursement made by agent banking and financial inclusion.  There is significant relationship between account opening, number of agents participating, inward remittance made by agents and financial inclusion.
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Chiteli (2013) studied agent banking operations as a competitive strategy of commercial banks in Kisumu city and found that commercial banks incur risks such as reputational risk, consumer protection, anti-money laundering, and legal risk when operating agent banking operations. The agents, on the other hand, face challenges such as operational risk, liquidity risk, and credit risk. Siddiquie (2014) did research on agent banking, a revolution in Bangladesh's financial services market, and notes that more and more individuals will use this service because the services provided by agents will bring convenience to their daily lives.

Jayanty (2012) points out that, agent banking has empowered commercial banks to expand their reach to low branch penetration areas but also to the doorsteps of people who are reluctant or unable to travel to a branch. Agent banking derives its concept as an expansion strategy from the agency banking model, which is used to provide financial services without the usage of bank branches, as represented by (Ivatury & Pickens, 2006). According to the authors, agent banking is a less expensive alternative to traditional banking since it uses common delivery channels like retail locations, mobile phones, the internet, and ATMs. The authors further show that agent banking is profitable to the customers since it lowers transaction costs by bringing services closer to their homes and reducing the expense of transportation to bank offices. Moreover, banking agencies provide clients with extended operating hours because they operate for longer hours than banks and thus avoid long queues.

In a similar context of the discussion, Wainaina (2011) considers long distances between bank branches and rural residences as one of the primary causes of inadequate (poor) financial inclusion in remote and rural locations. In addition, clients may find it inefficient to drive to a faraway bank branch simply to do bank transactions, which may be more expensive than the cost of transportation. For these customers, agent banking becomes of paramount importance.

Collins, Morduch, Rutherford and Ruthven (2010) showed that, in Colombia, the majority of payments such as official government payments, loan repayment, and utility bill payments were completed through agent banking. The study recommends introducing and implementing the agent banking model gradually. These findings are similar to Celina (2012) who did a trend study for Brazil, Peru, Mexico, and Colombia.

## **2.5 Research Gap**

The agency banking model is a relatively modern approach that banks have adopted as part of their financial inclusion and growth, notably to reach out to the unbanked. The research had been conducted on financial inclusion, as well as on an assessment of the adaptation levels of the agency banking model. However, a minimal study has been done to determine the model's impact on financial inclusion. The model is still relatively new, hence there is a lack of study in this field and the effects it may have will take time to reflect on the financial performance. This study adds to the body of information on agent banking and its impact on financial inclusion in Nepal.

## **2.6 Theoretical Framework**

In this paper, the researcher intends to identify how agent banking will enhance financial inclusion in Nepal. The dependent variable for the study is financial inclusion whereas the independent variable for the study is agent banking which is determined by geographical coverage, security, liquidity, cost and technology of agent banking.

The following conceptual model is formulated through the reviewed literature.

**Figure 2.1**

*Conceptual Framework*

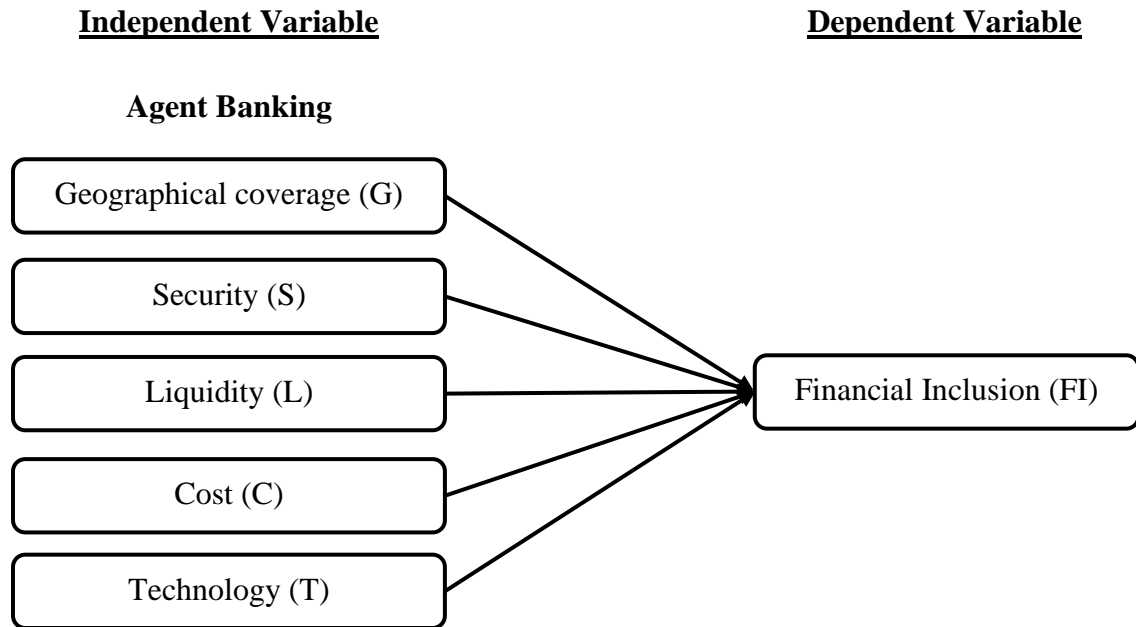


Figure 2.1 shows the link between agents banking and its implications towards financial inclusion which is the main purpose of this study. Specifically, the researcher tries to find out the influence of geographical coverage, security, liquidity, cost, and technology of agent banking to financial inclusion.

## **2.7 Operational Definition of Variables**

### **Independent Variables**

The independent variables for the study are the agent banking which is determined by the geographical coverage, security, liquidity, cost, and technology of agent banking.

#### **1. Geographical Coverage**

Geographical coverage refers to the area covered by the agents outside conventional bank branches. It refers to the ability of agents to bring financial services closer to customers. BLB points are primarily launched in areas where brick-and-mortar outlets are difficult to build due to tough topography or inadequate market potential to justify the development of

a full-fledged physical branch. Because of the unique geographical diversity and rural communities lack of access to financial services, there is a potential for agent banking to outreach in many difficult and untested regions.

## **2. Security**

It refers to the agent's ability to implement physical security and confidentiality to ensure the protection of customers liquid cash at their disposal. BLB points utilize security as a safety measure to safeguard the safety of both agents and customers. To avoid tampering and manipulation by agents, as well as to secure the medium of transaction, the safety, security, efficiency, and operation of agents are frequently monitored.

## **3. Liquidity**

It refers to the availability of access to cash as well as convertibility. The management of liquidity is important for the success of agent banking. As a result, it is necessary to consider the peak liquidity requirements. A shortage of physical cash and e-money at BLB points might result in denial of the service, thereby lowering customers confidence.

## **4. Cost**

The cost of banking with agents is described as the cost of fundamental financial products and services such as account opening, deposits, withdrawals, remittances, top-ups, balance inquiries, statements, bill payments, and utility payments, among others.

## **5. Technology**

It is defined as usability and effectiveness of the technology utilized by agents to transact. The agents generally use POS devices, that are connected to the internet via General Packet Radio Service (GPRS) connections. Besides POS, some use Short Message Service (SMS) and Interactive Voice Response (IVR) for transactions. It also reflects the problems encountered when the technology platform is inaccessible for transactions due to server downtime or technological glitches.

## **Dependent Variables**

The Group of Twenty (G20) recognizes the importance of financial inclusion in economic development. Financial inclusion policies and initiatives are receiving more attention as a critical enabler in the battle against poverty and the pursuit of inclusive development. Financial inclusion is a process that ensures easy availability, usage and access of the formal financial system to all members of an economy. Individuals and businesses who are financially included have access to relevant and affordable financial products and services that are supplied responsibly and sustainably. Financial inclusion is measured in three dimensions:

- (i) Access to financial services,
- (ii) Usage of financial services, and
- (iii) The quality of the products and the service delivered.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter primarily focuses on the methods and procedures that were used in this research study. The chapter serves as a blueprint for data collection, measurement, and analysis. This section describes the research design, population and sample, data collection methods and the analysis procedure.

#### **3.1 Research Design**

This study adopts a descriptive and causal research design to describe the characteristics of the variables used in this study with a clearly phrased structured questionnaire to communicate with participants and avoid misunderstandings. This research is quantitative research which is achieved through primary data collected from Bagmati Pradesh, Nepal. The study attempts to examine the effects of agent banking on financial inclusion in Nepal. The study used descriptive, correlation, regression, and other statistical approaches to achieve the objectives.

#### **3.2 Population and Sample**

The study targets the BLB department, head office of the commercial banks, and managers and operations in-charge of branches of commercial banks in Nepal which have successfully implemented the agent banking services. This is due to the fact that such individuals are in control of the banks operations and are resourceful in different areas and activities of the bank, such as agent banking. Out of 27 commercial banks, 15 commercial banks and their branches are actively providing agent banking services in Nepal. However, the study limits to head offices and their branches that have adopted the agency banking model in Bagmati provinces. Among 15 commercial banks, 9 head office banks were considered for the pilot study. There were a total of 86 branches that have successfully adopted and implemented the agency banking model from 9 commercial banks in Bagmati Pradesh, Nepal. The convenience sampling method has been used to determine the samples. Google Forms were circulated via email to 86 bank branches that are actively

providing agent banking services. Out of 86 respondents, 53 were recorded. Thus, considering the time limit and reliability of data submitted by the respondents, the researcher concluded the survey by analyzing the responses of 53 respondents. A list of commercial banks and their branches providing agent banking services in Bagmati Pradesh, Nepal has been included in appendices 2.

### **3.3 Data Collection Method**

The primary data for this study were collected through the distribution of structured questionnaires to the BLB department, branch managers and operations in charge of the commercial banks and their branches in Nepal that have used the agency banking model. The researcher opted for the questionnaire because the responses are acquired systematically, making questionnaires more objective than other tools of data collection. It solely comprises closed-ended questions to reduce the amount of time spent filling in the answers. A Likert scale is the most widely used scale in survey research, where respondents specify their level of agreement with a statement when responding to a Likert questionnaire item.

### **3.4 Instrumentation**

The data for this study was gathered using a questionnaire created by the researcher. The draft of the questionnaire was drawn out based on the researcher's readings, past studies, and relevant literature to the study. In the preparation of the instrument, multiple-choice and Likert scale questions were framed to study the effect of agent banking on financial inclusion in Nepal. The researcher used five-point Likert type scales ranging from "Strongly Agree" with a score of 5 to "Strongly Disagree" with a score of 1. The research instrument has two sections. The first section deals with the general information of the respondent and the adaptation of the agency banking model. The second section was further divided into two parts to examine the independent and dependent variables. The independent variable for the study is agent banking which is determined by the geographical coverage, security, liquidity, cost, and technology of agent banking. The dependent variable is financial inclusion. After the questionnaire was completed, each item



was analyzed separately, or in some cases, item responses were summed up to create a score for a group of items. Hence, Likert scales are also known as summative scales.

### **3.5 Reliability Analysis of Data**

#### **Pilot Study**

The purpose of the pilot test is to determine the accuracy and consistency of the model and measurement of scale. The internal consistency of the Cronbach's alpha is used to determine the instrument's reliability. The pilot survey of the study was conducted in Kathmandu. This area was selected because most of the head office of the commercial banks and their branches are located in this area while providing both financial and non-financial services to their customers.

A total of nine BLB department, head office were interviewed in the pilot phase. Selection procedures were based on convenience; however, it was required that the commercial banks must have adopted agency banking model in order to evaluate the accuracy and the consistency of the questionnaire design.

#### **Reliability**

The Statistical Package for Social Scientists (SPSS) statistical tool was used to check the reliability of the data. The reliability of the study has been measured by using the consistency and stability of the respondent's responses in primary data. The major use of reliability coefficients is to convey the repeatability of results. Cronbach's alpha is a statistical reliability coefficient for internal consistency. Cronbach's alpha is a coefficient of reliability or consistency and not a statistical test.

Cronbach's alpha is the most common measure of internal consistency and reliability which is most used when the questionnaire used for the research study have multiple Likert questions that form a scale and to determine if the scale is reliable enough to obtain reliable findings for the study.

In this study, all the respondents have responded to on a Likert scale of 1 to 5. The coefficient of Cronbach's alpha varies from 0 to 1, and a value of 0.60 or less generally

indicates unsatisfactory internal consistency reliability and a value of Cronbach's alpha in the range of .90 to .99 is considered excellent internal consistency reliability.

**Table 3.1**

*Reliability Analysis*

Variables	Cronbach's Alpha	No. of Statements	No. of selected statements
G	0.667	3	2
S	0.428	4	4
L	0.663	6	6
C	0.645	3	3
T	0.463	3	3
FI	0.515	4	4
Total	0.56	23	22

Table 3.1 shows the Cronbach's alpha value for the test of reliability of six variables. There were a total of twenty-three statements from both dependent and explanatory variables and item total statistics revealed that removing one statement will increase the alpha, ensuring higher reliability of the questionnaire. Therefore, one statement has been removed from the questionnaire used for the study

Cronbach's alpha 0.56 implies that the data are reliable which is greater than 0.50 ( $0.56 \geq 0.50$ ) as the benchmark of this test is 0.50 due to less than 10 items. Hence, the questionnaire used in this study is reliable.

### **3.6 Methods of Analysis**

Primary data has been collected and evaluated from several perspectives to ascertain the influence of agent banking on financial inclusion. Data were analyzed using SPSS. Simple descriptive analysis was used to evaluate the data acquired throughout the study using the SPSS and Microsoft Excel software. This program was chosen because it is the most suitable for a research project and contains all of the necessary features.

By using SPSS, descriptive statistics i.e., percentage, mean and standard deviation is calculated. The correlations and regression of variables were also analyzed using SPSS (V 22). For the support of data collection Google Forms was used and Excel 2019 was also used for the data management.

### **Descriptive Statistics**

The study employed a summary of descriptive statistics associated with the dependent and explanatory variables of the sample to explain the variables. Descriptive analytical tools like mean, median, standard deviation, minimum and maximum values, of different variables such as geographical coverage, security, liquidity, cost, technology, and financial inclusion have been used to identify the impact of agent banking on financial inclusion in Nepal.

### **Correlation Analysis**

This study has also applied correlation analysis in causal-comparative research design. In this study, correlation analysis has been adopted to identify the direction and magnitude of the relationship between different pairs of dependent variables and explanatory variables. It shows the movements of two variables and their association. The relationship has been explained by using the bivariate Pearson correlation coefficient. The correlation coefficient value ranges from  $-1$  to  $+1$ . If the correlation coefficient is exactly  $-1$ , two variables are said to have a perfect negative correlation since they move in opposite directions. On the other hand, if the correlation coefficient is  $+1$ , the variables are considered to be perfectly positively correlated.

### **Regression Analysis**

Regression is used to represent (model) the relationship between a response variable and one or more predictor variables. The purpose of this analysis is to determine the relationship between a dependent variable and one or more independent variables. To construct an estimated regression equation, a model of the relationship is hypothesized, and parameter values are inferred. Several tests are used to determine if the model is significant. If the model is a significant fit, the estimated regression equation can be used to predict the value of a dependent variable, given the values of the independent variables.

Linear regression is a technique for stimulating the connection between two variables. Linear regression was used to evaluate whether or not there is a significant relationship between agent banking and financial inclusion, as well as to determine the relative strength of different independent variables. The regression models algebraic formulation, which includes the constant term coefficient and the error term, is as follows:

$$Y = X + X_1GC + X_2S + X_3L + X_4T + e$$

Where, Y = Financial Inclusion

X = Constant

$X_1, X_2, X_3, X_4$  = Co-efficient

GC = Geographical coverage

S = Security

L = Liquidity

T = Technology

e = Residual error

## **CHAPTER IV**

### **ANALYSIS AND FINDINGS**

This chapter deals with presentation and analysis of primary data collected through questionnaire survey. The aim of this chapter is to analyze and examine the influence of agent banking on financial inclusion in Nepal, as well as to interpret the findings. Here the collected data are summarized and presented in tabulated form for the understanding and analysis purpose. This chapter also discusses the hypothesis tests that were established in the previous chapter. Each hypothesis is tested and examined to draw the conclusion. Statistical techniques such as descriptive analysis, structure of variables, regression analysis, statistical analysis and inferential analysis were used to analyze the data. The findings from data analysis have been discussed in depth in the relevant sections.

#### **4.1 Descriptive Analysis**

Agent banking which is determined by their geographical coverage, security, liquidity, cost, and technology is considered as the independent variables of the study and financial inclusion which is determined by the access to financial services, usage of financial services, and the quality of the products and the service delivery is considered as the dependent variable.

Descriptive analysis is used to describe the fundamental characteristics of the data in the research. They provide simple summary about the different variables that were studied to examine the financial inclusion. The descriptive analysis includes the total number of respondents, minimum value, and maximum value, the mean and standard deviation of variables taken for the study.

#### **Geographical coverage**

Coverage refers to the area covered by the agent banking outside conventional bank branches. It refers to the ability of agents to bring financial services closer to the customers. BLB points are usually located in areas where brick-and-mortar outlets are difficult to build

due to tough topography or inadequate market potential to justify the development of a full-fledged physical branch. The unique geographical diversity and rural communities lack of access to formal financial services suggest that there is a potential for agent banking to outreach in many difficult and untested regions. This section presents findings relevant to the first objective of the study sought to find out the extent to which geographical coverage of agency banking has influence on financial inclusion.

The dimensions of geographical coverage of the agents is analyzed under these sub sections; a) customers prefer agents as they feel closer to the agent than the bank, b) agent banking has reduced the overcrowding in the bank.

**Table 4.1**

*Descriptive analysis of the level of agreement or disagreement in regards to geographical coverage*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Customers prefer agents as they feel closer to the agent than the bank	53	2	5	3.57	.971
Agent banking has reduced the overcrowding in the bank	53	2	5	3.89	.610

Table 4.1 exhibits the mean score of the respondent on each of the Likert scale questions of the study. The mean scale for the question ‘Customers prefer agents as they feel closer to the agent than the bank’ is 3.57, which means that a majority of the respondents agree that agents provide only basic financial products and services. Moreover, the respondents also agree that agent banking has reduced the overcrowding in the bank, and thus, customers prefer agents as they feel closer to the agent than to the bank.

This suggests that, despite the availability of basic financial products and services, the majority of the study's respondents agree that agency bankers have brought financial services closer to customers and that agency banking's geographic coverage has an impact on financial inclusion.

## Product and Services

Products and services are the foundation for the success of any agent banking service. Customers are more inclined to use financial-needs-satisfying products and services than products and services provided in the absence of better alternatives.

**Figure 4.1**

*Products and Services Offered*

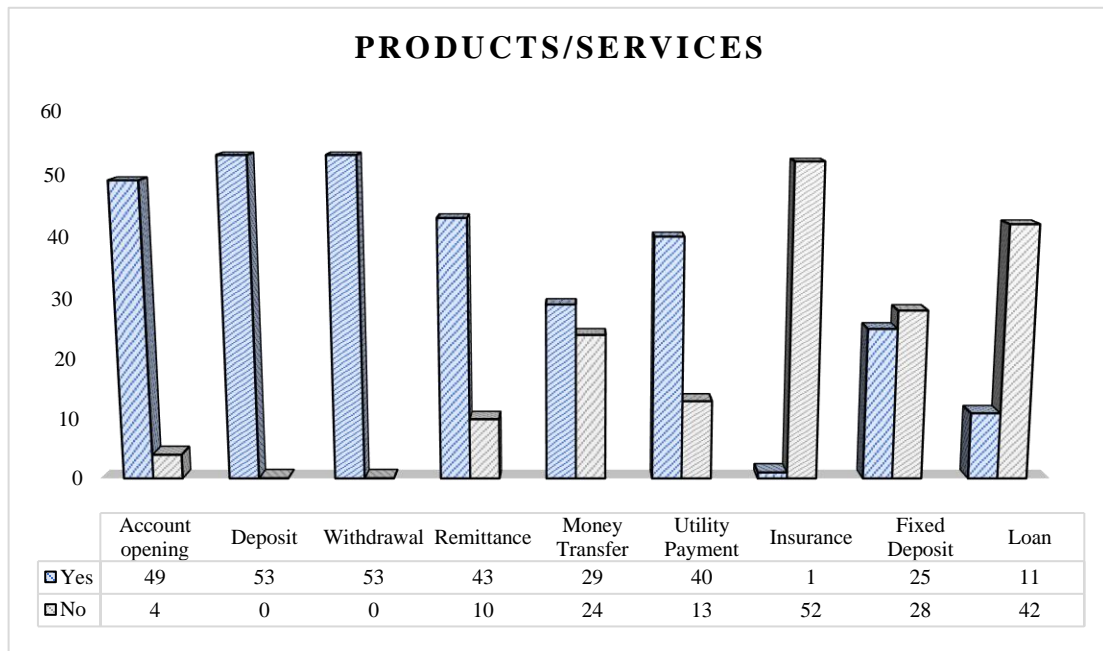


Figure 4.1 shows that most service providers only offer basic financial products and services through their agent networks. Most providers already offer account opening, cash deposit and withdrawal, remittance, and utility payment services through their agent networks. Moreover, some of the providers also offer money transfer, fixed deposit, insurance, and loan services. Among these products and services, cash deposit and withdrawal are the most used, followed by account opening and remittance. Insurance and loan services are not yet widely available due to limited agent networks.

## Security

It refers to the agent's ability to implement physical security and confidentiality to ensure the protection of customers liquid cash at their disposal. BLB points utilize security as a safety measure to safeguard the safety of both agents and customers. To avoid tampering

and manipulation by agents, as well as to secure the medium of transaction, the safety, security, efficiency, and operation of agents are frequently monitored. This section presents findings related to the second objective of the study sought to analyze the effect of security of agent banking on financial inclusion.

For this, the dimension of security is analyzed under these sub section; a) customers fail to bank with agents because of lack of security and trust, b) operation of the agency is monitored often to ensure the security and safety of the customers, c) safety, security and efficiency of the equipment used by the agents is monitored often to prevent tampering and manipulation by the agent, d) agents are trained frequently to ensure that they comply with the security standards.

**Table 4.2**

*Descriptive analysis of the level of agreement or disagreement in regards to security*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Customers fail to bank with agents because of lack of security and trust	53	1	5	2.60	.968
Operation of the agent is monitored often to ensure the security and safety of the customers	53	3	5	4.32	.581
Safety, security and efficiency of the equipment used by the agents is monitored often to prevent tampering and manipulation by the agent	53	2	5	4.23	.800
Agents are trained frequently to ensure that they comply with the security standards	53	2	5	4.38	.686

Table 4.2 represents the descriptive statistics of the study. The mean scale for the question ‘Agents are trained frequently to ensure that they comply with the security standards’ is 4.38, which means that a majority of the respondents strongly agree that agents are trained



to ensure that they comply with the security standards. They also strongly agree that the agents are monitored during operations of the service as well as regarding the safety, security and efficiency of the equipment. Moreover, the average respondents disagree with the statement “the customers fail to bank with agents because of lack of security and trust”.

This indicates that the respondents of the study mostly agree with the fact that agents are frequently monitored to ensure the safety of both agents and consumers, as well as to secure the medium of transaction, security, efficiency, and operation of agents. In addition, the study shows that a lack of security and trust is not a barrier to financial inclusion.

### **Liquidity**

It refers to the availability of access to cash as well as convertibility. The management of liquidity is important for the success of agent banking. As a result, it is necessary to consider the peak liquidity requirements. A shortage of physical cash and e-money at BLB points might result in denial of the service, thereby lowering customers confidence. This section presents findings related to the third objective of the study sought to analyze the effect of liquidity on financial inclusion.

Table 4.3 exhibits the mean score for each of the Likert scale questions regarding liquidity and the level of agreement or disagreement. The mean scale for the question ‘Agent banking outlets have a daily limit of cash deposit and withdrawal’ is 4.42, which means on average the respondents strongly agree that agents have a daily limit of cash deposit and withdrawal. The average respondents also agree that agent outlets are closely monitored to maintain adequate liquidity and that liquidity availability affects customer retention. The average respondents agree that the customers decline because of the agents lack of liquidity. Similarly, the average respondents disagree that the customers avoid agents because of perennial cash shortages, which lead to frustration.

This indicates that the respondents of the study agree that the agents are monitored to ensure sufficient liquidity and that customers do not avoid agents due to perennial cash shortages. However, shortages of physical cash and e-money can lead to service denial.

**Table 4.3***Descriptive analysis of the level of agreement or disagreement in regards to liquidity*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Agent banking outlets are monitored to ensure sufficient liquidity	53	2	4	3.68	.581
Agent banking outlets have daily limit of cash deposit and withdrawal	53	2	5	4.42	.633
Lack of liquid cash at agent outlets leads to frustration	53	1	5	3.21	1.044
Lack of liquidity by agent bankers leads to loss of customers	53	1	5	3.36	1.058
Customers avoid agents because of perennial cash shortages	53	1	5	2.81	1.194
Liquidity availability in agent outlets affect customer retention	53	1	5	3.58	.969

**Cost**

The cost of banking with agents is described as the cost of fundamental financial products and services such as account opening, deposits, withdrawals, remittances, top-ups, balance inquiries, statements, bill payments, and utility payments, among others. The cost of administering low-value accounts and expanding physical infrastructure to remote rural areas, as well as the cost in terms of money and time required by customers in remote locations to reach bank branches, are the main hurdles to financial inclusion. This section presents findings related to the fourth objective of the study sought to analyze the effect of cost of agent banking on financial inclusion.

The dimensions of cost is analyzed under the sub section; a) customers perceive the cost of banking with agents to be low, b) customers prefer agents regardless of costs, c) operational cost of agency banking affects the transaction cost of financial services.

**Table 4.4***Descriptive analysis of the level of agreement or disagreement in regards to cost*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Customers perceive the cost of banking with agents to be low	53	1	5	3.40	1.062
Customers prefer agents regardless of cost	53	1	5	3.42	.865
Operational cost of agent banking affects the transaction cost of financial services	53	1	5	3.15	.988

The table 4.4 exhibits the mean given by the respondents to each of the Likert scale questions regarding the cost of financial products and services and the level of agreement or disagreement. The mean scale for the question ‘customers perceive the cost of banking with agents to be low’ is 3.40, which means on average the respondents agree that cost of banking with agents is lower than traveling to the nearest traditional bank branches. The average respondents also agree that customers prefer agents regardless of the cost of agent banking. Likewise, we can also infer the result that the operational cost of agent banking affects the transaction cost of financial services and the customers prefer agents regardless of cost.

This indicates that the respondents of the study agree that customers get advantage from banking with agents since transaction costs are lower, longer opening hours and shorter queues than in branches.

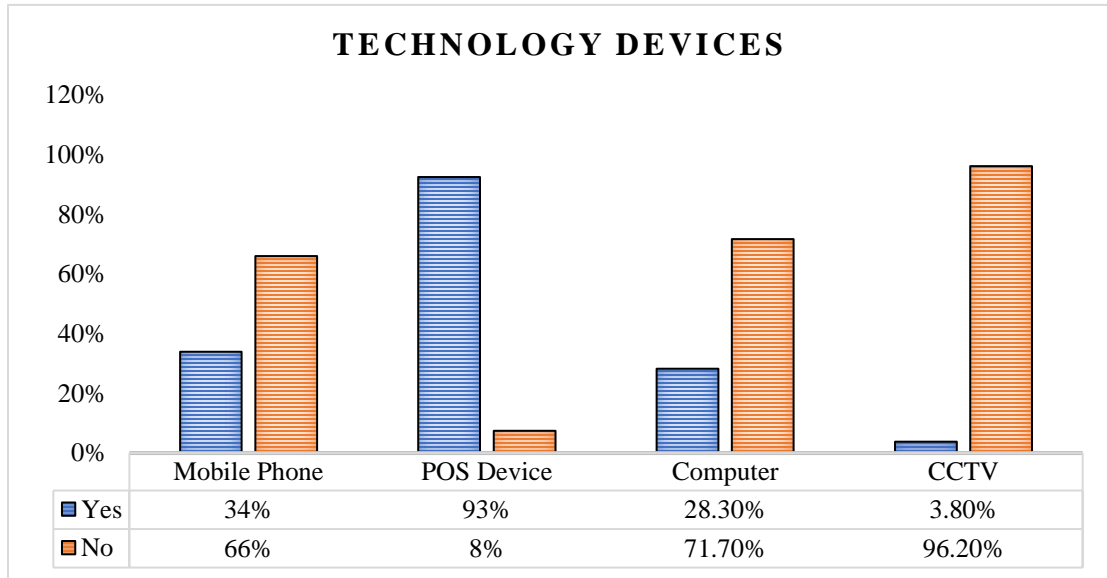
### **Technology**

It is defined as usability and effectiveness of the technology utilized by agents to transact. The agents generally use POS devices, that are connected to the internet via General Packet Radio Service (GPRS) connections. Besides POS, some use Short Message Service (SMS) and Interactive Voice Response (IVR) for transactions. It also reflects the problems encountered when the technology platform is inaccessible for transactions due to server

downtime or technological glitches. This section presents findings related to the fifth objective of the study sought to assess the effect of technology of agent banking on financial inclusion.

**Figure 4.2**

*Technology Devices used in Agent Outlets*



Findings in figure 4.2 indicate that all of the agent outlets employ a POS device which includes fingerprint reader, card machine, and a receipt printer. In addition. Mobile phones and computer devices are also used but from small agent networks. However, fewer agents have installed CCTV device in their service.

The table 4.5 exhibits the mean score for the statement ‘technology malfunction and server down lead to frustration and loss of customer’ is 3.72, which means average respondents agree that malfunction and server down leads to frustration and loss of the customer. Moreover, on average the respondents strongly agree that the agent user interface is accessible and simple and technology influences financial inclusion.

This indicates that the study's respondents agree that financial products and services are more accessible as a result of technology and that the technology is simple and easy to use. The majority of the equipment utilized by agents to transact is a POS device, a mobile phone, and a fingerprint reader.

**Table 4.5***Descriptive analysis of the level of agreement or disagreement in regards to technology*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Technology malfunction and server down leads to frustration and loss of customer	53	2	5	3.72	.841
Agent user interface are accessible and simple	53	3	5	4.25	.648
Technology of agent banking influence financial inclusion	53	3	5	4.19	.681

**Financial Inclusion**

Financial inclusion is a process that assure easy availability, usage and access of the formal financial system to all members of an economy. Individuals and businesses who are financially included have access to relevant and affordable financial products and services that are supplied responsibly and sustainably.

This section presents findings related to the general objective of the study sought to examine the effect of agent banking on financial inclusion in Nepal. The dimensions of financial inclusion is analyzed under the sub section; a) the number of accounts opened has increased in our bank through agent, b) the number of cash deposit and withdrawal has increased in our bank through agent, c) payment of utilities through banking system has increased, d) inflow and outflow of remittance through banking system has increased.

Table 4.6 exhibits the mean score by the assistant and officers of the bank and their branches on each of the Likert scale questions of the study. The mean scale for the question ‘the number of accounts opened has increased in our bank through agent’ is 4.42, which means that on average the respondents of the study strongly agree that the number of accounts opened has increased due to agent banking. Similarly, we can also infer the result that the increase in the number of cash deposits and withdrawals, payment of utilities, and inflow/outflow of remittance is due to agent banking.

**Table 4.6**

*Descriptive analysis of the level of agreement or disagreement in regards to financial inclusion*

<b>Particulars</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
The number of accounts opened has increased in our bank through agent	53	3	5	4.42	0.535
The number of cash deposit and withdrawal has increased in our bank through agent	53	3	5	4.26	0.593
Payment of utilities through banking system has increased	53	2	5	3.98	0.604
Inflow and outflow of remittance through banking system has increased	53	2	5	3.83	0.826

This indicates that the respondents agree that they have access and easy availability of formal financial services through agent banking. In addition, majority of the respondent agree that the agent banking has increased the usage of formal financial services, resulting in financial inclusion.

#### **4.2 Relation Between Variables**

Correlation analysis has been basically adopted to identify the direction and magnitude of relationship between different pairs of dependent variables and explanatory variables. It shows the movements of two variables and their association. The relationship has been explained by using bivariate Pearson correlation coefficient. The larger the correlation coefficient the stronger is the association which is either positive or negative depending on the direction of the relationship between variables.

Table 4.7 shows the correlation matrix of dependent and independent variables, which shows the relationship between dependent and independent variables. In addition, the correlation between independent and dependent also indicates whether or not there is a

strong relationship between independent variables. From the correlation coefficient matrix table, financial inclusion has a moderate and positive association with geographical coverage. The relation between financial inclusion and geographical coverage is positive and the degree of correlation is 0.362, which is statistically significant at a 1 percent level of significance. Financial inclusion has a weak and negative insignificant relationship between security, liquidity and cost. Also, financial inclusion has a weak and positive insignificant relationship with technology.

**Table 4.7**

*Bivariate Pearson Correlation Matrix*

	FI	G	S	L	C	T
FI	1	.362**	-.040	-.214	-.052	.036
G		1	.161	.139	.119	.298*
S			1	.132	-.116	.177
L				1	.151	.609**
C					1	.192
T						1

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

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

Similarly, geographical coverage has a weak, positive and insignificant association with security, liquidity and cost. Geographical coverage and technology are also positively correlated and the correlation coefficient is 0.298, which is also statistically significant at a 5 percent level of significance. Likewise, security has a weak and positive insignificant association with liquidity and technology. The correlation coefficient between security and cost is -.116, which is weak, negative and insignificant. The liquidity has a weak and positive insignificant relationship between cost and has a moderate and positive significant relationship with technology at a 1 percent level of significance. Moreover, the cost has a weak and positive insignificant relationship with technology.

### 4.3 Effect of Agent Banking in Financial Inclusion

Regression is used to represent (model) the relationship between a response variable and one or more predictor variables. To construct an estimated regression equation, a model of the relationship is hypothesized, and parameter values are inferred. Several tests are used to determine if the model is significant.

**Table 4.8**

*Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.477 <sup>a</sup>	.228	.146	1.677

a. Predictors: (Constant), G, S, L, C, T

b. Dependent variable: FI

Table 4.8 represents the model summary of regression analysis between agent banking and financial inclusion. R is the correlation coefficient between variables. The R of the regression model is 0.447, which represents that 44.7 percent of the variation in financial inclusion can be interpreted by geographical coverage, security, liquidity, cost and technology of agent banking services.

**Table 4.9**

*Analysis of Variance (ANOVA)*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	39.014	5	7.803	2.773	.028 <sup>b</sup>
1 Residual	132.232	47	2.813		
Total	171.245	52			

a. Dependent Variable: FI

b. Predictors: (Constant), T, S, GC, C, L

R square is the coefficient of determination of the dependent variable that can be explained by variation in the independent variables. The R-square of the regression model is 0.228, which represents that the model explains the dependent variable by 22.8 percent i.e., 22.8



percent variation in financial inclusion is explained by the regression equation involving five explanatory variables; geographical coverage, security, liquidity, cost and technology. This shows that the study's regression model is good at predicting financial inclusion.

Table 4.9 shows the overall significance level of the regression model. It shows the goodness of fit of the regression equation. The above ANOVA test shows that there is an overall significance of the regression model. Here, the sig. (p-value) is 0.028, which is less than 0.05 i.e.,  $0.028 < 0.05$  implies that our model is significant and the variables are good predictors of financial inclusion. The total sum of square deviation of the observations is 171.245, in which the explained sum of square is 39.014 and the residual sum of square is 132.232. The total degree of freedom in ANOVA test is 52.

**Table 4.10**

*Regression Result of Financial Inclusion*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	16.227	2.820		5.755	.000
1					
G	.520	.182	.388	2.851	.006
S	-.098	.135	-.096	-.725	.472
L	-.175	.083	-.341	-2.104	.041
C	-.080	.119	-.089	-.671	.505
T	.197	.206	-.162	.957	.344

a. Dependent Variable: FI

b. Predictors: (Constant), T, S, GC, C, L

Table 4.10 represent the regression result of financial inclusion where the geographical coverage, security, liquidity, cost, and technology were tested as the independent variables and financial inclusion was tested as the dependent variable. Table 4.10 shows the contribution of each variable in explaining financial inclusion as shown by unstandardized beta values which assess the contribution of each variable towards the prediction of the dependent variable.

The beta coefficient of geographical coverage is 0.520, which is positive indicating that an increment in geographical coverage by 1 unit increases the financial inclusion by 0.520 unit and such a relationship is statistically significant at a 1 percent level of significance (i.e.,  $0.006 < 0.01$ ). Similarly, the liquidity has a negative coefficient of 0.175, which means if the liquidity is increased by 1 unit, financial inclusion will decrease by 0.175 unit. However, this inverse relationship is statistically significant at a 5 percent level of significance (i.e.;  $0.041 < 0.05$ ), liquidity does not enhance financial inclusion as beta is negative. Moreover, the security, cost and technology have an insignificant relationship with financial inclusion.

The model also indicates that a change in 1 unit of geographical coverage leads to 52 percent change in financial inclusion, which is a strong indicator of financial inclusion because of lower travel expenses and other inconveniences like time lost in lengthy lines at bank branches.

**Table 4.11**

*Summary of Hypothesis Test Result*

<b>S. No.</b>	<b>Alternative Hypothesis</b>	<b>P-Value</b>	<b>Beta</b>	<b>Accept/ Reject</b>
<b>H<sub>1</sub></b>	Geographical coverage of agent banking enhances financial inclusion	0.006 ( $P < 0.01$ )	.520	Accept
<b>H<sub>2</sub></b>	Security of agent banking enhances financial inclusion	0.472 ( $P > 0.05$ )	-.098	Reject
<b>H<sub>3</sub></b>	Liquidity of agent banking enhances financial inclusion	0.041 ( $P < 0.05$ )	-.175	Reject
<b>H<sub>4</sub></b>	Cost of agent banking enhances financial inclusion	0.505 ( $P > 0.05$ )	-.080	Reject
<b>H<sub>5</sub></b>	Technology of agent banking enhances financial inclusion	0.344 ( $P > 0.05$ )	.197	Reject

#### **4.4 Findings of the Study**

This study was conducted with the main objective to examine the effect of agent banking on financial inclusion in Nepal. The collected data were analyzed and interpreted through simple ways like tables and charts by using SPSS to meet the research objectives. Therefore, the major findings of this study are as followings:

- The majority of the banks and their branches have been offering agent banking services for the period of below 5 years.
- The mean value of the statements of geographical coverage of agent banking shows that the majority of the respondent agree that geographical coverage of agent banking is an effective variable of the study.
- The majority of the respondents agree that the agents are frequently monitored to safeguard both the parties and disagree the fact that customer doesn't transact with agents due to lack of security and trust.
- The majority of the respondents agree that the agents are frequently monitored to ensure sufficient liquidity and disagree the fact that customers avoid agents because of perennial cash shortages.
- The majority of the respondents agree that cost of agents are low as operational cost of agents are low. Moreover, the respondents prefer agents regardless of the cost.
- The majority of the agree that technology of agent banking has an impact on financial inclusion.
- Mean value of geographical coverage, security, liquidity, cost, technology and financial inclusion shows that all the variables are effective variables for the study.
- Standard deviation of the variables shows that they have a high degree of variation between agreement and disagreement of the respondent.
- Only basic financial products and services are offered through agent networks such as: account opening, deposits and withdrawals, remittance and utility payment services.
- More complex products and services such as insurance and loan were not very popular because of sparse agent networks.

- All agent outlets employ a POS device, 34 percent of agents use mobile phones and 28.30 percent use computer devices and only 3.80 percent have a CCTV device installed.
- Financial inclusion has a moderate and positive association with geographical coverage which is statistically significant at a 1 percent level of significance.
- The financial inclusion has a weak and negative insignificant relationship between security, liquidity, and cost.
- The financial inclusion has a weak and positive insignificant relationship with technology.
- The geographical coverage has a weak, positive and insignificant association with security, liquidity and cost.
- The geographical coverage and technology are positively correlated which is statistically significant at a 5 percent level of significance.
- The liquidity has a moderate and positive significant relationship with technology at a 1 percent level of significance.
- The R-square of the regression model is 0.228, which represents that the model explain the dependent variable by 22.8 percent.
- The probability of F-stat is 0.028, which is the result of ANOVA and represents a good model fit in this case, where the five independent variables best describe financial inclusion.
- The beta coefficient of geographical coverage of agent is 0.520, which is positive and significant at a 5 percent level of significance.
- There is a significant change in financial inclusion due to geographical coverage of agent banking.
- The security of the agent has the beta coefficient of -0.098, which is negative and insignificant and shows there is no significant change in financial inclusion due to the security of agent banking.
- The liquidity has a negative coefficient of 0.175, which is statistically significant at a 5 percent level of significance which shows there is a significant change in financial inclusion due to the liquidity of agent banking.

- The cost has a coefficient of -0.080, which is negative and insignificant and shows there is no significant change in financial inclusion due to the cost of agent banking.
- The technology has a coefficient of 0.197, which is a positive but insignificant relationship which shows there is no significant change in financial inclusion due to the technology of agent banking.

## CHAPTER V

### DISCUSSION, CONCLUSIONS AND IMPLICATIONS

This chapter presents the discussion of the results and findings that have been obtained from data analysis, as well as the conclusions and implications that could be drawn from the study. The chapter has been divided into three segments. The first segment is driven towards discussion, which involves a comparison of the findings of this study and answering the research questions to meet the objective of the research. Likewise, the conclusion is drawn in the second segment from the result obtained from the data analysis inferred in the study, whereas an implication of the study is in the third segment, which may be useful for future research related to agent banking and financial inclusion in Nepal.

#### **5.1 Discussion**

The general objective of the study is to examine the effect of agent banking on financial inclusion in Nepal. This paper assesses how geographical coverage of agent banking, security issues associated with agent banking, agent liquidity, the cost of financial services, and agent banking technologies affect financial inclusion. The regression model was used to estimate the dimensions of the effect of agent banking on financial inclusion in Nepal, where the geographical coverage, security, liquidity, cost, and technology were analyzed.

The study found that geographical coverage of agent banking has a positive and significant impact on financial inclusion i.e., the geographical coverage of agent banking enhances financial inclusion. The result was calculated using regression analysis and the study concludes that for better financial inclusion, bank agents should bring financial services closer to customers, as the most significant driver of financial inclusion is geographical coverage. The findings are consistent with Afande and Mbugua (2015), Lotto (2016), Ndegwa (2017), Rahman (2019) and Barasa (2013) who stated that agent banking services have played an important role in the adoption of financial services in underbanked areas, because of its greater geographical coverage.

This study found that the operations of the agents are often monitored to ensure the safety and security of the customers, and customers do not avoid banking with agents because of security and trust issues. The study shows that security of agent banking is statistically insignificant and that there is no significant change in financial inclusion due to the security of agent banking. In addition, the study also found that there is no security measures in agent outlets. However, Peake (2012) notes that security concerns are minimal because agents are typically located in retail locations such as pharmacies, grocery stores, retail outlets, gas stations. Afande and Mbugua (2015) concluded that security concerns were minimal as agents were equipped with physical security features such as metal grills and CCTV. Banerjee et al. (2017) stated that security measure should be adopted particularly when dealing with cash as agents either hold the money in their residence or in a small vault in their outlet which is likely to include robbery and other threats. To address the issue of security, the bank may request that agents appoint security employees or select powerful agents with large vaults. Bill and Melinda Gates Foundation (2014), explains that one of the key issues for users is the security and safety of mobile payment transactions.

The liquidity of agent banking has a negative but significant impact on financial inclusion. This study found that agents are monitored to ensure sufficient liquidity and that customers do not avoid agents due to perennial cash shortages. In addition, the result also found that most of the respondents agree that lack of liquidity by agents leads to service denial and eventually loss of customers. When a customer approaches an agent with the desire to withdraw a large sum of money, it is common for the agent to be unable to meet the customer's demand. Micro Save (2014) states that cash liquidity is handled by reaching out to friends, family, or neighbors to meet immediate financial needs. Ndegwa (2017) found that liquidity of agent banking was statistically significant as agents were located in established businesses thereby making liquidity shortage a non-issue. The study also discovered that the activities of the agents are thoroughly reviewed and controlled by the parent bank in order to avoid cash shortages and reduce security issues.

The cost of agent banking has a negative and insignificant impact on financial inclusion. This study shows that customers prefer agents regardless of costs. However, customers get the advantage in the form of cheaper transaction costs, extended operating hours, and

shorter queues than in branches. Beck et al. (2007) state that agent banking services are more usable to illiterates and underprivileged, who may be intimidated by bank branches. Lotto (2016) concluded that the wide geographic coverage of agent banking is a best promoter of financial inclusion as it lowers travel expenses and other inconveniences such as time lost in lengthy lines at bank branches. The findings indicate that the cost of agent banking has no significant impact on financial inclusion but has aid to simplify banking services by reducing the distance between customers and service points.

The technology of agent banking has a positive but insignificant impact on financial inclusion. The study found that financial products and services are more accessible as a result of technology and that technology is simple and easy to use. Molla (2013) notes that the success of agent banking is determined on the agents ease of banking. Khalti (2018) states technology has a critical role in reducing geographical barriers and boosting financial inclusion. Agent banking is all driven by technology and transactions can be made via POS system, mobile phones, and online banking, which must be reflected immediately in the core banking system (Keeler, 2011). The findings imply that agent banking technology should be updated to new technology for providing services which will improve both safety and convenience.

## **5.2 Conclusions**

The study investigates the effect of agent banking on financial inclusion, where the geographical coverage, security, liquidity, cost and technology of agent banking were used as the independent variables and financial inclusion was used as the dependent variable. For the analysis, descriptive statistics, correlation and regression were conducted.

The study concludes that greater geographical coverage of agent banking is the only variable that enhances financial inclusion as services are brought closer to the individuals, thus saving time that might otherwise be spent queuing in banking halls. Likewise, security concerns were minimal as agents are typically located in retail locations such as pharmacies, grocery stores, retail outlets, and gas stations. However, the agents should adopt physical security features like metal grills and CCTV. Nonetheless, the study concludes that the security of agent banking doesn't enhance financial inclusion.



The study also found that a liquidity shortage was not a barrier because the agents were thoroughly reviewed and monitored to guarantee that cash shortages were infrequent. Despite this, the results suggest that the liquidity of agent banking should be increased and supervised by the parent bank to maintain liquidity. Nonetheless, the study concludes that the liquidity of agent banking doesn't enhance financial inclusion. Likewise, the results show that the cost of agent banking is low and the majority of respondents prefer agents regardless of the cost. However, the study concludes that the cost of agent banking doesn't enhance financial inclusion.

In addition, the findings imply that agent banking technology should be updated to new technology for providing services which will improve both safety and convenience. However, this study concludes that the technology of agent banking doesn't enhance financial inclusion.

In the light of the above discussions, agent banking can be used to enhance financial inclusion in Nepal. As a precursor intended to increase access to financial services that will enhance the opening of accounts for the unbanked and give rise to financial literacy by assisting people to have a better appreciation and consumption of financial services. However, because the notion of agent banking is now gaining popularity around the world, as depicted by Afande and Mbugua (2015), banks risk management processes should be highlighted in order to avoid entering into agency contracts with bank agents whose credentials are doubtful. The parent bank should keep a record of proper identification of agents in order to hold them accountable in case of any fraud or misconduct.

As a part of financial inclusion, the agency banking model has been described as an effective tool to provide basic banking services to the underprivileged economy, as well as a cost and time-effective approach that saves a lot of money and time for both the customers and the banks. The services provided by the agents are crucial since they are the sole individuals through whom the bank can provide services to the rural community. Agents must be able to provide a positive and consistent service to their customers. For this, agents require ongoing bank assistance to serve customers, manage cash flow, and give technical support for any devices or equipment they use.

Hence, the study concludes that the agent banking concept is a success in terms of financial inclusion. As agent banking services are new phenomena in Nepal, the low number of accounts opened or transactions should not be seen as a failure of the business. The agent banking model is constantly growing and expanding, and as it grows, so will the level of financial inclusion. As a result, agent banking has the impact of promoting financial inclusion and should be supported and promoted by all participants, including banks, governments, and licensing organizations, in order to reduce high gap among the unbanked. Finally, banks, governments and licensing bodies should provide individuals with financial education in order to improve financial literacy, comprehend the operations of the agents, and ensure the protection of their funds.

### **5.3 Implications**

The study results may provide a useful reference document for commercial banks, agent bankers, policymakers, and scholars. The findings of the study might be helpful to commercial banks in promoting agent banking services through conducting a regular awareness campaign and attracting new users through banners, radios, TV etc. Also, existing customers can be informed through posters in agent shops, advertising, and text messages regarding the know-how of agent banking services, such as the transaction process with agents, how and why a user should keep their PIN safe, charges and commissions of agents, and benefits of the agent banking services. More agent banking outlets should be opened to expand the geographical coverage, thus enhancing financial inclusion.

As the agent banking model becomes popular, banks have to be extra careful about the agents they hire and ensure that the agents uphold the required standards for the delivery of products and services. Agents must receive training and retraining to ensure that they comply with their agreement, minimum standards, customer handling and customer satisfaction. Agents may be further incentivized by setting up an annual prize for the best customer service to boost their morale. Security should be emphasized in all agent banking outlets and should adopt strict procedures when an agency contract expires to ensure that the agent does not take advantage of the situation and fraud the customers.

Furthermore, the system used should be stable and robust with minimal failures and a good network connection. Also, with time the agent banking services should provide more complex products and services allowing the agent outlet to be a one-stop-shop. However, an appropriate analysis should be done before a product or service is introduced to determine its potential impact. There should be a regular follow up to the agent's outlet to make sure they are handling the service as expected.

Agents must ensure that the client's personal information is kept confidential and secure. To decrease the risk of theft-related losses, agents should adopt security measures such as metal grills, CCTV and also hire security agencies if required. Agents must carefully manage their financial liquidity to ensure the availability of the float to offer financial services. Agent banking services should keep operational expenditures low so as to keep customer service costs low.

Further researchers and scholars can also use this study to add to the existing literature on financial inclusion through agent banking. The findings of this study can be used as a source of reference and as a basis for future research for those interested in this area or other related topics. The study will provide background information to other researchers or scholars who would like to investigate more on agent banking and its effect on financial inclusion.

There have been several studies about financial inclusion through agent banking in the case of other countries but very few in the context of Nepal. Hence, this research gives insight into agent banking and its effect on financial inclusion in the context of Nepal. The study also gives valuable suggestions to the researchers to think about the variables that are to be taken for the study as some variables used for the study may not have any implication. The research provides supporting roles for the future studies that can be carried out by selecting other commercial banks and their branches from other provinces of Nepal to grab more evidence about financial inclusion in Nepal.

Finally, the present study is conducted in Bagmati province and most of the respondents are from Kathmandu valley. There is a need for future research to replicate and extend the existing study to additional scenarios. The current study is concentrated on commercial banks BLB department, branch managers and operations in charge of branches providing

agent banking services in Bagmati province. Therefore, future studies should include agents and their clients to gather their perspectives. In addition, future studies should analyze the effect of agent and principal relationships on financial inclusion. Moreover, moral hazards and the adverse selection problem may have a significant impact on financial inclusion.

In the future, further research should be carried out on financial inclusion using more relevant, consistent, and balanced measures such as the core set of indicators such as access to financial services, the quality of products and services delivered, and usage of financial services. More study should be conducted on the quality of service offered by agents to their client, as well as the security measures employed by banks to protect the security of both customers and the agents.

Future studies should also examine the cost-benefit analysis of implementing agent banking since this will assist financial institutions to find areas where they can save costs, and enhance the agency banking process. Replication and extension of the existing study to investigate respondents in various areas and countries with different cultures are required for the results to be generalized across different places.

The study recommends that banks should raise awareness of agent banking services and also provide them at a cheaper cost to encourage their usage and adaptation of agent banking services. This study suggests that the governments and banks should come up with a policy structure that will enhance financial inclusion since financial inclusion promotes financial intermediation and economic growth. The study recommends that regulations should be made more efficient in order to enable more banks to embrace agent banking services. The report also suggests that all commercial banks should embrace agent banking services by adopting improved technology and security to make the services more reliable. This will boost customers confidence in the agents and hence lead to an increase in the volume of transactions which will eventually lead to greater financial inclusion.

## REFERENCES

- Achugamonu, B. U. (2017). Agent Banking and Financial Inclusion: The Nigerian Experience. *Journal of Internet Banking and Commerce*, 22(S8), 1-15
- Adiera, A. (1995). Instituting effective linkages between formal and informal financial sector in Africa: A proposal. *Savings and Development*, 19(1), 5-27. Available at <http://www.jstor.org/stable/25830402>
- Afande F. O., & Mbugua, S. W. (2015). Role of agent banking services in promotion of financial inclusion in Nyeri town, Kenya. *Journal of Finance and Accounting*, 6(3), 2222-2847.
- Aggarwal, S., & Klapper, L. (2013). Designing government policies to expand financial inclusion: Evidence from around the world. *The Journal of Finance*, 56(3), 1029-51.
- Agufa, M. M. (2016). *The effect of digital finance on financial inclusion in the banking industry in Kenya* (Doctoral dissertation, University of Nairobi). Retrieved from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/98616/Midika%20\\_The%20Effect%20Of%20Digital%20Finance%20On%20Financial%20Inclusion%20In%20The%20Banking%20Industry%20In%20Kenya.pdf?isAllowed=y&sequence=1](http://erepository.uonbi.ac.ke/bitstream/handle/11295/98616/Midika%20_The%20Effect%20Of%20Digital%20Finance%20On%20Financial%20Inclusion%20In%20The%20Banking%20Industry%20In%20Kenya.pdf?isAllowed=y&sequence=1)
- Allen, F., & Santomero, A. M. (1996). The theory of financial intermediation. *Journal of Banking & Finance*, 21(11-12), 1461-1485.
- Banerjee, P. K., Alam, M. R., Mehdee, T., Hossain, Z., & Khan, A. K. (2017). Agent banking: Effectiveness in financial inclusion. Available at SSRN: <https://ssrn.com/abstract=3601950>
- Barasa, D. (2013). The role of agency banking in enhancing financial sector deepening in emerging markets: The Kenyan experience. *European Journal of Business and Management*, 5 (21), 2222-2839.

- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of economic growth*, 12(1), 27-49.
- Bill & Melinda Gates Foundation. (2014). *Melinda gates challenges global leaders: Create savings accounts and bring financial security to the world's poorest*. Retrieved from <http://www.gatesfoundation.org/press-releases/Pages/melindagates-at-global-savings-forum101116.aspx>
- Bizah, D. S., Gumbo, L., & Magweva, R. (2017). Agent banking as a driver of financial inclusion in Zimbabwe: A review. *International Journal of Education and Research*, 5(11), 89-96.
- Celina, L. (2012). *Agent banking in Latin America*. Mexico: Alliance for Financial Inclusion.
- Cheston, S. (2016). *The business of financial inclusion: insights from banks in emerging markets*. Washington, DC: Institute of International Finance.
- Chiteli, N. (2013). Agent banking operations as a competitive strategy of commercial banks in Kisumu City. *International Journal of Business and Social Science*, 4(13), 306-324.
- Collins, D., Morduch, J., Rutherford, S., & Ruthven, O. (2010). *Portfolios of the poor: How the world's poor live on \$2 a day*. Princeton, NJ: Princeton University Press.
- Ebong, J., & George, B. (2021). Financial Inclusion through Digital Financial Services (DFS): A Study in Uganda. *Journal of Risk and Financial Management*, 14(9), 393-411.
- Echchabi, A. & Hassanuddeen, A. (2013). An empirical survey on the prospects of mobile money in Morocco. *Studies in Business and Economics*, 8(1), 46–54.
- EFInA. (2011). *Evaluation of agent banking models in different countries*. Retrieved from <https://www.efina.org.ng/wp-content/uploads/2018/12/EFInAAgent-banking-study-report-26-Oct-2011.pdf>

- Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57-74.
- Fanta, A., & Makina, D. (2019). The relationship between technology and financial inclusion: Cross-sectional evidence. *Extending financial inclusion in Africa*, 211-230.
- Ferdous, J., Mosharrafa, R. AL., & Farzana, N. (2015). Agent banking in Bangladesh-A new era in financial institution by enhancing customers' accessibility and profitability of banks. *The International Journal of Business & Management*, 3(3), 206-210.
- Government of Nepal. (2007). *Competition Promotion and Market Protection Act*. Retrieved from <https://www.tepc.gov.np/assets/upload/acts/6competition-promotion-and-market-protection-act1111.pdf>
- Haider, H. (2018). *Innovative financial technologies to support livelihoods and economic outcomes*. Brighton: K4D Helpdesk Report.
- Hariharian, M., & Marktanner, U. (2015). The need for financial inclusion in India. A publication of India Reserve Bank. *International Journal in Management and Social Science*, 8(8), 22-23.
- Hossain, M. I., Al-Amin, M., & Toha, M. A. (2021). Are Commercial Agent Banking Services Worthwhile for Financial Inclusion? *Business Management and Strategy*, 12(2), 206-227.
- Ignacio, M. (2009). The economics of branchless banking. *International Journal of Arts and Entrepreneurship*, 1(5), 243–256.
- Jayanty, S. K. (2012). *Agency banking: New frontiers in financial inclusion*. Retrieved from <https://www.edgeverve.com/wp-content/uploads/2018/12/agency-banking-new-frontiers.pdf>
- Jensen, M. C., & Meckling, W. H. (1978). Can the corporation survive? *Financial Analyst Journal*, 34(1), 31-37.

- Keeler, R. (2011). Expanding financial services in Kenya: Agency banking versus mobile banking, Ratio magazine. *The Inside Track to East Africa's Economies*.
- Khabar, B. (2017). *What is branchless banking? How service is provided?* Retrieved from <https://bankingkhabar.com/archives/28615>
- Khabar, B. (2020). *What is branchless banking?* Retrieved from <https://bankingkhabar.com/archives/66458>
- Khalti. (n.d.). The rising wave of digital finance in Nepal [Blog post]. Retrieved from <http://blog.khalti.com/portfolio/digital-finance-in-nepal/>
- Khalti. (2018). Financial inclusion: Where does Nepal stand [Blog post]? Retrieved from <https://blog.khalti.com/financial-literacy/financial-inclusion-nepal/>
- Khalti. (2018). From Metallic Coins to Online Payments: A brief history of banking in nepal [Blog post]. Retrieved from <http://blog.khalti.com/fintech-trends/brief-history-of-banking-in-nepal/>
- Khalti. (2018). Role of digital finance in financial inclusion [Blog post]. Retrieved from <http://blog.khalti.com/fintech/role-of-digital-finance-in-financial-inclusion/>
- Khalti. (2019). Branchless banking: Facilitating financial inclusion in Nepal [Blog post]. Retrieved from <https://blog.khalti.com/fintech-trends/branchless-banking-facilitating-financial-inclusion-nepal/>
- Khanvilkar, A. S. (2015). Financial inclusion in India [Blog post]. Retrieved from <https://www.nelito.com/blog/importance-of-financial-inclusion-in-india.html>
- Kitaka, P. (2001). *A survey of the use of financial performance indicators by microfinance institutions in Kenya* (Doctoral dissertation, University of Nairobi). Retrieved from <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/40230>
- Lehman, J. (2010). *Operational challenges of agent banking systems*. Retrieved from <https://docs.gatesfoundation.org/Documents/operational-challenges.pdf>



- Lotto, J. (2016). The role of agency banking in promoting financial inclusion: Descriptive analytical evidence from Tanzania. *European Journal of Business and Management*, 8(33), 231-240.
- Mahmood, R., & Sarker, S. (2015). Inclusive growth through branchless banking: A review of agent banking and its impact. *Journal of Economics and Sustainable Development*, 6(23), 86-93
- Michelle, A. M. (2016). *The Effect of Digital Finance on Financial Inclusion in the Banking Industry in Kenya* (Doctoral dissertation, University of Nairobi). Retrieved from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/98616/Midika%2520\\_The%2520Effect%2520Of%2520Digital%2520Finance%2520On%2520Financial%2520Inclusion%2520In%2520The%2520Banking%2520Industry%2520In%2520Kenya.pdf?sequence=1](http://erepository.uonbi.ac.ke/bitstream/handle/11295/98616/Midika%2520_The%2520Effect%2520Of%2520Digital%2520Finance%2520On%2520Financial%2520Inclusion%2520In%2520The%2520Banking%2520Industry%2520In%2520Kenya.pdf?sequence=1)
- Micro Save. (2014). *Assessment of agent networks in nepal*. Retrieved from <https://www.calpnetwork.org/wp-content/uploads/2020/01/uncdf-assessmentofagentnetworksinnepal.pdf>
- Ministry of Law and Justice. (2018). *Consumer Protection Act*. Retrieved from <https://www.lawcommission.gov.np/en/wp-content/uploads/2019/09/The-Consumer-Protection-Act-2075-2018.pdf>
- Monyoncho, L. N. (2015). Relationship between banking technologies and financial performance of commercial banks in Kenya. *International Journal of Economics, Commerce and Management*, 3(11), 784 -815.
- Muasya, M. I., & Kerongo, F. (2015). The Effects of Agency Banking on Access to Financial Services: A survey of commercial banks in Kilindini District. *International Journal of Management Research & Business Strategy*, 4(3), 104-118.
- Mulili, M. B., & Wong, P. (2010). Corporate governance practices in developing countries: The case for Kenya. *International Journal of Business Administration*, 2(1), 14-27.

- Munoru, M. K. (2016). Effect of agency banking on financial inclusion in Kenya. *International Journal of Science and Research*, 5(10), 1380-1397.
- Ndegwa, P. M. (2017). An analysis of the effectiveness of agency banking as a financial inclusion strategy in commercial banks. *International Journal of Business and Management Invention*, 6(8), 67-75.
- Ndungu, C. G., & Njeru, A. (2014). Assessment of factors influencing adoption of agency banking in Kenya: The case of Kajiado north sub county. *International Journal of Business and Commerce*, 3(8), 91-111.
- Nepal Clearing house Limited (NCHL). (n.d.). *Overview*. Retrieved from <http://nchl.com.np/informations/view/Overview.html>
- Nisha, N., Nawrin, K., & Bushra, A. (2020). Agent banking and financial inclusion: The case of Bangladesh. *International Journal of Asian Business and Information Management (IJABIM)*, 11(1), 127-141.
- Njunju, A. (2013). *A Survey of Adoption of Agency Banking by Commercial Banks in Nakuru CBD* (Doctoral dissertation, University of Nairobi). Retrieved from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/62237/Njunji\\_A%20survey%20of%20adoption%20of%20agency%20banking%20by%20commercial%20banks.pdf?sequence=3](http://erepository.uonbi.ac.ke/bitstream/handle/11295/62237/Njunji_A%20survey%20of%20adoption%20of%20agency%20banking%20by%20commercial%20banks.pdf?sequence=3)
- Novatti. (2019). *Bringing banking to the people*. Retrieved from <https://novatti.com/solutions/agency-banking/>
- NRB. (2021). *Banks and financial institution regulation department*. Kathmandu: NRB.
- NTA. (2021). *About us*. Retrieved from <https://nta.gov.np/en/about-us/>
- Nurcan, T. C. (2005). *Agency theory: An extended conceptualization and reformation*. (PhD thesis, Queensland University of Technology). Retrieved from [https://eprints.qut.edu.au/16188/1/Nurcan\\_Temel\\_Candemir\\_Thesis.pdf](https://eprints.qut.edu.au/16188/1/Nurcan_Temel_Candemir_Thesis.pdf)
- Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18(4), 329-340.

- Pant, B. (2016). Financial inclusion in Nepal: Policy review and prescriptions. *NRB Economic Review*, 28(2), 1-18.
- Pant, B. (2016). *Financial inclusion: Aggressive promotion*. Retrieved from <https://thehimalayantimes.com/opinion/financial-inclusion-aggressive-promotion>
- Pant, B. (2018). *Financial inclusion: Progress and Challenges*. Retrieved from <https://thehimalayantimes.com/opinion/financial-inclusion-progress-and-challenges/>
- Peake, C. (2012). New frontiers: Launching digital financial services in rural areas. *Old Problems, New Solutions*, 12-18.
- Perlman, L., & Gurung, N. (2018a). Use of RegTech by central banks and its impact on financial inclusion. *SSRN Electronic Journal*. Retrieved from [www.citicolumbia.org/wp-content/uploads/2018/10/REGTECH-FINAL-VERSION-FOR-FINAL-PUBLICATION1.pdf](http://www.citicolumbia.org/wp-content/uploads/2018/10/REGTECH-FINAL-VERSION-FOR-FINAL-PUBLICATION1.pdf)
- Perlman, L. (2018c). *The Role of the National Telecommunications authority in DFS*. Retrieved from <https://dfsobservatory.com/sites/default/files/Role-of-competition-regulators-final-for-publication.pdf>
- Pervin, T., & Sarker, B. K. (2021). The Evolution and Prospect of Agent Banking in Bangladesh: A Study Based on Bangladesh Banking Sectors. *Economic Research*, 5(4), 121-134.
- Pickens, M., Porteous, D., & Rotman, S. (2009). *Scenarios for Branchless Banking in 2020*. Washington, DC: CGAP. available at <https://goo.gl/bkmuTX>
- Radcliffe, D., & Voorhies, R. (2012). *A digital pathway to financial inclusion*. Retrieved from <https://www.findevgateway.org/sites/default/files/publications/files/mfg-en-paper-a-digital-pathway-to-financial-inclusion-dec-2012.pdf>
- Rahman, M. M. (2019). Prospect and challenges of agent banking on financial inclusion in Bangladesh. *Amity Global Business Review*, 18-26.
- Rogers, E. M. (2003). *Diffusion of Innovations*, Free Press, New York.

- Sahayogee, J. (n.d.). *Banking in Nepal: A history of banking system in Nepal*. Retrieved from <https://www.imnepal.com/banking-in-nepal-a-history-of-banking-system-in-nepal/>
- Sakchyam. (n.d.). *A Brief on Branchless Banking (BLB) initiative*. Retrieved from <https://secureservercdn.net/198.71.233.38/k4k.775.myftpupload.com/wp-content/uploads/2020/02/A-Brief-on-Branchless-Banking-Initiative.pdf>
- SEPA for Corporates. (2015). *5 reasons why financial inclusion is important*. Retrieved from <https://www.sepaforcorporates.com/payments-news-2/5-reasons-financial-inclusion-important/>
- Shrestha, S., Joshi, N. K., & Dongol, P. (2018). *Banking the unbanked: Ensuring financial inclusion*. Retrieved from <https://thehimalayantimes.com/opinion/banking-the-unbanked-ensuring-financial-inclusion/>
- Siddiquie, M. R. (2014). Agent banking, the revolution in financial service sector of Bangladesh. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 5(1), 28-72.
- Sohail, M. S. & Al-Jabri, I. M. (2012). Mobile banking adoption: Application of diffusion of innovation theory. *Journal of Electronic Commerce Research*. 13(4), 379-391.
- Subbarao, D. (2009). Financial inclusion: challenges and opportunities. *Reserve Bank of India's Bankers Club*, 1-16. Retrieved from <https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/IFFG091209.pdf>
- Subramanian, S. L. (2013). A study of branchless banking in achieving financial inclusion in India. *Journal of Management Research*, 5(2), 1-10.
- Tarazi, M., & Breloff, P. (2011). *Regulating bank agents*. Retrieved from: <https://www.cgap.org/sites/default/files/CGAP-Focus-Note-Regulating-Banking-Agents-Mar-2011.pdf>
- The Economist Corporate Network. (2016). *The Future of Digital Finance*.
- The World Bank. (2018). *Financial inclusion overview*. Retrieved from: <https://www.worldbank.org/en/topic/financialinclusion/overview#1>

- UNCDF. (2015). *Digital financial services in Nepal - Briefing note 1: Developing a digital financial services strategy in Nepal*. Retrieved from <http://un.info.np/Net/NeoDocs/View/4772>
- Veniard, C. (2010). *How Agent Banking Changes the Economics of Small Accounts*. Retrieved from <https://docs.gatesfoundation.org/documents/agent-banking.pdf>
- Wainaina, G. (2011). Agency banking to drive financial inclusion in Tanzania.
- Waller, S. D. (2004). Developing an account-management lifecycle for advertising agency-client relationships. *Marketing intelligence and planning*, 22(1), 95-112.
- Wechsler, M., Gurung, N., & Perlman, L. (2018). The state of regulatory sandboxes in developing countries. *IPRN: Innovation and Finance*, 1-45. DOI: <https://doi.org/10.2139/ssrn.3285938>
- Wheelen, M., & Hunger, N. (2002). Corporate governance and social responsibility.

# APPENDICES 1

## QUESTIONNAIRE

### AGENT BANKING AND ITS EFFECT ON FINANCIAL INCLUSION

Hello! I am Prajwol Shakya, student of Master of Finance and Control (MFC) at School of Management, Tribhuvan University. I am conducting this research as a Graduate Research Project. This survey aims to determine the impact of agent banking on financial inclusion in Nepal. Therefore, this survey questionnaire is primarily designed for commercial banks and their branches providing agent banking services. The results of this survey will be used only for academic purpose. The information provided in this research will be kept confidential. The research will take roughly 10 minutes to complete. Thank you for your time and cooperation.

#### 1. GENERAL INFORMATION

Name ..... Mobile number .....  
Bank Name ..... Branch .....

How long has the agent banking service been available at your bank branch? Put  in the relevant option.

Below 5 Years [27]    6 to 10 Years [15]    11 to 15 Years [11]    Above 16 Years [00]

#### 2. COVERAGE

2.1 Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	Customers prefer agents as they feel closer to the agent rather than the bank	0	8	17	18	10
2	Agent banking has reduced the overcrowding in the bank	0	2	7	39	5

2.2 Product and services offered by the agents? (You can choose more than one option)

Account opening [49]                      Deposit [53]                      Withdrawal [53]  
Remittance [43]                      Money Transfer [29]                      Utility Payment [40]  
Insurance [1]                      Fixed Deposit [25]                      Loan [11]

#### 3. SECURITY

3.1 What kind of security concern have you witnessed? Put  in the relevant cage.

(1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always)

Q. No	Particulars	1	2	3	4	5
1	System failure	3	10	38	2	0
2	Poor network connection	0	13	23	17	0
3	Wrong identification by customers	23	18	10	2	0
4	Fake currencies	42	8	3	0	0

3.2 Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	Customers fail to transact with agents because of lack of security and trust	6	20	17	9	1
2	Operation of the agent is monitored often to ensure the security and safety of the customers	0	0	3	30	20
3	Safety, security, and efficiency of the equipment used by the agents is monitored often to prevent tampering and manipulation by the agent.	0	2	6	23	22
4	Agents are trained frequently to ensure that they comply with the security standards	0	1	3	24	25

#### 4. LIQUIDITY

Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	Agent banking outlets are monitored to ensure sufficient liquidity	0	3	11	39	0
2	Agent banking outlets have daily limit of cash deposit and withdrawal	0	1	1	26	25
3	Lack of liquid cash at agent outlets leads to frustration	2	10	24	9	8
4	Lack of liquidity by agent bankers leads to loss of customers	2	10	15	19	7
5	Customers avoid agents because of perennial cash shortages.	8	15	13	13	4
6	Liquidity availability in agent outlets affect customer retention	2	7	7	32	5

## 5. COST

Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	Customers perceive the cost of banking with agents to be low	3	9	10	26	5
2	Customers prefer agents regardless of costs	1	8	14	28	2
3	Operational cost of agent banking affects the transaction cost of financial services	1	17	10	23	2

## 6. TECHNOLOGY

6.1 Technology used for providing financial services? (You can choose more than one option)

Mobile phone [18]    POS device [49]    CCTV [2]    Computer/ Laptop [15]

6.2 Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	Technology malfunction and server down leads to frustration and loss of customer	0	6	10	30	7
2	Agent user interface are accessible and simple	0	0	6	28	19
3	Technology of agent banking influence financial inclusion	0	0	8	27	18

## 7. FINANCIAL INCUSION

Give your opinion on the level of agreement or disagreement with the following statements. Put  in the relevant cage. (1 Strongly Disagree; 2 Disagree; 3 Neutral; 4 Agree; 5 Strongly Agree)

Q. No	Statements	1	2	3	4	5
1	The number of accounts opened has increased in our bank through agent	0	0	1	29	23
2	The number of cash deposit and withdrawal has increased in our bank through agent	0	0	4	31	18
3	Payment of utilities through banking system has increased	0	1	7	37	8
4	Inflow and outflow of remittance through banking system has increased	0	5	8	31	9



## APPENDICES 2

List of commercial banks and their branches providing agent banking services in Bagmati Pradesh, Nepal.

S. N	Commercial Banks	Branch Location	S. N	Commercial Banks	Branch Location
1	Citizen Bank	Bhaktapur	43	Machhapuchhre Bank	Boudha
2		Bhaisepati	44		Chapagaun
3		Banepa	45		Gajuri
4		Charikot	46		Kalanki
5		Kalanki	47		Kalika
6		Kupondole	48		Kirtipur
7		Kirtipur	49		Narayantar
8		Nayabazar	50		Parsa
9		Samakhusi	51		Pepsicola
10		Tokha	52		Sanothimi
11	Nepal Investment Bank Limited	Banepa	53	Siddhartha Bank	Tandi
12		Dolakha	54		Trishuli
13		Gongabu	55		Banepa
14		Hetauda	56		Charikot
15		Nuwakot	57		Golanjar
16		Ramechhap	58		Hetauda
17		Sindhuli	59		Kalanki
18		Sindhupalchowk	60		Nepaltar
19		Tripureshor	61		Roshi

20		Baneshwor	62		Baireni
21		Battar	63		Banepa
22		Bhaktapur	64		Barhabise
23		Chabahil	65		Bhakudobesi
24		Dhading	66		Chabahil
25		Gongabu	67		Dhapasi
26		Gwarko	68		Doramba
27	Everest Bank	Hakimchowk	69	Global IME	Hetauda
28		Hetauda	70	Bank	Kholesimal
29		Jorpati	71		Manthali
30		Kirtipur	72		Narayanghar
31		Lagankhel	73		Suryabinayak
32		Lazimpat	74		Tandi
33		Newroad	75		Thankot
34		Baireni	76		Timpure
35		Battar	77		Trishuli
36		Bhaisepati	78		Bagmati
37		Bharatpur	79		Jalbire
38	Sunrise Bank	Gotikhel	80		Kholesimal
39		Manthali	81	Kumari Bank	Melamchi
40		Pharping	82		Sanobharyang
41		Priti Gaupalika	83		Siddhalek
42		Tandi Branch	84		Tandi
			85	NIC Asia Bank	Kirtipur
			86		Tokha