Adoption of Cloud Based Banking Services among Select Bank Employers

Project Report

Submitted by

M.K. Samyuktha
[21PCO016]

Under the Guidance of

Dr. V. Vimala
Assistant Professor (SS)

In Partial Fulfillment of the Requirements for the Award of the Degree of Master of Commerce

Department of Commerce

Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 641043

May – 2023

Department of Commerce

Avinashilingam Institute for Home Science and Higher Education for Women

Coimbatore – 641043

Certificate

This is to certify that the project entitled

Adoption of Cloud Based Banking Services among Select Bank Employers

Is a record of bonafide work done by,

M.K. Samyuktha

[21PCO016]

Submitted in Partial Fulfilment of the Requirements for the Degree of Master of Commerce

11/05/2023

Signature of the Supervisor

Vice-Voce Examination held on 15.05.2023

11/5/23

Signature of the Head of the Department

15/5/23

Signature of the External Examiner

AVINASHILINGAM UNIVERSITY FOR HOME SCIENCE
DEPT OF COMMERCE
COIMBATORE 641 043

DECLARATION

I hereby declare that this project work entitled **Adoption of Cloud Based Banking Services among Select Bank Employers** submitted to Department of Commerce, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, in partial fulfillment of the requirements for the award of the **Degree of Master of Commerce** is the record of the original project work done by us during the period of study, under the supervision and guidance of **Dr.V.Vimala, Assistant Professor(SS),** Department of Commerce.

Place : Coimbatore

Date : 11.05.2023

11/05/2023

Signature of the Supervisor

M. K. Sowyuktha

Signature of the Candidate

ACKNOWLEDGEMENT

I would like to express my sincere thanks to God Almighty, for his constant love and grace that he has showered upon me.

I am grateful to **Prof. S. P Thyagarajan, Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing me an opportunity to conduct the project work.

My heartily thanks to **Dr. V. Bharathi Harishankar, Vice Chancellor,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for the resources facilitated for the conduct of the present study.

I express my humble gratitude to **Dr. S. Kowsalya, Registrar,** Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, for providing all facilities necessary for the study.

My special thanks to **Dr. P. Chitramani, Professor and Dean, School of Commerce and Management,** for her necessary help and support for completing the project successfully.

My sincere thanks to **Dr. P. Santhi, Professor and Head, Department of Commerce and Deputy Dean, School of Commerce and Management** for encouragement and help in conduct of the study and for her necessary help and support for completing the project successfully.

My heartfelt thanks are due to **Dr. V.Vimala, Assistant Professor (SS),** Department of commerce, for the guidance and for her valuable and patient help, affectionate support, expert suggestion, and motivation throughout the project.

I am thankful to all **Staff Members** of the Department of Commerce who rendered their help whenever required. The researcher owes heartfelt thanks and gratitude to the **Librarian** of Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore. I owe my special thanks to my beloved **Parents**, all my family members, friends, and well- wishers, who have helped me by providing full strength, support, and encouragement to complete the project successfully.

CONTENTS

LIST OF TABLES AND FIGURES

LIST OF FIGURES

Adoption of Cloud Based Banking Services among Select Bank Employers

Abstract

Cloud-based banking services have emerged as a key driver in transforming the traditional banking industry. This study aims to investigate the awareness level, perception, and satisfaction level of SBI and HDFC bank employees toward cloud-based banking services. Additionally, this study explores the factors that influence customers in the adoption of cloud-based banking services, as well as the efficacy of these services. Furthermore, the study aims to identify the risks and issues faced in the adoption of cloud-based banking services. In this study, the primary data was obtained and a multi-stage sampling technique was adopted for the selection of respondents. The sample was finite so it was determined by using Krejcie Morgan table. Based on this table, the sample size for SBI Bank employees was 354, while the sample size for HDFC Bank employees was 317. The data was collected through a structured questionnaire in face to face data method from 617 Bank employers. For analyzing the collected data, percentage analysis, frequency distribution was used. To test hypothesis, regression analysis and factor analysis were used through the SPSS software. The finding of the study reveals that large number of bank employers was aware of cloud based banking services and using this service. Some of the Cloud services are Software as a Service, Platform as a Service and Infrastructure as a Service. They are achieving some benefits but the same time they are also facing some issues and risks. As per the result, Bank employers are facing Cyber issues than the financial risks. Because, due to the risk of data breaches and security concerns some users may be hesitant to use cloud-based banking services. It can be concluded that cloud-based banking services are a valuable addition to the banking industry in Coimbatore, providing convenience and efficiency to bank employees.

Keywords: Cloud Computing, Adoption, Service models, Bank Employers.

CHAPTER – I

INTRODUCTION

1.1.Cloud Computing

The Cloud refers to a network of remote servers that are hosted on the internet and are used for storing, managing, and processing data. These servers are typically owned and operated by third-party companies, such as Amazon Web Services (AWS), Google Cloud, and Microsoft Azure, which provide various cloud-based services and resources to users. The term "cloud" is derived from the cloud symbol used in diagrams to represent the internet, reflecting the concept of remote and virtualized computing resources that are accessible over the internet.

Cloud computing is a type of computing that involves delivering hosted services over the internet. These services can be accessed through the internet using a web browser or a software application. Cloud computing allows users to access computing resources such as servers, storage, databases, networking, software, analytics, and intelligence over the internet.

Cloud computing can vary between different individuals. For some, it means accessing software and storing data in a "Cloud" model of the Internet or a network, as well as using associated services. Others regard it as nothing more than a modification of the time-sharing concept that was widely used in the 1960s prior to the introduction of comparatively lower-cost computing platforms. Cloud computing is sometimes regarded as a revival of the original mainframe client-server concept. (Timothy Grance and Peter Mell)

According to Mell and Grance (2011), cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. The National Institute of Standards and Technology (NIST) identify five essential characteristics of cloud computing: on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service.

1.2. Characteristics of Cloud Computing (Deyan Chen, and Hong Zhao, 2013)

The Cloud Computing technique is made up of five key components. The following are the five basic qualities of cloud computing:

A. Self-service available on demand: Customers can pre-order computing capabilities/resources such as server time and network storage as needed without requiring human intervention/interaction between the user and each cloud service provider. In other words, a company will obtain cloud-hosting services from a cloud-host provider, which may be your typical software vendor. Clients have access to your services and the ability to alter cloud services such as computing and storage as needed using an online control panel or directly with the provider, as well as manage and implement these services.

- Clients can change storage networks and software, as well as add or delete users. Normally, you are charged on a monthly basis or on a per-use basis. It suggests that a consumer can purchase service over the web or another manner at any time, 24 hours a day, seven days a week, and it will be immediately accessible for his or her usage.
- The self-service interface must be user pleasant and give effective ways to manage the service providing in order to be effective and acceptable to the consumer. Its ease of use and elimination of human interaction brings efficiency and cost savings to both the consumer and the cloud service provider.

B. Cloud Computing or Broad Network Access: All capabilities are available/over the network and accessed through standard procedures that support usage by heterogeneous thin or thick client platforms such as tablets, mobile phones, workstations, and laptops. In other words, a team may use their tablets, mobile phones/Smart phones, workstations, laptops/notebooks, and office PCs to access business management systems. With a simple connection to an online access point, anybody may utilize these devices from anywhere.

This mobility is appealing to businesses because it allows staff to keep on top of contracts, projects, and clients whether they are in the office or on the road, whether they are in the office or on the road. Public clouds and private clouds that run behind a company's firewall, as well as hybrid deployments, are examples of broad network access. It denotes diverse, extensive network accessibility for thick, thin, mobile, and other regularly used computer media.

In-house data centers must be available to connect to cloud services as a viable alternative to high-bandwidth lines. One of the economic benefits of cloud computing is the cheap cost of high-bandwidth network transmission to the cloud, which enables access to a bigger pool of information technology (IT) resources and allows for a higher level of utilization to be maintained. Most firms employ three-tier architecture to link a variety of computer platforms to the WAN, including printers, PDAs, mobile phones, and laptops (Wide Area Network).

This three-tier architecture includes the following components:

- Aggregation switches for connecting desktop devices to access switches
- Control flow aggregation switches
- Switches and core routers that link to traffic control and Wide Area Networks

C. Category-independent Resource Pooling: Using a multi-tenant approach, the provider's computing resources are pooled to serve numerous customers, with distinct physical and virtual resources dynamically assigned and reassigned based on consumer demand. There is a sense of location independence in that the customer has little control or knowledge of the exact location of the provided resources, but may be able to specify location at a higher level of abstraction, such as data center, state, or country, which includes resources such as processing, memory, storage, and network bandwidth.

The cloud enables your employees to enter and use data within the business management software hosted in the cloud at the same time, from any location, and at any time. This is an attractive feature for multiple business offices and field service or sales teams that are usually outside the office. It converts the aggregation of physical computing resources into a logical ‘pool’ that is dynamically allocated in a multi-tenancy capacity across broad application service requirements.

The cloud must have a large and flexible resource pool to meet the consumer‘s need, provide economies of scale, and meet service level requirements. Applications require resources for their execution, and these resources must be allocated efficiently for optimum performance. The resources can be physically located at many geographic locations and assigned as virtual components of the computation as needed.

D. Rapid Elasticity: It refers the ability of the cloud to expand or reduce allocated resources quickly and efficiently to meet the requirements of the self-service characteristic of Cloud Computing. This allocation might be done automatically and appear to the user as a large pool of dynamic resources that can be paid for as needed and when needed. One of the considerations in enabling rapid elasticity is the development and implementation of loosely coupled services that scale independently of other services and are not dependent on the elasticity of these other services.

E. Measured Service: Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth and active user accounts). Resource usage in the cloud can be monitored, controlled and reported, providing transparency for the provider and consumer. The affordable nature of the cloud, you only pay for what you use. You and your cloud provider can measure storage levels, processing, bandwidth, and the number of user accounts and you are charged appropriately. The amount of resources that you may use can be monitored and controlled from both your side and your cloud provider‘s side which provides transparency.

1.3. Technology Service Models of Cloud Computing

A cloud service model refers to the different ways in which a cloud computing service can be delivered to customers. The following are the main cloud service models:

A. Infrastructure as a Service
B. Platform as a Service
C. Software as a Service

A. Infrastructure as a Service

Infrastructure as a Service (IaaS) is a cloud computing model that provides virtualized computing resources, such as servers, storage, and networking, over the Internet. IaaS enables organizations to scale their IT infrastructure up or down according to their business needs and pay only for the resources they use.

IaaS has become an increasingly popular model for organizations to deploy their applications and services in the cloud. IaaS offers several benefits to organizations, including cost savings, scalability, and flexibility. IaaS enables organizations to reduce their capital expenditures on IT infrastructure, as they no longer need to invest in hardware and software

to support their applications. Moreover, IaaS allows organizations to scale their resources up or down as per their business needs and pay only for what they use. It makes IaaS an attractive option for organizations that experience fluctuating demand for their applications and services.

B. Platform as a Service (PaaS)

Platform as a Service is a cloud computing model that provides users with a complete platform, including hardware, operating system, programming language execution environment, and pre-installed software components, to develop, run, and manage their applications without the need to worry about the underlying infrastructure.

PaaS providers typically offer a range of tools and services to help developers build, test, and deploy applications, including software development kits, programming frameworks, application servers, and databases. PaaS also provides automatic scaling and load balancing, ensuring that applications can handle increasing traffic and demand without manual intervention.

One of the key benefits of PaaS is its ability to reduce the time and cost associated with developing and deploying applications. By providing a complete platform and pre-built components, PaaS allows developers to focus on building and customizing their applications, rather than worrying about infrastructure management. PaaS also makes it easy to deploy applications to multiple environments, including public and private clouds, and on-premise data centers.

C. **Software as a Service**

Software as a Service is a cloud computing model where a provider hosts and delivers software applications over the internet to users. Instead of purchasing and installing software on their computers, users access the software through a web browser or application interface. SaaS is a popular model for business applications such as customer relationship management (CRM), enterprise resource planning (ERP), and project management.

One of the benefits of SaaS is that it allows for flexible and scalable software usage, as users only pay for the software they use, and can easily increase or decrease usage as needed. SaaS also eliminates the need for companies to invest in expensive hardware and infrastructure to support their software applications, as the provider handles all maintenance,

updates, and security measures. However, there are also some potential drawbacks to SaaS, including concerns around data privacy and security, as well as the risk of vendor lock-in.

1.4. Deployment Model of Cloud Computing

In cloud computing, deployment models refer to the way cloud services are made available to customers. There are three main deployment models

A. Public cloud
B. Private cloud
C. Hybrid cloud
D. Community cloud

A. Public Cloud

A public cloud is a cloud computing model in which services are offered to the public over the internet. Public clouds are owned and operated by third-party service providers and are shared among multiple customers. This deployment model offers the benefits of scalability, low cost, and easy accessibility.

In the banking sector, the public cloud refers to the use of public clouds computing services, such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform (GCP), by banks and financial institutions to run their operations and services. The public cloud provides these organizations with the benefits of scalability, cost-effectiveness, and accessibility to a wide range of services.

Banks can use the public cloud for various purposes, such as hosting their websites and mobile applications, storing customer data and financial transactions, running analytics and big data applications, and developing and deploying new financial services and products. However, the use of the public cloud in the banking sector is often subject to regulatory compliance requirements and security concerns, which must be carefully managed to ensure the protection of sensitive financial information and to comply with industry regulations.

B. Private Cloud

A private cloud is a cloud computing model in which services are dedicated to a single organization. Private clouds can be operated by the organization itself or by a third-party service provider and can be located on-premises or off-premises. This deployment model offers increased security and control, but also comes with higher costs and increased management responsibilities.

Private clouds are often used by banks and financial institutions to meet specific security, privacy, and regulatory requirements that cannot be satisfied by public cloud services. With a private cloud, the organization has more control over the underlying infrastructure and can customize it to meet its specific needs. Banks can use private clouds for various purposes, such as running their core banking systems, storing and processing sensitive financial information, and hosting their mission-critical applications. Private clouds offer the benefits of increased security, control, and compliance, but also come with higher costs and management responsibilities.

The advantages of using a private cloud are

- **Customer Information Protection**

  In the private cloud security concerns are less since customer data and other sensitive information do not flow out of private infrastructure.

- **Infrastructure Ensuring**

  Private cloud provides specific operations such as appropriate clustering, data replication, system monitoring and maintenance, disaster recovery, and other uptime services.

- **Compliance with standard procedures and operations:**

  Specific procedures have to be put in place when deploying and executing applications according to third-party compliance standards. This is not possible in the case of a public cloud.

C. Hybrid Cloud

A hybrid cloud is a cloud computing model that combines the benefits of public and private clouds. Applications and services can be deployed in both public and private clouds, allowing organizations to use the most appropriate cloud for each workload. This deployment model offers flexibility and cost optimization, as well as improved data security and compliance. Banks and financial institutions can use hybrid clouds to deploy different applications and services in the most appropriate cloud environment for each workload.

Hybrid cloud offers banks and financial institutions greater flexibility, cost optimization, and improved security compared to relying solely on either public or private

clouds. However, it also requires careful management to ensure that sensitive data is properly protected and to ensure compliance with industry regulations.

D. Community Cloud:

Community clouds are distributed systems created by integrating the services of different clouds to address the specific needs of an industry, a community, or a business sector. In the community cloud, the infrastructure is shared between the organization which has shared concerns or tasks. The cloud may be managed by an organization or a third party. Sectors that use community clouds are

- **Media Industry:** Media companies are looking for a quick, simple, low-cost way for increasing the efficiency of content generation. Most media productions involve an extended ecosystem of partners. In particular, the creation of digital content is the outcome of a collaborative process that includes the movement of large data, massive compute-intensive rendering tasks, and complex workflow executions.
- **Healthcare Industry:** In the healthcare industry community clouds are used to share information and knowledge on the global level with sensitive data in the private infrastructure.
- **Energy and Core Industry:** In these sectors, the community cloud is used to cluster a set of solutions that collectively address the management, deployment, and orchestration of services and operations.
- **Scientific Research:** In this organization with common interests in science share a large distributed infrastructure for scientific computing.

1.5. Benefits Of Cloud Computing

Cloud computing has numerous benefits, which are as follows:

A. Quick Deployment or Scalability

All companies must deal with environmental changes. The capacity of Cloud Computing systems to scale up and down is a significant advantage. If an organization's computer resource demands are much greater or lower than usual, cloud technologies such as public and private can accommodate those fluctuations.

B. Startup Costs or Capital Investments are low

The number of cloud resources consumed by a customer may be dynamically and automatically allotted and monitored, which one of the characteristics of cloud is computing. Cloud systems automatically regulate and optimize resource utilization by using a metering capability at some level of abstraction relevant to the type of service for which it is used, according to optimize of the NIST. Storage, processing, bandwidth, and active user accounts are a few examples. Resource utilization may be monitored, regulated, and reported, giving transparency to both the service provider and the service customer.

C. Expenses based on usage or Subscription

Cloud computing is less expensive than traditional types of computing. Because the service provider is responsible for service availability, the maintenance cost is nothing. Our clients are free of resource machine maintenance and administration concerns. One of the most intriguing aspects of cloud computing is that customer's pay based on their use. In other words, the most tempting aspect of cloud computing is the "pay-as-you-go" concept.

D. Multi-tenant service or Resource sharing

Multi-tenancy is the underlying technology that clouds employ to share IT resources cost-effectively and securely. A cloud employs multi-tenancy technology to securely share IT resources across different applications and tenants, such as enterprises and organizations that use the cloud. Some clouds utilize virtualization-based designs to separate tenants, while others use proprietary software architectures.

The multitenant architecture of a cloud service may have a significant influence on an IT organization's application delivery and productivity, but most Chief Information Officers (CIOs) and Chief Technology Officers (CTOs) are unaware of this. (CTOs), system architects and developers who utilize clouds don't think twice about it since its all magic that happens transparently behind the scenes.

1.6. Features Of Cloud Computing

A. On-demand Self-service: Cloud computing provides users with the ability to quickly and easily provision computing resources as needed without the need for human interaction with service providers. (Mel and Grance, 2011).

B. Broad Network Access: Cloud computing allows access to computing resources over a wide range of networks and devices, enabling users to work from anywhere with an internet connection. (Armbrust et al. 2010).

C. Resource Pooling: Cloud computing enables multiple users to share the same pool of computing resources, making it more efficient and cost-effective. (Mel and Grance, 2011).

D. Rapid Elasticity: Cloud computing enables resources to be quickly and easily scaled up or down based on demand, allowing users to quickly respond to changing business needs. (Armbrust et al. 2010).

E. Measured Service: Cloud computing services are typically metered, allowing users to pay only for what they use, rather than making large upfront investments in computing infrastructure. (Mell and Grance, 2011).

1.7. Risks and Issues Faced in Adoption of Cloud Based Banking Technology

The adoption of cloud-based banking technology presents both benefits and risks to financial institutions. Here are some of the risks and issues associated with cloud-based banking technology adoption:

A. Data Security: One of the main risks of adopting cloud-based banking technology is data security. Financial institutions need to ensure that their sensitive data is secure and protected from unauthorized access. Cloud providers should be able to provide secure data centers, robust access control mechanisms, encryption, and multi-factor authentication to protect data. According to a survey by Deloitte, 42 percentage of financial institutions were concerned about the security of their data in the cloud. (Deloitte, 2021)

B. Regulatory Compliance: Financial institutions operate in a highly regulated environment, and they need to comply with strict regulations to ensure the safety and soundness of the financial system. Moving to the cloud requires a thorough analysis of regulatory compliance requirements to ensure that cloud-based services are in line with regulatory requirements. This includes compliance with data privacy regulations such as GDPR and CCPA. (Gartner, 2021)

C. Vendor Risk Management: Financial institutions need to have a robust vendor risk management framework in place to ensure that cloud providers meet their contractual obligations and service level agreements (SLAs). The framework should include regular

monitoring of cloud providers, due diligence, and contingency planning in case of service disruptions or contract breaches. (KPMG, 2021)

D. Operational Risk: Cloud-based banking technology can introduce operational risks such as system downtime, data loss, and cyber-attacks. Financial institutions need to have a comprehensive disaster recovery and business continuity plan to ensure that they can continue to operate in case of service disruptions. (PwC, 2021)

E. Cost: Cloud-based banking technology can be cost-effective for financial institutions, but it can also lead to hidden costs such as data transfer fees, licensing fees, and other expenses that can add up over time. Financial institutions need to carefully analyze the total cost of ownership before moving to the cloud. (McKinsey, 2021)

F. Integration Challenges: Banks often have complex IT systems with multiple applications and databases, and integrating these systems with a cloud-based platform can be challenging. Banks should work closely with their cloud service provider to ensure that their existing systems can be integrated smoothly and efficiently.

G. Data Migration Risks: Moving data from on-premises systems to the cloud can be a complex process, and there is a risk of data loss or corruption during migration. Banks should work with their cloud service provider to develop a comprehensive data migration plan that includes testing and verification to ensure the integrity of the data.

Overall, the adoption of cloud-based banking technology can bring significant benefits to banks and financial institutions, but it is important to carefully consider and address the risks and issues associated with this technology.

1.8. Cloud Based Banking Technology - A Global Perspective

Cloud-based banking services have gained significant attention in recent years due to their potential to offer increased efficiency, flexibility, and cost savings. From a global perspective, cloud-based banking services have become increasingly popular among financial institutions in both developed and developing countries.

The global cloud-based banking market is expected to grow at a CAGR of 22.4% from 2020 to 2027. The report notes that the increasing adoption of cloud-based banking services is driven by factors such as cost savings, scalability, flexibility, and agility.

In developed countries such as the United States, cloud-based banking services have become increasingly popular among large financial institutions. In developing countries, cloud-based banking services are also gaining traction due to their potential to offer cost-effective solutions for financial inclusion. In India, the government has launched a cloud-based platform called India Stack, which enables citizens to access financial services such as banking, insurance, and credit through their mobile phones.

Overall, cloud-based banking services offer numerous benefits to financial institutions, including increased efficiency, flexibility, and cost savings. As such, they are likely to continue to gain popularity in both developed and developing countries in the coming years.

1.9. Cloud Based Banking Technology - Indian Scenario

Cloud-based banking technology adoption is rapidly growing in India due to several advantages such as cost savings, scalability, flexibility, and enhanced security. According to a report by McKinsey, cloud adoption in Indian banking is expected to grow by 40% in the next two years.

The Reserve Bank of India (RBI) has also been actively promoting the use of cloud-based technology in Indian banks. In 2018, the RBI issued guidelines for banks to adopt cloud computing technology for their operations, subject to certain security and regulatory requirements. In a recent survey conducted by Deloitte, it was found that 69 percentages of Indian banks have either adopted or are planning to adopt cloud-based technologies. The survey also revealed that the main drivers for cloud adoption in the banking sector are improved agility, cost savings, and scalability.

Several banks in India including HDFC Bank, ICICI Bank, and Yes Bank have already started adopting cloud-based technology. HDFC Bank has migrated its entire mobile banking platform to the cloud. The move has helped the bank improve its digital offerings and enhance its customer experience.In 2019, ICICI Bank, one of India's largest private sector banks, announced that it had adopted a cloud-based application for its trade finance operations. The bank reported that the adoption of cloud technology had resulted in a 30% reduction in total cost of ownership and a 20 percentages of reduction in time taken to complete transactions.

SBI has adopted a cloud-based platform to provide a better banking experience for its customers. The bank has migrated its core banking system to a private cloud, which has helped it to reduce costs and improve its operational efficiency. The bank has partnered with Microsoft Azure to build a scalable and secure cloud platform that enables it to quickly launch new digital products and services.

Cloud-based banking technology adoption in India is expected to continue to grow in the coming years, as more banks recognize the benefits of cloud technology in enhancing their services and operations. They are leveraging this technology to improve their operations and deliver better services to their customers.

1.10. Statement of the Problem

The Adoption of Cloud Based Banking Technology among bank employees remains a challenge for many financial institutions. Despite the numerous benefits that come with cloud technology such as flexibility, cost savings, and improved efficiency, some bank employees remain hesitant to adopt this technology. The problem is that the reasons for the slow adoption of cloud-based banking technology among bank employees are not well understood, and there is a lack of research on how to encourage and facilitate the adoption of this technology in the banking industry. Therefore, there is a need to investigate the factors that influence bank employees' adoption of cloud-based banking technology and develop strategies to promote its adoption in the banking industry.

1.11. Need of the Study

- The necessity for a study on the adoption of cloud-based banking services specifically among bank employees is crucial to understand the underlying reasons for the low adoption rate and to provide insights that can assist financial institutions in increasing adoption rates.
- The study can also provide valuable information on employee attitudes, perceptions, and behavior towards these services, allowing for the development of effective training programs and strategies to improve adoption rates.
- Additionally, the study can highlight the potential benefits and challenges associated with cloud-based banking services, giving financial institutions a comprehensive understanding of the risks and opportunities linked to this technology.

- Ultimately, this study is crucial for driving innovation, improving efficiency, and enhancing the overall customer experience in the financial services industry.

1.12. Scope of the Study

The scope of this study is to examine the adoption of cloud-based banking services among bank employees in Coimbatore. Specifically, the research aims to identify the factors that influence bank employees' adoption of cloud-based banking services, including their perceptions of the benefits and risks associated with using cloud technology in their work. Additionally, the study will explore the extent to which bank employees are currently using cloud-based banking services and the factors that have contributed to their adoption or non-adoption of these services. The study will be limited to SBI and HDFC bank employees in Coimbatore city, and data will be collected using a survey questionnaire. The findings of this research will be useful to banks and other financial institutions looking to adopt cloud-based banking services and will help them understand the factors that influence employee adoption of this technology.

1.13. Objectives of the Study

The objectives of the study are as follows:

01. To know the awareness level and perception of Cloud Based Banking Services
02. To examine the factors that influence in adoption of Cloud Based Banking Services
03. To analyze the efficacy of cloud based banking services among Bank Employees
04. To measure the satisfaction level of Cloud Based Banking Services and
05. To identify the risks and issues faced in adoption of Cloud Based Banking Services.

1.14. HYPOTHESIS OF THE STUDY

A. SBI Bank Employers

H_{10}: The factors of Cloud Based Banking Services strongly influence the SBI bank employees.

H_{1a}: The factors of Cloud Based Banking Services is not strongly influence the SBI bank employees.

H_{20}: Cloud Based Banking Services and its performance strongly associated with SBI bank employers' efficiency.

H_{2a}: Cloud Based Banking Services and its performance is not strongly associated with SBI bank employers' efficiency.

H_{30}: Financial risks and Cyber issues are strongly associated with Cloud Based Banking Services of SBI Bank Employers

H_{3a}: Financial risks and Cyber issues are not strongly associated with Cloud Based Banking Services of SBI Bank Employers

B. HDFC Bank Employers

H_{10}: The factors of Cloud Based Banking Services strongly influence the HDFC bank employees.

H_{1a}: The factors of Cloud Based Banking Services is not strongly influence the HDFC bank employees.

H_{20}: Cloud Based Banking Services and its performance strongly associated with HDFC bank employers' efficiency.

H_{2a}: Cloud Based Banking Services and its performance is not strongly associated with HDFC bank employers' efficiency.

H_{30}: Financial risks and Cyber issues are strongly associated with Cloud Based Banking Services of HDFC Bank Employers

H_{3a}: Financial risks and Cyber issues are not strongly associated with Cloud Based Banking Services of HDFC Bank Employers

1.15. LIMITATIONS OF THE STUDY

The various limitations of the study are:

01. The study is mainly based on the primary data collected from 671 bank employers in Coimbatore. The inherent drawbacks of the primary data apply to the study.
02. The study covers only Coimbatore. So, the results found out the study may not be generalized.

1.16. CHAPTER SCHEME

The present study is categorized into five main chapters which are given below:

CHAPTER	NAME OF THE CHAPTER
I	Introduction
II	Review of literature
III	Research Methodology
IV	Analysis and Interpretation
V	Findings, Suggestions and Conclusions
	Bibliography
	Annexure

In the Chapter I – Introduction deals with the introductory aspects of Cloud banking, customers' benefit from cloud banking, factors influencing, statement of the problem, scope, objectives, hypothesis and the limitations of the study.

The Chapter II – It represents a comprehensive review of literature related to the research topic. It summarizes and critically evaluates the studies carried since 2011, highlighting their strengths, limitations, and relevance to the current study.

The Chapter III – It includes the research design, sample size determination, area of study selection, and the statistical tools used for data analysis. This chapter helps to ensure the validity and reliability of the research.

The Chapter IV – It represents the analysis and interpretation of data collected during the study. It outlines the methods used to analyze the data, the results obtained, and the conclusions drawn from the analysis. It helps to provide insights into the research findings.

The Chapter V - It summarizes the research findings, highlighting the key results and their implications. It also provides suggestions for further research and concludes with a comprehensive summary of the study, emphasizing its significance and contribution to the research field.

CHAPTER – II

REVIEW OF LITERATURE

2.1. Introduction

The literature in the area of cloud banking adoption is extensive, with studies ranging from simple case studies to cross-country and sector-wise comparisons. Given the vast number of works in this field, the literature review will be limited to studies that are most relevant to the objectives of the current research. The objective of this review is to identify the existing research gap and to highlight the most important findings from the available literature.

The literatures in the area of cloud based banking services are classified into four categories:

2.2.1. Cloud Computing services in banking sector in India.

2.2.2. Cloud Computing services in banking sector in other countries.

2.2.1. Cloud Computing Services in Banking Sector in India

(Rajput et al., 2020) sought to examine the Impact of cloud computing adoption on the performance of Indian banks. The data for the study was gathered from secondary sources from a sample of 50 banks. The findings revealed that cloud computing adoption had a positive impact on bank performance in terms of cost savings, increased efficiency, and improved customer experience.

(Goyal, 2019) his work entitled on Cloud Banking Adoption in India: Challenges and Opportunities. The study aims to explore the challenges and opportunities for cloud banking adoption in India. The study identified the following challenges to cloud banking adoption in India: Lack of Infrastructure, Limited awareness and Inadequate Regulatory Framework. However, it also revealed that cloud banking in India presents significant opportunities such as cost savings, scalability and flexibility.

(Kumar and Singh, 2019) their work focused on cloud adoption in the banking sector aims to identify the key factors that influence cloud adoption among Indian banks. The sample of the study was 200 bank employees and used regression analysis to identify the factors that had the greatest influence on cloud adoption. The result found that cost savings, agility, and scalability were significant factors that influenced cloud adoption. However, the authors note that customer trust was a critical factor in the adoption of cloud technology in

the banking sector. The study suggests that banks need to be transparent about the security measures in place and communicate the benefits of cloud technology to customers.

(Garg and Sharma, 2018) the objective of the study was to investigated the Impact of Customer Satisfaction on the Adoption of Cloud Banking in India. The sample was collected from 304 customers of cloud banking services in India. Structural Equation Modeling (SEM) and the Partial Least Squares (PLS) approach was used to analyze the data. The findings showed that customer satisfaction significantly influenced the adoption of cloud banking in India. In addition, trust, perceived usefulness and perceived ease of use were also found to be significant predictors of cloud banking adoption.

(Jena and Mohapatra, 2017) the study explored the Factors Influencing the Adoption of Cloud computing in the Banking Sector in India. The study employed a quantitative research approach with a survey questionnaire distributed to bank employees in India. The structured questionnaire was based on the Technology Acceptance Model (TAM). Factor Analysis and regression analysis were used to analyze the data. The findings revealed that perceived usefulness, perceived ease of use, compatibility, security and privacy concerns and top management support were the significant factors that influenced the adoption of cloud computing in the banking sector in India.

(Bhatia and Singh, 2017) their research works on Factors Affecting the Adoption of Cloud Computing by Banks in India. The study's objective was to identify the factors that influence cloud computing adoption in Indian banks. The sample was comprised of 150 workers from 15 banks. The variables were analyzed using Structural Equation Modeling (SEM). The study found that perceptions of cloud computing advantages, perceived security and trust, and organizational support had a significant effect on cloud computing adoption in Indian banks.

(Rani and Chauhan, 2017) work on Security and privacy concerns in the adoption of cloud banking in India. The objective of the study was to examine the impact of security and privacy concerns on the adoption of cloud banking in India. The sample size was 200 respondents from different parts of India. Descriptive statistics and logistic regression analysis were used to analyze the collected data. Results revealed that security and privacy concerns were significant barriers to the adoption of cloud banking in India. However, trust, perceived usefulness and compatibility were found to be significant predictors of cloud banking adoption.

(Asadi et al., 2016) explored the factors influencing cloud computing selection in the banking sector from the perspective of the customers. They established a target selection model. Data was collected by inquiry and analyzed using the Partial Least Squares method (PLS). The findings revealed that privacy and security mechanisms had a significant beneficial influence on perceived usefulness, trust, and convenience of use. The findings also revealed that perceived ease of use, affordability, utility, trust, and attitudes towards cloud computing had a significant influence on subscribers' behavioral intention to utilize cloud computing.

(Gupta and Bansal, 2015) work on the Adoption of Cloud computing In the Indian Banking sector. The Objective of the study was to examine the factors that influence the adoption of cloud computing in Indian banking industry. The sample was collected from 10 banks. Analytic Hierarchy Process (AHP) and Interpretive Structural Modeling (ISM) were used to analyze the data. The findings showed that the perceived benefits of cloud computing, perceived risks and challenges, and organizational readiness are the main factors that influence the adoption of cloud computing in the Indian banking industry.

2.2.2. Cloud Computing Services in Banking Sector in Other Countries

(Sarah Jackson Brown, 2022) the study entitled on the influence of cloud computing adaption on organization performance with particular reference to selected Commercial Banks in Ilala Municipality. The study aimed at analyzing how cloud computing improves bank operations, investigating the usefulness of cloud computing in increasing customer happiness, and identifying the problems and possibilities found by Commercial Banks in adopting and utilizing cloud computing services. Using basic random and purposive selection approaches, a sample of 70 respondents was chosen from the research population. The acquired collected data were analyzed using multiple regressions by using the Statistical Package for Social Science (SPSS). The results showed that cloud computing is simple to utilize in banking operations and that cloud computing in banks is accurate in data processing, which improves efficiency.

(Bernard Kotonya et al., 2022) the study was motivated by the following objectives: to determine the impact of on-demand self service, fast elasticity and the impact of widespread network connectivity, resource sharing, and metering on business strategic agility in Kenya commercial banks. The 42 commercial banks in Kenya were chosen as the study's targeted audience. Structured questionnaires were used to collect primary data. The statistical package for Social sciences was used to examine the data (SPSS Version 25). Results showed

that broadband network availability has a significant impact on firm strategic agility. The study also discovered that the number of sessions held had a minor impact on corporate strategic agility.

(Mohammed Hamdi et al., 2021). The study's goal was to look at the factors that influence the Saudi banking sector's attitude toward cloud computing. The research proposed a model that incorporates factors gathered from the literature to examine if particular factors favorably or adversely influence the Saudi banking sector's attitude toward cloud computing adoption. Data is collected from decision-makers and IT staff members in the Saudi banking sector using a quantitative manner. The findings revealed that security and privacy have a large negative impact on the Saudi banking sector's attitude towards cloud computing, whereas advantages and competition pressure have a big favorable impact.

(Ahmad et al., 2021) their research works on the Adoption of cloud banking technology in the Malaysian banking industry: The moderating role of organizational culture. A study of 150 Malaysian bank workers was undertaken to assess the usage of cloud banking technologies. The findings revealed that staff had a favorable attitude towards cloud banking technology and were eager to use it. The study discovered that corporate culture has a substantial impact on cloud banking technology adoption.

(Sadhana Tiwari et al., 2021) their research works on impact of Cloud Computing and Artificial Intelligence on Banking Services, Profitability and Operational Benefits. IT in the banking industry supports both banks and their clients. Banks' business models are now centered on delivering consumer joy through IT-enabled solutions and services. To assess the impact of cloud computing and artificial intelligence in operational and service advantage Confirmatory factor analysis (CFA) technique is used. The findings demonstrated how well the measured variables reflect the number of constructs and whether the estimation hypothesis is confirmed or rejected.

(Feng Lia, Hui Lu et al., 2020) explained Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. The study's objective was to examine the elements that influence consumer satisfaction with e-banking services. Cloud services, security, e-learning, and service quality are four elements that might influence client satisfaction with e-banking. The structural equation modeling approach was used in this work to assess the validity and reliability of the causal model with the measurement model. SMART PLS 3.2 was used to assess the data received from the questionnaires in the study

model. Based on the findings, four key elements impacting consumer satisfaction in utilizing internet banking services include cloud services, security, e-learning, and service quality.

(Dawit Hailu Tesema, 2020) the main objective of the study is to discuss challenges regarding cloud computing adoption in Commercial bank of Ethiopia. The study aimed to pinpoint the challenges and issues of cloud computing security and privacy issues, availability of strong band width telecom service present a strong barrier to adopt cloud computing systems in Commercial bank of Ethiopia. The researcher identified several challenges from the cloud computing adoption perspective and issue that deserves substantial further research and development.

(Younis et, al., 2020) the study investigated the adoption of cloud banking technology in developing countries by using Structural Equation Modeling (SEM). The survey was conducted with 300 bank customers in Pakistan. The results showed that the perceived benefits and ease of use have a significant influence on the adoption of cloud banking technology. Additionally, the study found that security concerns are the main barrier to the adoption of cloud banking technology.

(Aatish Bajracharya1 et, al., 2020) their research work on Cloud Computing Adoption in Banking System of Nepal. The purpose of the study is to look at the use of credit cards in the banking sector and to identify the significant obstacles and possibilities in Nepal. Security, network, accessibility, and other factors were shown to be key reasons for the delay in cloud adoption. According to the study's analysis, the primary aspects that may be expanded by efficient cloud appropriation are accessibility and security.

(Anisur Rahman and Abdullah-Al-Mamun, 2019) their research works on the Adoption of Cloud Computing in Banks. The study aims to provide an overview of cloud computing adoption in the banking sector. The authors reviewed 30 articles published between 2010 and 2018 and found that the primary objectives of cloud adoption in banking are cost reduction, increased efficiency, and improved customer experience. The authors also found that security and regulatory compliance are significant challenges to cloud adoption in banking.

(Alshehri and Drew, 2019) the study was to identify the Factors Influencing the Adoption of Cloud Based Banking Systems by Bank Employees. The study employed a quantitative research approach with a survey questionnaire distributed to bank employees in Saudi Arabia. The study used structured questionnaire based on the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology. Descriptive statistics, factor analysis and multiple regression analysis were used to analyze the data. The findings showed that perceived usefulness, perceived ease of use, attitude towards use and compatibility were significant factors that influenced the adoption of cloud based banking systems by employees.

(Dipak Adhikari and Thakur, 2019) their research work on critical success factors in cloud computing adoption in banking sector of Nepal. The study's objective was to identify some of the obstacles to CC adoption in Nepal's banking industry. To obtain primary data, a self-administered questionnaire was designed and sent to college students and banking workers in Kathmandu Valley, Nepal. The sample size was 176 people. The data was input into SPSS version 25 as well as Excel, and descriptive statistics were used. The findings revealed that the majority of students and bankers were agnostic about how transitioning Nepal's banking industry to cloud computing will assist the banking sector to secure more money and enhance investment.

(Mohammad Al Amin et, al., 2019). The study was entitled on Adoption of cloud computing in the banking sector: An empirical investigation. The study aims to investigate the factors that influence the adoption of cloud computing in the banking sector. The authors collected data from 154 bank employees and conducted a structural equation modeling analysis. The findings suggest that perceived usefulness and perceived ease of use are significant predictors of cloud adoption in banking.

(Huang and Li's, 2019) study investigates the impact of cloud technology on the perceived service quality of online banking. The study analyzed the association between cloud technology and perceived service quality using data from 520 online banking clients in China. To evaluate the data and examine the correlations between the variables, the structural equation modeling program was employed. The findings revealed that cloud technology had a favorable influence on perceived service quality, increasing customer happiness and loyalty.

(Ginardi et al., 2019) Analysis Of Application Based On Cloud Computing in Banking Industries In Indonesia Using Technology Acceptance Model (Tam) 2 Method: Case Study on the National Private Banks in Surabaya And Bali Region studied to determine the degree of user satisfaction with Cloud computing applications in Indonesian banks, employing the Technology acceptance model with social influence and external perspective variables (TAM2). About 90 questionnaires were distributed to banks and tested for validity and reliability, correlation and regression, variable descriptive analysis, and hypothesis. The study found that all TAM 2 hypotheses were acceptable, with the outcome quality variable having an effect on the benefits of using cloud computing applications at 41.2%.

(Shailja Tripathi and Vaibhav Mishra, 2019) the study explored the variables that impact users' behavioral intentions to adopt cloud computing for both adopter and non-adopter businesses. The research framework is based on the Valence Framework of Behavioral Beliefs theory and the Technology Acceptance Model (TAM). A questionnaire-based survey approach was used to collect data. There were 458 valid responses received. For data analysis, exploratory factor analysis (EFA) and structural equation modeling (SEM) was utilized. The findings showed that the influence of favorable characteristics such as perceived ubiquity and perceived advantages were shown to be more important in the case of adopter businesses than negative aspects.

(Rizwan et al., 2018) aimed to examine the factors that influence cloud computing adoption in Pakistan's banking industry. A questionnaire survey was used to collect data from a sample of 200 workers from various banks for the study. The findings revealed that perceived ease of use, perceived utility, and perceived risk were the most important factors influencing cloud computing adoption in the banking business.

(Rania Alrashoud and Hanaa Alshaikh, 2018) their research works on the Impact of Cloud Computing Technology on Banking Industry. The methodology used in the study was a qualitative approach, where the authors conducted interviews with bank employees to understand their perceptions of cloud computing. The findings suggest that cloud computing technology can improve the efficiency and security of banking operations.

(Soroya Hanif Soroya, Muhammad Usman, and Nusrat Yasmin, 2018).The study entitled on Cloud computing adoption in banking: a comparative analysis of Indian and Pakistani banks. The study aims to compare the adoption of cloud computing in Indian and Pakistani banks. The authors collected data from 150 bank employees and conducted a descriptive analysis. The findings suggest that Indian banks are more likely to adopt cloud computing technology than Pakistani banks. The authors suggest that this difference is due to differences in IT infrastructure and regulatory environment between the two countries.

(Kadhir and Rahman, 2017) the study was to explore the Adoption of Cloud Based Mobile banking among Customers in Malaysia. The study employed a qualitative research approach, with semi-structured interviews conducted with customers of a bank in Malaysia. The study used thematic analysis to analyze the data. The result showed that perceived usefulness, perceived ease of use, trust, security and privacy concerns, and perceived risk were significant factors that influenced customer adoption of cloud-based mobile banking.

(Bekele, 2017) explained in his paper Cloud Computing Readiness Assessment for Banking Sector in Ethiopia. Mixed research to address a research question, the technique was utilized, and data were analyzed using the SPSS application. TOE was the suggested model. The findings indicate that the banking sector's readiness for Cloud Computing is inadequate. Security and privacy are also major considerations. The most critical issues for firms considering Cloud Computing adoption are cost and security. In Ethiopia, there is no particular legislation that regulates cloud computing. Government assistance is not available to provide the required infrastructure such as bandwidth. Because of insufficient bandwidth availability, the quality of internet service is poor.

(Alsaidan et al., 2017) the study was to explore the Factors Influencing the Adoption of Cloud Computing Technology among Healthcare Organizations. The study conducted by used a survey of 215 healthcare organizations in Saudi Arabia. The study used structural equation modeling (SEM) to test the research model. The study found that the perceived usefulness and ease of use of cloud computing technology were the most important factors influencing adoption among healthcare organizations.

(Farnaz Ghane et al., 2016) the study evaluated the effect of cloud computing on the effectiveness of customer relationship management in the electronic banking industry regarding Eghtesad Novin Bank. The modified model (a conceptual model of the research) has been applied and tested in the CRM systems of the banks and has been implemented as an innovation. The data was collected through a questionnaire by field survey. Random sampling method was used to collect the respondents among bank customers. The results showed that using cloud computing method will be useful for the banks' success.

(Gounaris, Koritos, and Vassiliadis, 2016) investigate Cloud computing adoption in the banking sector from the perspective of the customer. The research investigates the elements that impact customer adoption of cloud computing in the banking sector. The authors conducted a survey with 525 bank customers in Greece and discovered that customers are normally positive about cloud adoption provided they believe it is helpful, safe, and simple to use. It highlighted the importance of trust and reputation in cloud adoption, as customers are more likely to use cloud-based services if they trust their bank and perceive it to be reliable.

(Mahbubur Rahman Syed and Salim Al Ismaili, 2016). The study aims to investigate Banking Customers' Acceptance of Cloud computing in a Developing Country Context. The authors collected data from 316 bank customers and conducted a structural equation modeling analysis. The findings suggest that perceived usefulness, perceived ease of use and perceived risk are significant predictors of customers' intention to use cloud computing in banking.

(Liang et al., 2016). The study was to investigate the Adoption of Cloud Computing Technology among Higher Education Institutions (HEIs) in the United States. The study conducted by used a survey of 257 HEIs in the United States to investigate the adoption of cloud computing technology. The study used logistic regression analysis to identify the factors that influence the adoption of cloud computing technology among HEIs. The study found that the size of the institution, the presence of an IT strategic plan, and the availability of IT staff were significant predictors of cloud computing technology adoption among HEIs.

(Samaila et al., 2015). The study was to examine the Factors Influencing the Adoption of Cloud Computing Technology among Small and Medium-sized Enterprises (SMEs). The study used a survey of 400 SMEs in the UK to identify the factors that influence their adoption of cloud computing technology. The study used factor analysis to identify six key factors, including cost, security, performance, flexibility, reliability, and scalability. The study found that cost, security, and performance were the most important factors influencing the adoption of cloud computing technology among SMEs.

(Anurag Bejju, 2014) his research work on Cloud Computing for Banking and Investment Services. Cloud Computing is a promising paradigm for delivering computing utilities as services. The purpose of this study was to provide an overview of cloud computing and to offer a business model to reduce the negative perceptions associated with cloud-based technology. It also explains n banking system vulnerabilities and investigates creative cloud computing applications in banks.

(Alawadhi and Almarzooqi, 2014) investigated the variables impacting Cloud Computing Adoption in the Banking Business in the United Arab Emirates. The study's sample size was 100 banks, and data were acquired using a questionnaire survey. The findings revealed that the main challenges to cloud computing adoption were security and privacy issues, a lack of confidence in cloud services providers and the perceived complexity of cloud computing.

(Tiago Oliveria et al., 2014). The study was based on the Diffusion of Innovation (DOI) theory and the technology organization environment (TOE) framework to examine the variables that impact cloud computing adoption. Data from 369 Portuguese enterprises was utilized to investigate the related hypotheses. The result showed that the industrial and services sectors have unique drivers of cloud computing adoption, emphasizing the need of taking into account the different characteristics of cloud computing across industries.

(Rania Fahim El-Gazzar et al., 2014) the research works on an Overview of Cloud Computing Adoption Challenges in the Norwegian Context. The study identified the cloud computing adoption challenges in Europe in general and Norway in specific. The findings are organized using isomorphic pressures (i.e., coercive, normative, and mimetic) borrowed from neo-institutional theory. The study concluded that despite the prevailing concerns about legal issues still existing; there is an increasing tendency toward adopting cloud computing in Norway.

2.2. Research Gap

Despite the growing trend of cloud-based banking services adoption, there is a research gap in understanding the specific reasons for the low adoption rate among bank employees. While previous studies have examined cloud adoption in various sectors, including healthcare and education, there is a lack of research focused specifically on the banking sector. Therefore, there is a need for further investigation into the adoption of cloud-based banking services among bank employees to identify the factors that contribute to the low adoption rate and to develop strategies to overcome these barriers.

2.3. Conclusion

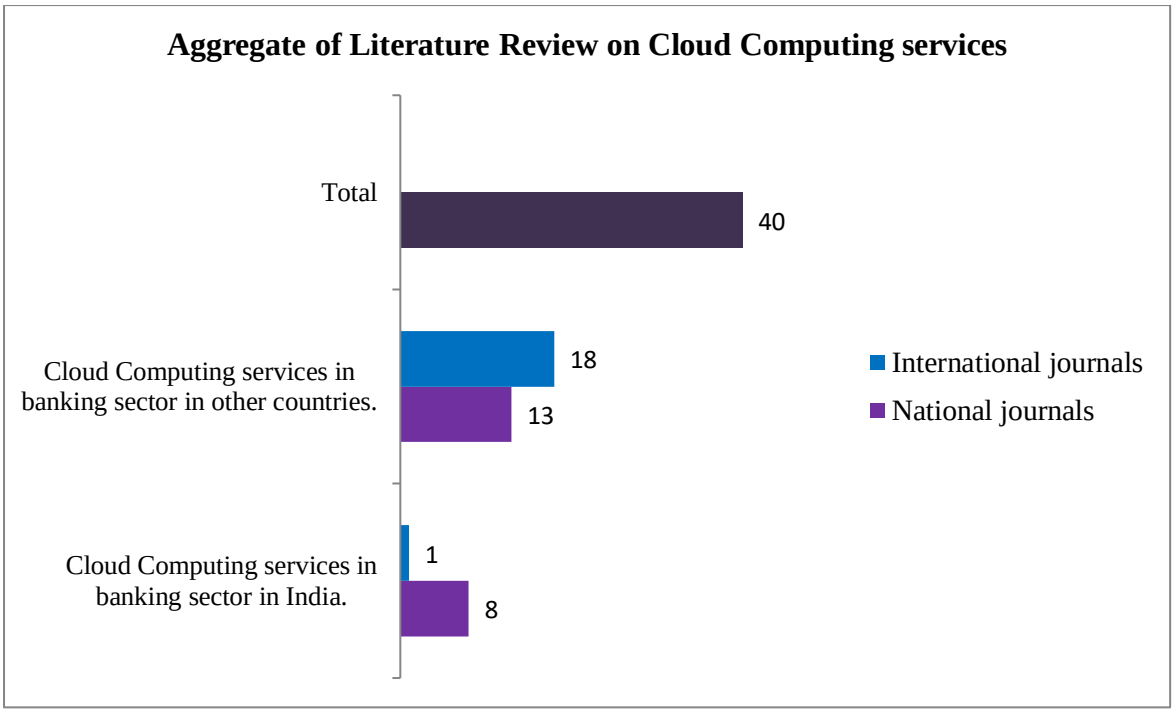
The review of research studies on the adoption of cloud based banking technology among bank employees in Tamilnadu, particularly in Coimbatore district and the related aspects revealed that the extent of research carried out on this topic is inadequate in Coimbatore. So it was noticed that there exists a research gap in this area. Hence, the study intends to investigate the awareness, perception, satisfaction, and impact of cloud based banking technology adoption among bank customers and employees in Coimbatore district, particularly in the selected sample.

Table – 2.1

Concept of Literature Review on Cloud Computing Services

Categories	**Literature**		
	National Journals	**International Journals**	**Total**
Cloud Computing services in banking sector in India.	08	01	09
Cloud Computing services in banking sector in other countries.	13	18	31
Total	**40**		

Figure – 2.1



Refrence and Notes

01. Rajput, N., Dahiya, R., & Mehta, N. (2020). Cloud computing adoption and its impact on the performance of Indian banks. *International Journal of Bank Marketing*, 38(2), 393-406.

02. Goyal, N., Pandey, A. K., Gupta, S. K., & Pandey, R. (2019, February). Suppleness of multi-tenancy in cloud computing: advantages, privacy issues and risk factors. In *Proceedings of International Conference on Sustainable Computing in Science, Technology and Management (SUSCOM), Amity University Rajasthan, Jaipur-India*.

03. Kumar, M., Sharma, S. C., Goel, A., & Singh, S. P. (2019). A comprehensive survey for scheduling techniques in cloud computing. *Journal of Network and Computer Applications*, *143*, 1-33.

04. Garg, S., & Sharma, M. (2018). Impact of customer satisfaction on the adoption of cloud banking in India. *Journal of Financial Services Marketing*, 23(4), 203-215.

05. Jena, R. K., & Mohapatra, R. K. (2017). Cloud computing adoption in banking sector: An empirical study of factors influencing cloud computing adoption in Indian banks. *Journal of Advances in Management Research*, 14(1), 63-80.

06. Bhatia, S., & Singh, H. (2017). Factors Affecting the Adoption of Cloud Computing by Banks in India. *Journal of Advances in Management Research*, 14(2), 192-209.

07. Rani, P., & Chauhan, R. (2017). Security and privacy concerns in the adoption of cloud banking in India. *Journal of Advances in Management Research*, 14(2), 167-181.

08. Asadi, S., Nilashi, M., Husin, A. R. C., & Yadegaridehkordi, E. (2017). Customers perspectives on adoption of cloud computing in banking sector. *Information Technology and Management*, *18*, 305-330.

09. Gupta, R., & Bansal, G. (2015). An Empirical Study on the Adoption of Cloud Computing in the Indian Banking Industry. *Journal of Technology Management for Growing Economies*, 6(2), 29-42.

10. Brown, S. J. (2022). Influence of Cloud Computing Adaption on Organization Performance: A Case Study of Selected Commercial Banks in Ilala Municipality. *International journal of Engineering, Business and Management*, *6*(4).

11. Kotonya, B., & Odollo, L. (2022). Effect of cloud computing strategies on business strategic agility in commercial banks in Kenya. *International Academic Journal of Human Resource and Business Administration*, *4*(2), 100-126.

12. Hamdi, M., Olayah, F., Al-Awady, A. A., Shamsan, A. F., & Ghilan, M. M. (2021). Attitude Towards Adopting Cloud Computing in the Saudi Banking Sector. *Intelligent automation and soft computing*, *29*(2), 605-617.

13. Ahmad, N., Shahzad, A., Ghani, U., Hassan, S., & Rana, R. A. (2021). Adoption of cloud banking technology in the Malaysian banking industry: The moderating role of organizational culture. *Journal of Business Research*, 133, 549-562.

14. Tiwari, S., Bharadwaj, S., & Joshi, S. (2021). A study of impact of cloud computing and artificial intelligence on banking services, profitability and operational benefits. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(6), 1617-1627.

15. Li, F., Lu, H., Hou, M., Cui, K., & Darbandi, M. (2020). Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. *Technology in Society*, *64*, 101487.

16. Tesema, D. H. (2020). Cloud computing adoption challenge in case of commercial bank of Ethiopia. *International Journal of Development Research*, *10*(1), 33562-33565.

17. Younis, R., & Adel, H. M. (2020, September). Artificial intelligence strategy, creativity-oriented HRM and knowledge-sharing quality: Empirical analysis of individual and organisational performance of AI-powered businesses. In *The Annual International Conference of The British Academy of Management (BAM)*.

18. Bajracharya, A., & Rouniyar, R. (2020). Cloud Computing Adoption in Banking System of Nepal. *LBEF Research Journal of Science, Technology and Management*, *2*(2).

19. Rahman, A., & Abdullah-Al-Mamun, M. (2019). Cloud Computing Adoption in Banking: A Literature Review. *Journal of Advanced Research in Dynamical and Control Systems*, 11(01), 118-126.

20. Alshehri, M. M., & Drew, M. S. (2019). Factors influencing adoption of cloud-based banking systems: an empirical study. *Journal of Enterprise Information Management*, 32(6), 932-950.

21. Adhikari, D., & Thakur, R. N. (2019). An exploratory study on critical success factors in cloud computing adoption in banking sector of Nepal. *Research Journal of Science, Technology and Management*, *1*(2), 1-19.

22. Al Amin, M., & Taskin, N. (2019). Adoption of cloud computing in the banking sector: An empirical investigation. *Journal of Enterprise Information Management*, 32(3), 491-514.

23. Huang, J., & Li, Y. (2019). The impact of cloud technology on perceived service quality in online banking. *Journal of Business Research*, 96, 365-376.

24. Purnama, I. W. J. W., & Ginardi, R. V. H. (2019). Analysis of Application Based on Cloud Computing in Banking Industries in Indonesia Using Technology Acceptance Model (TAM) 2 Method Case Study The National Private Banks in Surabaya and Bali Region. *IPTEK Journal of Proceedings Series*, (5), 519-526.

25. Tripathi, S., & Mishra, V. (2019). Determinants of cloud computing adoption: a comparative study. *Pacific Asia Journal of the Association for Information Systems*, *11*(3), 3.

26. Rizwan, M., Syed, A. A., & Muzaffar, M. A. (2018). Factors affecting cloud computing adoption in banking industry of Pakistan. *Journal of Electronic Commerce in Organizations*, 16(4), 1-12.

27. Alrashoud, Rania, and Hanaa Alshaikh. "Impact of Cloud Computing Technology on Banking Industry." *International Journal of Computer Science and Information Security 16*, no. 7 (2018): 67-72.

28. Soroya, S. H., Usman, M., & Yasmin, N. (2018). Cloud computing adoption in banking: a comparative analysis of Indian and Pakistani banks. *Journal of Asia Business Studies*, 12(1), 1-29. Kadir, K. M., & Rahman, M. S. (2017). Customer adoption of cloud-based mobile banking: A qualitative study. *Journal of Internet Banking and Commerce*, 22(1), 1-18.

30. Bekele, M., Zewdie, S., Boissière, M., & Atmadja, S. S. (2018). REDD+ MRV implementation in Ethiopia. Review of the context, framework and progress.

31. Alsaidan, S., Alshawi, S., & Alalwan, A. (2017). Factors influencing cloud computing adoption by healthcare organizations: A systematic review. *Journal of Health Informatics in Developing Countries*, 11(1), 1-16.

32. Ghane, F., Gilaninia, S., & Homayounfar, M. (2016). The effect of cloud computing on effectiveness of customer relation management in electronic banking industry: a case study of eghtesad novin bank. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, *5*(8), 50.

33. Gounaris, D., Koritos, C., & Vassiliadis, C. (2016). Cloud computing adoption in the banking sector: A comparative study. *Journal of Business Research*, 69(5), 1840-1844.

34. Syed, M. R., & Al Ismaili, S. (2016). Banking customers' acceptance of cloud computing in a developing country context. *Journal of Global Information Technology Management*, 19(4), 248-270.

35. Liang, X., Sarathy, R., & Huang, Y. (2016). Cloud computing adoption by higher education institutions in the USA: A survey-based study. *Journal of Computing in Higher Education*, 28(1), 1-22.

36. Kumar, D., Samalia, H. V., & Verma, P. (2015). Factors influencing cloud computing adoption by small and medium-sized enterprises (SMEs) in India. *Pacific Asia Journal of the Association for Information Systems*, *9*(3), 3.

37. Bejju, A. (2014). Cloud computing for banking and investment services. *Advances in Economics and Business Management*, *1*(2), 34-40.

38. Alawadhi, S., & Almarzooqi, G. (2014). The adoption of cloud computing in the banking industry in the UAE: A qualitative study. *Journal of Internet Banking and Commerce*, 19(2), 1-15.

39. Tiago Oliveira, Marlene Amorim, Ana Ferreira, and Manuel Castilho Coelho. (2014). Determinants of cloud computing adoption in the manufacturing and services sectors. *Journal of Information & Management*, 51(5), 497-510

40. El-Gazzar, R. F. (2014, December). An overview of cloud computing adoption challenges in the Norwegian Context. In *2014 IEEE/ACM 7th International Conference on Utility and Cloud Computing* (pp. 412-418). IEEE.

CHAPTER – III

RESEARCH METHODOLOGY

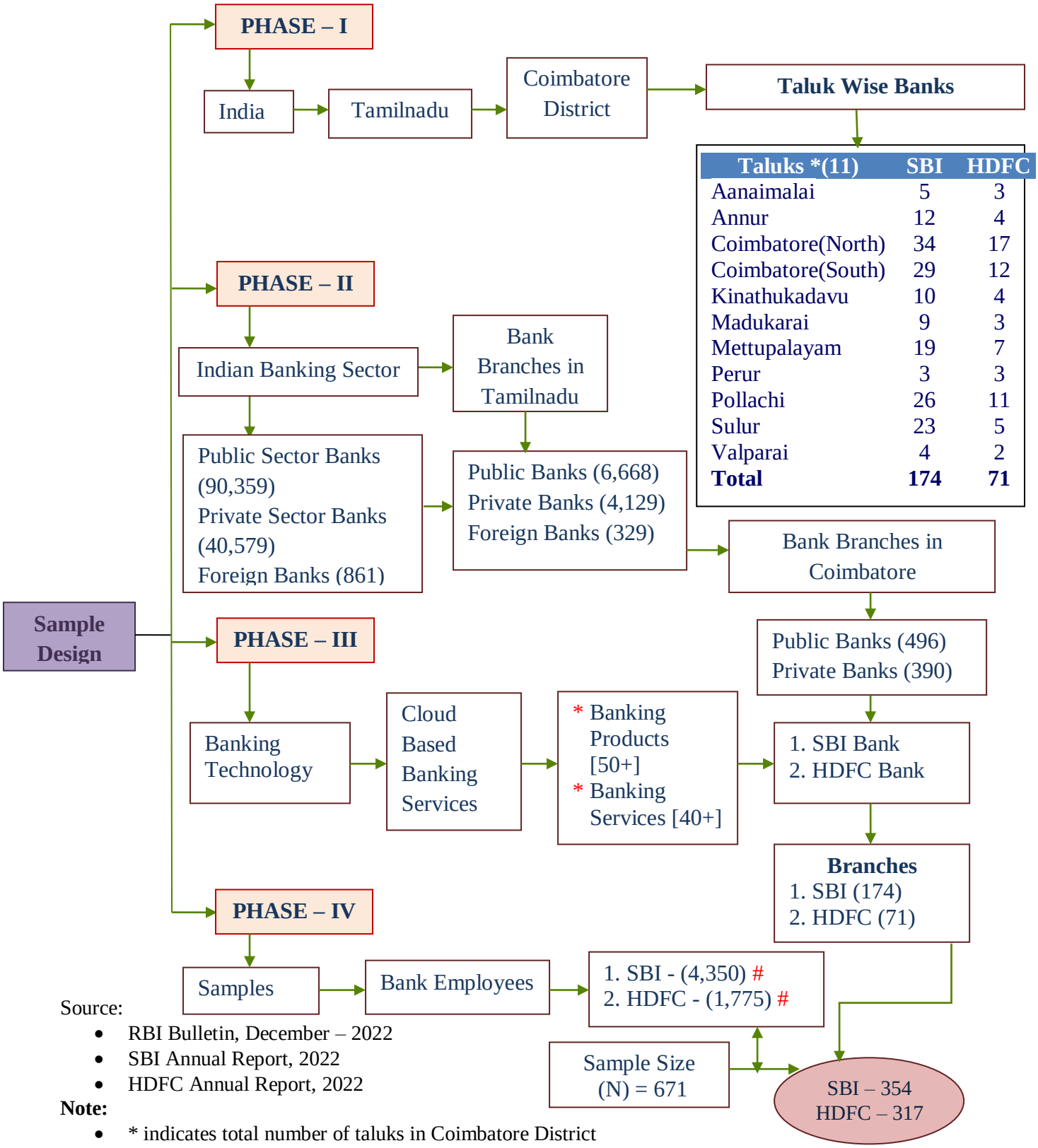
3.1. Introduction

The systematic and structured procedure of examining a subject or phenomenon in a specific field of study is referred to as research methodology. It includes developing a research topic or hypothesis, selecting appropriate research methodologies and procedures, collecting and analyzing data, and interpreting and presenting results. Research methodology aims to ensure that research is carried out in a trustworthy, logical, and ethical manner, yielding data that may be utilized to answer the research question or test the hypothesis. Researchers use research techniques to develop and carry out their investigations, and it helps to ensure that their findings are accurate, useful, and applicable to the area. The proposed study will be based on analytical and exploratory nature.

3.2. Sample Design

The Multi stage sampling technique adopts for selection of respondents for the study. The purpose of the study it is divided into four phases. In first phase, Coimbatore district was selected from the region of Tamilnadu. The sample was collected from 11 taluks. In second phase, both public and private sector bank was selected. The highly Cloud using banks have been selected. In public sector, State Bank of India (SBI)and in private sector, HDFC bank was selected . In third phase, from the banking technology, a Cloud Based Banking Service was selected. There are several products and services in banking sector. But only cloud computing service was taken as it offers a number of benefits to the banking sector, including cost savings, scalability, improved security, flexibility, and remote work capabilities. By adopting cloud computing services, banks can improve their efficiency, competitiveness, and overall customer experience. The sample was collected from both SBI and HDFC bank employees purposively.

Figure – 3.1 Sample Design



Taluks *(11)	SBI	HDFC
Aanaimalai	5	3
Annur	12	4
Coimbatore(North)	34	17
Coimbatore(South)	29	12
Kinathukadavu	10	4
Madukarai	9	3
Mettupalayam	19	7
Perur	3	3
Pollachi	26	11
Sulur	23	5
Valparai	4	2
Total	**174**	**71**

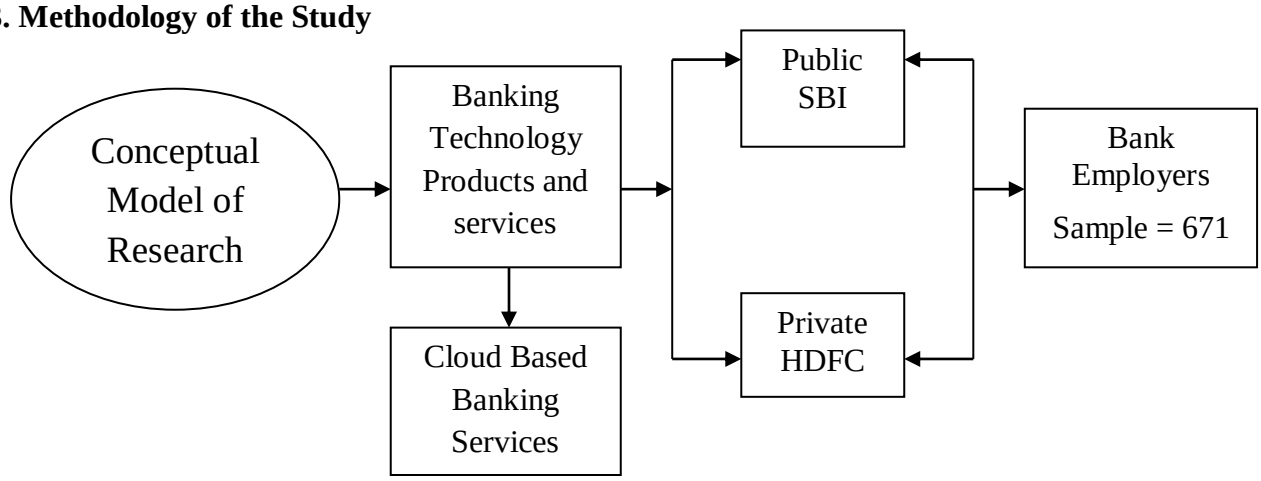
Source:

- RBI Bulletin, December – 2022
- SBI Annual Report, 2022
- HDFC Annual Report, 2022

Note:

- * indicates total number of taluks in Coimbatore District
- The numbers in parent thesis indicates total number of branches in India, Tamilnadu and Coimbatore respectively.
- The numbers in the parent thesis [ ] indicated numbers of banking products and services.
- The numbers in the parent thesis # indicates total number of Bank employers in SBI Bank and HDFC Bank.

3.3. Methodology of the Study



3.4. Sampling Size

The focus of this study is on employees of SBI and HDFC banks. To determine the appropriate sample size, the Krejcie Morgan formula was initially considered, but it was found that the table for determining sample size already had all the necessary provisions. Based on this table, the sample size for SBI Bank employers was 354 out of 4350, while the sample size for HDFC Bank employees was 317 out of 1775. Since the study is investigating both banks, the total sample size was 617 employees.

3.5. Methods of Data Collection

The present study will be based on analytical and exploratory nature. Accordingly, the uses of data have to be made of both primary as well as the secondary data. The relevant reports through Magazines, newspapers, business dailies, books and journals, e-media and other literature available in this field constitute Secondary sources for the present study. The awareness, perception, factors influencing, and others impacts of Cloud based banking technology is studied with the help of research instrument of structured questionnaire for bank customers and bank employees will be used to collect the data from them. The primary data has been collected, through a research structure from 671 bank employees, in Coimbatore. As a tool of research instrument, structured questionnaire has been used to obtain data by face-to-face data collection method. The study adapts the questionnaires from various part studied related to the topic.

3.6. Statistical Tools and Techniques

To analyze the collected data, various statistical techniques and tools such an averages, frequency distribution tables, and normal distribution will be used as per the requirement of the data and for the analysis purposes.

To arrive at a relevant interpretation, the obtained data will be processed and presented logically. This research will utilize appropriate statistical techniques such as descriptive statistics and regression, factor analysis, and other tools such as tables, diagrams, and so on, to evaluate both primary and secondary data and to strengthen the presentation. The above-mentioned tests and statistical approaches were utilized to examine the data by using Statistical Package for Social Science (SPSS) software program.

A. Percentage Analysis

Percentage analysis is a method that is used to represent the proportion or percentage of respondents falling into each category. It is used to convey the total frequency of respondents or responses in a percentage format.

B. Regression Analysis

Regression analysis is a statistical technique used to determine the relationship between a dependent variable (also known as the outcome or response variable) and one or more independent variables (also known as predictors or explanatory variablesThe mathematical equation that represents the relationship between the dependent variable and the independent variables is called the regression equation. It is often used to predict the value of the dependent variable based on the values of the independent variables.

In regression analysis, the dependent variable is often called the response variable or outcome variable, and the independent variables are often called predictor variables or explanatory variables. The goal of regression analysis is to find the best relationship between the dependent variable and the independent variables. Regression analysis can be used for various purposes, such as predicting future values of a dependent variable, identifying the strength and direction of the relationship between the dependent and independent variables, and determining the effect of changes in the independent variables on the dependent variable.

C. Factor Analysis

Factor analysis is a statistical technique used to identify underlying factors or dimensions that explain the correlations among a set of observed variables. The goal of factor analysis is to reduce the complexity of a large set of variables into a smaller set of factors or latent variables, which are easier to interpret and understand. Factor analysis assumes that the observed variables are influenced by one or more underlying factors or dimensions. The factors are not directly observed, but are inferred from the observed variables. The observed variables are often measured on continuous scales, such as Likert scales or interval scales.

Factor analysis works by extracting the factors that explain the maximum amount of variance in the observed variables. The extraction process involves transforming the observed variables into a smaller set of uncorrelated factors using mathematical algorithms such as principal component analysis or maximum likelihood estimation. The number of factors to be extracted is often determined based on the given values, which indicate the amount of variance explained by each factor.

D. Reliability Test

Simply put, a reliable measuring instrument is one which gives you the same measurements when you repeatedly measure the same unchanged objects or events. We shall briefly discuss here methods of estimating an instrument's reliability. The theory underlying this discussion is that which is sometimes called "classical measurement theory." The foundations for this theory were developed by Charles Spearman (1904, "General Intelligence," objectively determined and measures. American Journal of Psychology, 15, 201-293).

Cronbach's alpha is the most common measure of internal consistency ("reliability"). It is most commonly used when you have multiple Likert questions in a survey/questionnaire that form a scale and you wish to determine if the scale is reliable. If you are concerned with inter-rater reliability, we also have a guide on using Cohen's (κ) kappa that you might find useful.

3.7. Period of the Study

The present study covers a period of six months and will be undertaken from December 2022 to May 2023.

3.8. Conclusion

This chapter describes the method of study and discussed various statistical tools and techniques used to analyze the collected data and helped to interpret the results.

CHAPTER – IV

ANALYSIS AND INTERPRETATION

4.1. Introduction

Data analysis is the process of examining, cleaning, transforming, and modeling data to discover useful information, conclude, and support decision-making. Data analysis can be done using a variety of techniques, such as statistical analysis, machine learning, data visualization, and data mining. Data interpretation, on the other hand, is the process of making sense of the data that have been analyzed. It involves examining the results of the data analysis and concluding them. Interpretation requires an understanding of the context in which the data was collected and the methods used to analyze it. In general, data analysis and interpretation are crucial steps in turning raw data into actionable insights. By analyzing and interpreting data, we can gain a deeper understanding of the underlying patterns and trends, identify potential issues or opportunities, and make informed decisions based on the insights gained from the data.

The goal of data analysis and interpretation is to extract meaning from the data and draw conclusions that can inform decision-making or answer research questions. Data analysis and interpretation are crucial components of the research process and play a vital role in ensuring that the results of the research are accurate, reliable, and useful.

4.2. Analysis and Interpretation

A Socio-Economic Profile is a collection of personal details that describe an individual's social and economic status. It includes information such as a person's name, age, gender, educational qualification, occupation, monthly or annual income, marital status, and family members. This information can be used to gain insights into a person's lifestyle, attitudes, and behaviors. Socio-Economic Profiles are often used in socioeconomic studies to better understand the impact of various social and economic factors on people's lives.

Table – 4.1
Socio Economic profile of Select Bank Employers in Coimbatore

Sl. No	Description	Category	SBI (N=354)	Percentage (In %)	HDFC (N=317)	Percentage (In %)
01.	Age	20 – 30	119	33.6	112	35.3
		31 – 40	151	42.7	140	44.2
		41 – 50	75	21.2	59	18.6
		51 – 60	9	2.5	6	1.9
		60 and Above	-	-	-	-
02.	Gender	Male	185	52.3	166	52.4
		Female	169	47.7	151	47.6
03.	Qualification	Up to SSLC	-	-	-	-
		HSC	1	0.3	-	-
		Under Graduate	230	65.0	216	68.1
		Post Graduate	76	21.5	63	19.9
		Professional Course	34	9.6	28	8.8
		Certification Course	13	3.7	10	3.2
04.	Designation	Clerk	42	11.9	44	13.9
		Manager	72	20.3	66	20.8
		Assistant Manager	88	24.9	71	22.4
		Cashier	63	17.8	55	17.4
		Financial Advisor	57	16.1	50	15.8
		Loan Officer	32	9.0	31	9.8
05.	Department	Accounting	66	18.6	62	19.6
		Management	143	40.4	131	41.3
		IT	109	30.8	94	29.7
		Marketing	36	10.2	30	9.5
06.	Experience	Less than 1 year	27	7.6	20	6.3
		1 – 5 years	121	34.2	102	32.2
		6 – 10 years	143	40.4	133	42.0
		Above 10 years	63	17.8	62	19.6
08.	Income	Below ₹.10,000	-	-	-	-
		₹.10,000 – ₹.20,000	6	1.7	9	2.8
		₹. 21,000 – ₹.30,000	22	6.2	25	7.9
		₹.31,000 – ₹.40,000	59	16.7	54	17.0
		₹.41,000 – ₹.50,000	94	26.6	85	26.8
		₹.51,000 – ₹.1,00,000	106	29.9	94	29.7
		Above ₹.1,00,000	67	18.9	50	15.8
06.	Marital Status	Unmarried	141	39.8	124	39.1
		Married	213	60.2	193	60.9
07.	Family Members	Up to 3	73	20.6	65	20.5
		4 – 6	215	60.7	196	61.8
		6 and above	66	18.6	56	17.7

Source: Survey Data, 2023
Note: N – Number of respondents,
Total number of respondents: SBI + HDFC = 354+317=671

Inference

The table 4.1 provides information about the demographic profile of employees in two banks, SBI and HDFC.

In both banks, the majority of employees fall in the age group of 31-40, with 42.7 percentages in SBI and 44.2 percentages in HDFC. The number of employees in the 41-50 age group is 21.2 percentages in SBI and 18.6 percentages in HDFC. The number of employees above the age of 50 is very low in both banks.

The gender distribution is almost similar in both banks, with 52.3 percentages male employees in SBI and 52.4 percentages in HDFC. The remaining employees are females, accounting for 47.7 percentages in SBI and 47.6 percentages in HDFC.

The majority of employees in both banks have an undergraduate degree, with 65 percentages in SBI and 68.1 percentages in HDFC. The number of employees with a professional or certification course is relatively low.

The most common designation in both banks is Assistant Manager, with 24.9 percentages in SBI and 22.4 percentages in HDFC. The least common designation is Loan Officer, accounting for 9 percentages in SBI and 9.8 percentages in HDFC.

The majority of employees in both banks work in management, with 40.4 percentages in SBI and 41.3 percentages in HDFC. The next largest group is IT, accounting for 30.8 percentages in SBI and 29.7 percentages in HDFC. The least common department is marketing.

The majority of employees in both banks have 6-10 years of experience, with 40.4 percentages in SBI and 42 percentages in HDFC. The next largest group is employees with 1-5 years of experience, accounting for 34.2 percentages in SBI and 32.2 percentages in HDFC. The least experienced group is employees with less than 1 year of experience.

The majority of employees in both banks earn between ₹.51, 000 - ₹.1, 00,000, with 29.9 percentages in SBI and 29.7 percentages in HDFC. The next largest group is employees earning between ₹.41, 000 - ₹.50, 000, accounting for 26.6 percentages in SBI and 26.8 percentages in HDFC. The least common group is employees earning below ₹.10, 000.

The majority of employees in both banks are married, accounting for 60.2 percentages in SBI and 60.9 percentages in HDFC. Unmarried employees account for 39.8 percentages in SBI and 39.1 percentages in HDFC.

The majority of employees in both banks have 4-6 family members, accounting for 60.7 percentages in SBI and 61.8 percentages in HDFC. The next largest group is employees with up to 3 family members, accounting for 20.6 percentages in SBI and 20.5 percentages in HDFC. The least common group is employees with 6 or more family members.

Table – 4.2

Awareness of Cloud Based Banking Services of Select Bank Employers

Particulars	SBI Bank Employers (N=354)	HDFC Bank Employers (N=317)	Percentage (In %)
Yes	354	317	100
No	-	-	-

Source: Survey Data, 2023
Note: N – Number of respondents,
Total number of respondents: SBI + HDFC = 354+317, Sample = 671

Inference

The above table 4.2 shows the awareness of cloud-based banking services among employees of two banks, SBI and HDFC. Employees of both banks were surveyed, and 100 percentages of them were aware of cloud-based banking services. This indicates that both SBI and HDFC banks have made efforts to educate their employees about cloud-based banking services and have ensured that their staff is well informed about this technology.

Table – 4.3

Sources to know about Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Advertisements	176	49.7	91	25.7	85	24.0	1	0.3	1	0.3
2.	Newspaper	98	27.7	172	48.6	76	21.5	4	1.1	4	1.1
3.	Bank Employers	129	36.4	139	39.3	86	24.3	-	-	-	-
4.	Family member/Relatives	106	29.9	188	53.1	59	16.7	1	0.3	-	-
5.	Friends	115	32.5	134	37.9	85	24.0	15	4.2	5	1.4
6.	E-mail	59	16.7	111	31.4	120	33.9	59	16.7	5	1.4
7.	Television	34	9.6	25	7.1	109	30.8	126	35.6	60	16.9
8.	Journals	111	31.4	164	46.3	73	20.6	6	1.7	-	-

Source: Survey Data, 2023
Note: N – Number of respondents, N = 354
5 – Completely Aware, 4 – Aware, 3 – Neutral, 2 – Unaware, 1 – Completely Unaware

Inference

The above table 4.3 shows the percentage of bank employers who use different sources to know about cloud-based banking services. The highest percentage of bank employers 49.7 percentages rely on advertisements to learn about cloud-based banking services, followed by journals 31.4 percentages, bank employers 36.4 percentages, friends 32.5 percentages, family members/relatives 29.9 percentages, newspapers 27.7 percentages, e-mails 16.7 percentages, and television 9.6 percentages. This indicates that advertisements are the most popular source of information for bank employers to learn about cloud-based banking services. Journals and bank employers themselves are also important sources of information.

Table – 4.4

Sources to know about Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Advertisements	84	26.5	165	52.1	59	18.6	5	1.6	4	1.3
2.	Newspaper	141	44.5	79	24.9	95	30.0	1	0.3	1	0.3
3.	Bank Employers	111	35.0	120	37.9	86	27.1	-	-	-	-
4.	Family member/Relatives	87	27.4	180	56.8	49	15.5	1	0.3	-	-
5.	Friends	100	31.5	121	38.2	74	23.3	16	5.0	6	1.9
6.	E-mail	54	17.0	104	32.8	104	32.8	52	16.4	3	0.9
7.	Television	3	0.9	20	6.3	108	34.1	117	36.9	46	14.5
8.	Journals	108	34.1	140	44.2	65	20.5	4	1.3	-	-

Source: Survey Data, 2023
Note: N – Number of respondents, N = 317
5 – Completely Aware, 4 – Aware, 3 – Neutral, 2 – Unaware, 1 – Completely Unaware

Inference

The above table 4.4 represents the sources through which bank employers have come to know about cloud-based banking services. The highest percentage of bank employers, 44.5 percentages, has known about cloud-based banking services through newspaper. The second most common source of information for bank employers is through journals, with 34.1 percentages. The third most common source of information is bank employers 35 percentages. Other sources of information include family members/relatives 27.4 percentages, friends 31.5 percentages, advertisements 26.5 percentages, e-mail 17 percentages, and television 0.9 percentages. It is worth noting that only a small percentage of respondents cited television as a source of information

Table – 4.5

Usage of Cloud Based Banking Services of Select Bank Employers

Particulars	SBI Bank Employers (N=354)	HDFC Bank Employers (N=317)	Percentage (In %)
Yes	354	317	100
No	-	-	-

Source: Survey Data, 2023

Note: N – Number of respondents,

Total number of respondents: SBI + HDFC = 354+317, Sample = 671

Inference

The above table 4.5 shows that the usage of cloud based banking services is at 100 percentages among the bank employers of both SBI and HDFC. This adoption indicates that they are leveraging the benefits of cloud computing, such as scalability, cost-effectiveness, and flexibility, to enhance their operations. The high percentage of bank employers using cloud computing services also suggests that the banks have invested in training and up skilling their workforce to use the technology efficiently.

Table – 4.6

Usage of Cloud Computing Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Software as a Service	187	52.8	99	28.0	53	15.0	13	3.7	2	0.6
2.	Platform as a Service	121	34.2	196	55.4	31	8.8	3	0.8	3	0.8
3.	Infrastructure as a Service	82	23.2	171	48.3	79	22.3	19	5.4	3	0.8

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 354

5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Inference

The above table 4.6 provides information on the usage of different types of cloud-based banking services among bank employers. The highest percentage of bank employers is using Software as Service 52.8 percentages using this service. The next highest percentage of bank employers is using Platform as Service 34.2 percentages. Finally, Infrastructure as a Service has the lowest percentage of bank employers using it, with 23.2 percentages using this service. This indicates that SaaS is the most popular type of cloud-based banking service among bank employers, followed by PaaS and IaaS.

Table – 4.7

Usage of Cloud Computing Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Software as a Service	161	50.8	81	25.6	60	18.9	13	4.1	2	0.6
2.	Platform as a Service	108	34.1	178	56.2	27	8.5	2	0.6	2	0.6
3.	Infrastructure as a Service	71	22.4	155	48.9	74	23.3	15	4.7	2	0.6

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Inference

The above table 4.7 provides information on the usage of different types of cloud-based banking services among bank employers, categorized into Software as a Service SaaS, Platform as a Service PaaS, and Infrastructure as a Service IaaS. The table shows that SaaS has the highest percentage of usage at 50.8 percentages, followed by PaaS at 34.1 percentages, and IaaS at 22.4 percentages. This shows that bank employers are mainly utilizing SaaS-based cloud services in their operations, followed by PaaS and IaaS.

Table – 4.8

Years of using Cloud Computing Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Less than 6 months	144	40.7	114	32.2	84	23.7	6	1.7	6	1.7
2.	6 months to 1 year	155	43.8	152	42.9	44	12.4	-	-	3	0.8
3.	1 to 2 years	91	25.7	193	54.5	64	18.1	-	-	6	1.7
4.	2 to 3 years	110	31.1	113	31.9	119	33.6	6	1.7	6	1.7
5	More than 3 years	117	33.1	156	44.1	75	21.2	3	0.8	3	0.8

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354
5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Inference

The table 4.8 shows the number and percentage of bank employees who have used cloud computing services for different periods. The highest percentage of employees, 43.8 percentages have used them for 6 months to 1 year, and 40.7 percentages have used them for less than 6 months and 33.1percentages have used these services for more than 3 years. The lowest percentage, 31.1 percentages who have used them for 2 to 3 years, followed by 25.7 percentages, have used cloud computing services for 1 to 2 years.

Table – 4.9

Years of using Cloud Computing Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Less than 6 months	131	41.3	142	44.8	42	13.2	-	-	2	0.6
2.	6 months to 1 year	126	39.7	100	31.5	83	26.2	4	1.3	4	1.3
3.	1 to 2 years	79	24.9	175	55.2	59	18.6	-	-	4	1.3
4.	2 to 3 years	106	33.4	97	30.6	106	33.4	4	1.3	4	1.3
5	More than 3 years	102	32.2	149	47.0	62	19.6	2	0.6	2	0.6

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Inference

The above table 4.9 represents the number and percentage of bank employees who have used cloud computing services for varying periods of time. The highest percentage of employees falls under the category of 6 months to 1 year with 39.7 percentages, followed by less than 6 months with 41.3 percentages. The next two categories, 2 to 3 years and more than 3 years, have similar percentages with 33.4 percentages and 32.2 percentages, respectively. The category with the lowest percentage is 1 to 2 years with 24.9 percentages.

Table – 4.10
Perception of Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Are you comfortable in using cloud-based banking services?	199	56.2	102	28.8	47	13.3	3	0.8	3	0.8
2.	Would you familiar with cloud based banking services?	115	32.5	175	49.4	55	15.5	6	1.7	3	0.8
3.	Do you feel that cloud-based banking services offer more convenience compared to traditional banking services?	128	36.2	135	38.1	91	25.7	-	-	-	-
4.	Do you trust the security of cloud-based banking services?	181	51.1	98	27.7	70	19.8	3	0.8	2	0.6
5.	Do you feel comfortable using cloud-based banking services for financial transactions?	118	33.3	189	53.4	44	12.4	3	0.8	-	-
6.	Do you believe cloud-based banking services are secure and protect the information?	118	33.3	150	42.4	80	22.6	6	1.7	-	-
7.	Do you prefer using cloud-based banking services over traditional banking services?	150	42.4	125	35.3	76	21.5	3	0.8	-	-
8.	Do you believe cloud-based banking services are the future of banking?	166	46.9	97	27.4	85	24.0	4	1.1	2	0.6
9.	Do you agree that cloud based banking services are user friendly?	130	36.7	169	47.7	52	14.7	3	0.8	-	-
10.	Would you recommend cloud-based banking services to others?	110	31.1	142	40.1	99	28.0	3	0.8	-	-
11.	Do you think cloud-based banking services are more secure than traditional banking services?	138	39.0	159	44.9	57	16.1	-	-	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354
5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

From the above table 4.10, the highest percentage of employees 56.2 percentages reported feeling comfortable using cloud-based banking services. 51.1 percentages of employees reported trusting the security of cloud-based banking services. The majority of employees 46.9 percentages believed that cloud-based banking services are the future of banking, while 39.0 percentages thought that cloud-based banking services are more secure than traditional banking services. On the other hand, the lowest percentage of employees, at 32.5 percentages reported being familiar with cloud-based banking services. 31.1 percentages indicated that they would recommend cloud-based banking services to others.

Table – 4.11
Perception of Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Are you comfortable in using cloud-based banking services?	183	57.7	79	24.9	79	24.9	2	0.6	2	0.6
2.	Would you familiar with cloud based banking services?	99	31.2	161	50.8	51	16.1	4	1.3	2	0.6
3.	Do you feel that cloud-based banking services offer more convenience compared to traditional banking services?	115	36.3	122	38.5	80	25.2	-	-	-	-
4.	Do you trust the security of cloud-based banking services?	155	48.9	88	27.8	69	21.8	3	0.9	2	0.6
5.	Do you feel comfortable using cloud-based banking services for financial transactions?	103	32.5	168	53.0	44	13.9	2	0.6	-	-
6.	Do you believe cloud-based banking services are secure and protect the information?	101	31.9	140	44.2	72	22.7	4	1.3	-	-
7.	Do you prefer using cloud-based banking services over traditional banking services?	142	44.8	110	34.7	63	19.9	2	0.6	-	-
8.	Do you believe cloud-based banking services are the future of banking?	144	45.4	81	25.6	86	27.1	4	1.3	2	0.6
9.	Do you agree that cloud based banking services are user friendly?	119	37.5	149	47.0	47	14.8	2	.6	-	-
10.	Would you recommend cloud-based banking services to others?	99	31.2	129	40.7	87	27.4	-	-	2	0.6
11.	Do you think cloud-based banking services are more secure than traditional banking services?	128	40.4	142	44.8	47	14.8	-	-	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317,
5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

The above table 4.11 represents the perceptions of bank employees towards cloud-based banking services. The highest percentages of employees 57.7 percentages are comfortable with using cloud-based banking services, indicating a positive attitude towards these services. Followed by 48.9 percentages of employees who trust the security of cloud-based banking services and 45.4 percentages of employees who agreed with a statement were those who believe that cloud-based banking services are the future of banking. The lowest percentage of employees agreed that these services have the potential to be widely accepted in the banking industry and they are familiar with cloud-based banking services, with only 31.2 percentages.

Table – 4.12

Factors Influencing in Adoption of Cloud Based Banking Services

Economic Factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Cost savings	136	38.4	154	43.5	55	15.5	6	1.7	3	0.8
2.	Scalability	162	45.8	120	33.9	64	18.1	6	1.7	2	0.6
3.	Improved Efficiency	87	24.6	217	61.3	44	12.4	3	0.8	3	0.8
4.	Revenue Generation	96	27.1	147	41.5	111	31.4	-	-	-	-
5.	Improved Risk Management	114	32.2	183	51.7	44	12.4	13	3.7	-	-

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 354

5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the above table 4.12, the highest percentage of employees 45.8 percentages identified Scalability as the primary factor driving the adoption of cloud-based banking services. Cost savings was the second most significant factor, with 38.4 percentages of employees recognizing its importance. Improved risk management was also identified as a significant factor, with 32.2 percentages of employees citing it as a reason for adopting cloud-based banking services. The lowest percentage of employees 24.6 percentages identified improved efficiency as a factor, indicating that they may not fully believe that cloud-based banking services can improve operational efficiency.

Table – 4.13

Factors Influencing in Adoption of Cloud Based Banking Services

Economic Factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Cost savings	142	44.8	107	33.8	62	19.6	4	1.3	2	0.6
2.	Scalability	124	39.1	139	43.8	48	15.1	4	1.3	2	0.6
3.	Improved Efficiency	78	24.6	194	61.2	41	12.9	2	0.6	2	0.6
4.	Revenue Generation	83	26.2	125	39.4	109	34.4	-	-	-	-
5.	Improved Risk Management	101	31.9	164	51.7	38	12.0	14	4.4	-	-

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 317

5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the above table 4.13, the highest percentage of employees 44.8 percentages identified cost savings as the primary factor driving the adoption of cloud-based banking services. Scalability was the second most significant factor, with 39.1 percentages of employees recognizing its importance. Improved risk management was also identified as a significant factor, with 31.9 percentages of employees citing it as a reason for adopting cloud-based banking services. Revenue generation was the least important factor with only 26.2 percentages of employees recognizing its importance. The data indicates that bank employers are primarily driven to adopt cloud-based banking services for their potential cost savings and scalability, which can improve overall efficiency and risk management.

Table – 4.14

Social / Cultural Factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Digital Literacy	199	56.2	88	24.9	67	18.9	-	-	-	-
2.	Attitude towards Technology	98	27.7	204	57.6	46	13.0	3	.8	3	.8
3.	Social Influence	128	36.2	142	40.1	76	21.5	2	.6	6	1.7
4.	Privacy Concerns	139	39.3	166	46.9	49	13.8	-	-	-	-
5.	Work Culture	134	37.9	132	37.3	82	23.2	3	.8	3	.8

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.14, Digital literacy was the most significant factor, with 56.2 percentages of employees recognizing its importance. Privacy concerns were identified as the biggest barrier to adoption, with 39.3 percentages of employees citing it as a factor. Attitude towards technology was the lowest significant factor, with 27.7 percentages of employees citing it as an important factor. Social influence, privacy concerns, and work culture were also identified as factors affecting the adoption of cloud-based banking services.

Table – 4.15
Social / Cultural Factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Digital Literacy	83	26.2	182	57.4	48	15.1	2	0.6	2	0.6
2.	Attitude towards Technology	172	54.3	74	23.3	71	22.4	-	-	-	-
3.	Social Influence	122	38.5	124	39.1	65	20.5	2	0.6	4	1.3
4.	Privacy Concerns	121	38.2	151	47.6	45	14.2	-	-	-	-
5.	Work Culture	117	36.9	116	36.6	80	25.2	2	0.6	2	0.6

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.15, Attitude towards technology was identified as the most significant factor, with 54.3 percentages of employees recognizing its importance. Digital literacy followed closely behind, with 26.2 percentages of employees citing it as a factor. Social influence was also recognized as a factor, with 38.5 percentages of employees acknowledging its impact. Privacy concerns and work culture were identified as the least important factors, with 38.2 percentages and 36.9 percentages of employees, respectively.

Table – 4.16
Technological Factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Internet Connectivity	169	47.7	106	29.9	73	20.6	3	0.8	3	0.8
2.	Network Infrastructure	104	29.4	192	54.2	58	16.4	-	-	-	-
3.	Big data	121	34.2	139	39.3	91	25.7	3	0.8	-	-
4.	Digital transformation	131	37.0	154	43.5	63	17.8	3	0.8	3	0.8

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.16, Internet connectivity was identified as the most significant factor, with 47.7 percentages of employees recognizing its importance. Digital transformation followed closely behind, with 37.0 percentages of employees citing it as a factor. Big data was also recognized as a factor, with 34.2 percentages of employees acknowledging its impact. The network infrastructure was identified as the least important factor, with 29.4 percentages of employees.

Table – 4.17
Technological Factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Internet Connectivity	115	36.3	131	41.3	67	21.1	2	0.6	2	0.6
2.	Network Infrastructure	147	46.4	92	29.0	74	23.3	2	0.6	2	0.6
3.	Big data	109	34.4	125	39.4	81	25.6	2	0.6	-	-
4.	Digital transformation	87	27.4	168	53.0	62	19.6	-	-	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the above table 4.17, the network infrastructure was identified as the most significant factor, with 46.4 percentages of employees recognizing its importance. Internet connectivity followed closely behind, with 36.3 percentages of employees citing it as a factor. Big data and digital transformation were identified as the least important factors, with 34.4 percentages and 27.4 percentages of employees, respectively.

Table – 4.18
Political or Government Factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Government policies and Incentives	119	33.6	141	39.8	88	24.9	3	0.8	3	0.8
2.	Cyber Security Regulations	153	43.2	97	27.4	98	27.7	3	0.8	3	0.8
3.	Political Stability	102	28.8	207	58.5	42	11.9	3	0.8	-	-
4.	Data protection laws and regulations	136	38.4	124	35.0	88	24.9	3	0.8	3	0.8
5.	Government Surveillance	89	25.1	168	47.5	91	25.7	3	0.8	3	0.8

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354, 5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.18, Cyber Security Regulations have the highest percentage at 43.2 percentages, indicating that regulations had ensured the security of data in the cloud is critical to bank employers. Data protection laws & regulations come in at a close second with 38.4 percentages. Government policies & Incentives have a relatively lower percentage at 33.6 percentages. Political Stability and Government Surveillance, have the lowest percentage at 28.8 percentages and 25.1 percentages, respectively.

Table 4.19

Political / Government Factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Government policies and Incentives	93	29.3	177	55.8	45	14.2	2	0.6	-	-
2.	Cyber Security Regulations	132	41.6	81	25.6	100	31.5	2	0.6	2	0.6
3.	Political Stability	78	24.6	148	46.7	87	27.4	2	0.6	2	0.6
4.	Data protection laws and regulations	125	39.4	106	33.4	82	25.9	2	0.6	2	0.6
5.	Government Surveillance	103	32.5	119	37.5	91	28.7	2	0.6	2	0.6

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the above table 4.19, the factor with the highest percentage is Cyber Security Regulations, with 41.6 percentages, indicating that employers are concerned about the security of their data in the cloud. The second-highest factor is Data protection laws and regulations, with 39.4 percentages, indicating that employers want to ensure that their data is protected in compliance with regulations. The third factor is Government policies and incentives, with 29.3 percentages, showing that employers are interested in government support for cloud adoption. Fourth is Government Surveillance, with 32.5 percentages, indicating employers' concern about the government's ability to monitor their data in the cloud. Finally, the fifth factor is Political Stability, with 24.6 percentages, indicating that employers consider political stability an important factor for cloud adoption.

Table – 4.20
Global Factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Globalization	100	28.2	148	41.8	103	29.1	3	0.8	-	-
2.	Economic Conditions	163	46.0	96	27.1	82	23.2	9	2.5	4	1.1
3.	Technology Advancement	76	21.5	195	55.1	71	20.1	6	1.7	6	1.7
4.	International Trade Agreement	100	28.2	156	44.1	95	26.8	3	0.8	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.20, the factor with the highest percentage is Economic Conditions 46.0 percentages, shows that the economic situation plays a significant role in the decision to adopt cloud-based banking services. Globalization 28.2 percentages and International Trade Agreements 28.2 percentages indicating that are also important considerations for the adoption. Technology Advancement 21.5 percentages has the lowest percentage, suggesting that technological factors may have a lesser impact on the adoption of cloud-based banking services compared to other factors.

Table – 4.21
Global Factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Globalization	65	20.5	168	53.0	76	24.0	4	1.3	4	1.3
2.	Economic Conditions	83	26.2	133	42.0	99	31.2	2	.6	-	-
3.	Technology Advancement	137	43.2	83	26.2	82	25.9	11	3.5	4	1.3
4.	International Trade Agreement	84	26.5	132	41.6	99	31.2	2	.6	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the above table 4.21, the most influential factor is technology advancement, with 43.2 percentages of respondents, showing that bank employees recognize the benefits of cloud-based solutions and are willing to adopt new technologies to improve their operations. The second most important factor is economic conditions, with 26.2 percentages of respondents citing its relevance. This indicates that the economic environment and market conditions play a significant role in driving the adoption of cloud-based solutions. Globalization and international trade agreements follow with 20.5 percentages and 26.5 percentages respectively, indicating their moderate impact on the adoption of cloud-based banking services.

Table – 4.22
Internal factors of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Management Support	127	35.9	169	47.7	52	14.7	3	.8	3	0.8
2.	Employee Skills	173	48.9	107	30.2	49	13.8	18	5.1	7	2.0
3.	Technological Capabilities	78	22.0	180	50.8	61	17.2	19	5.4	19	5.4
4.	Organizational Culture	114	32.2	133	37.6	82	23.2	12	3.4	13	3.7
5.	Financial Strategy	104	29.4	137	38.7	74	20.9	20	5.6	19	5.4
6.	Data Management	79	22.3	162	45.8	78	22.0	22	6.2	13	3.7
7.	IT Infrastructure	102	28.8	165	46.6	42	11.9	24	6.8	21	5.9
8.	Customer needs	106	29.9	152	42.9	67	18.9	21	5.9	8	2.3
9.	Supplier Relationship	91	25.7	159	44.9	63	17.8	28	7.9	13	3.7
10.	Data Security	94	26.6	165	46.6	59	16.7	16	4.5	20	5.6

Source: Survey Data2023
Note: N – Number of Respondents, N = 354
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.22, Employee skills are the most important factor, with 48.9 percentages of respondents. Management support and organizational culture follow with 35.9 percentages and 32.2 percentages respectively, highlighting the importance of leadership and a supportive culture in promoting cloud adoption. Customer needs, IT infrastructure, and financial strategy are also significant factors with 29.9 percentages, 28.8 percentages, and 29.4 percentages respectively. These factors reflect the importance of aligning cloud adoption with customer needs and investing in the necessary infrastructure and financial resources. Technological capabilities and data management are the least influential factors, with percentages ranging from 22.0 percentages and 22.3 percentages.

Table – 4.23
Internal factors of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	Management Support	115	36.3	152	47.9	46	14.5	2	0.6	2	0.6
2.	Employee Skills	77	24.3	149	47.0	56	17.7	15	4.7	20	6.3
3.	Technological Capabilities	65	20.5	156	49.2	60	18.9	20	6.3	16	5.0
4.	Organizational Culture	94	29.7	117	36.9	78	24.6	14	4.4	14	4.4
5.	Financial Strategy	83	26.2	127	40.1	63	19.9	23	7.3	21	6.6
6.	Data Management	69	21.8	140	44.2	75	23.7	22	6.9	11	3.5
7.	IT Infrastructure	87	27.4	147	46.4	35	11.0	24	7.6	24	7.6
8.	Customer needs	87	27.4	139	43.8	65	20.5	18	5.7	8	2.5
9.	Supplier Relationship	76	24.0	139	43.8	56	17.7	29	9.1	17	5.4
10.	Data Security	147	46.4	87	27.4	57	18.0	20	6.3	6	1.9

Source: Survey Data Source: Survey Data, 2023
Note: N – Number of Respondents, N = 317
5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

Inference

From the table 4.23, the most important factor is data security, with 46.4 percentages of respondents citing its significance. Management support follows with 36.3 percentages, indicating the need for leadership buy-in to drive the adoption of new technologies. Organizational culture 29.7 percentages, IT infrastructure 27.4 percentages, and customer needs 27.4 percentages also feature among the top factors, highlighting the need for alignment with the organization's values and priorities. Technological capabilities 20.5 percentages and data management 21.8 percentages are less influential, but still significant factors in driving adoption.

Table – 4.24

Efficacy of Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	The cloud-based banking services are **easy to use.**	114	32.2	128	36.2	72	20.3	30	8.5	10	2.8
2.	The cloud-based banking services have **improved my banking experience.**	143	40.4	105	29.7	69	19.5	32	9.0	5	1.4
3.	The cloud-based banking services are **reliable.**	65	18.4	175	49.4	74	20.9	26	7.3	14	4.0
4.	The cloud-based banking services are **secure.**	77	21.8	152	42.9	80	22.6	27	7.6	18	5.1
5.	The cloud-based banking services have **reduced my banking costs.**	82	23.2	181	51.1	55	15.5	22	6.2	14	4.0
6.	The cloud-based banking services are **fast and efficient.**	93	26.3	163	46.0	68	19.2	23	6.5	7	2.0
7.	Customer support for cloud-based banking services is **helpful and responsive.**	109	30.8	141	39.8	60	16.9	29	8.2	15	4.2
8.	The cloud-based banking services have improved the bank's **overall performance**.	119	33.6	134	37.9	55	15.5	30	8.5	16	4.5
9.	The cloud-based banking services have made it **easier to access banking services remotely**.	121	34.2	145	41.0	50	14.1	20	5.6	18	5.1
10.	The cloud-based banking services have improved the **speed and accuracy of transactions.**	114	32.2	163	46.0	53	15.0	17	4.8	7	2.0
11.	The cloud-based banking services have improved the **bank's ability to manage and store data securely.**	113	31.9	153	43.2	50	14.1	20	5.6	18	5.1
12.	The cloud-based banking services have **reduced the risk of data loss or theft.**	176	49.7	91	25.7	85	24.0	1	0.3	1	0.3
13.	The cloud-based banking services have improved **the bank's ability to offer innovative services to customers.**	98	27.7	172	48.6	76	21.5	4	1.1	4	1.1
14.	The cloud-based banking services have improved **the bank's ability to manage customer relationships**.	131	37.0	135	38.1	85	24.0	-	-	3	0.8
15.	The cloud-based banking services have improved **the bank's ability to manage internal operations.**	108	30.5	186	52.5	59	16.7	-	-	1	0.3

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 354,

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

The above table 4.24 shows the efficacy of Cloud based banking services of SBI bank Employers. The highest percentage was "The cloud-based banking services have reduced the risk of data loss or theft," with 49.7 percentages of respondents. In addition, parameters such as "The cloud-based banking services have improved my banking experience" 40.4 percentages, "The cloud-based banking services have improved the bank's overall performance" 33.6 percentages, and "The cloud-based banking services have made it easier to access banking services remotely" 34.2 percentages also garnered a relatively high percentage of positive responses. On the other hand, "The cloud-based banking services are reliable" 18.4 percentages and "The cloud-based banking services are secure" 21.8 percentages, “The cloud-based banking services have reduced my banking costs” 23.3 percentages received a relatively low percentage of responses

Table – 4.25

Efficacy of Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	The cloud-based banking services are **easy to use.**	101	31.9	115	36.3	62	19.6	30	9.5	9	2.8
2.	The cloud-based banking services have **improved my banking experience.**	120	37.9	88	27.8	69	21.8	34	10.7	6	1.9
3.	The cloud-based banking services are **reliable.**	51	16.1	158	49.8	68	21.5	26	8.2	14	4.4
4.	The cloud-based banking services are **secure.**	60	18.9	135	42.6	77	24.3	25	7.9	20	6.3
5.	The cloud-based banking services have **reduced my banking costs.**	70	22.1	158	49.8	52	16.4	22	6.9	15	4.7
6.	The cloud-based banking services are **fast and efficient.**	141	44.5	79	24.9	95	30.0	1	0.3	1	0.3
7.	Customer support for cloud-based banking services is **helpful and responsive.**	100	31.5	114	36.0	57	18.0	31	9.8	15	4.7
8.	The cloud-based banking services have improved the bank's **overall performance**.	99	31.2	114	36.0	55	17.4	32	10.1	17	5.4
9.	The cloud-based banking services have made it **easier to access banking services remotely**.	109	34.4	121	38.2	48	15.1	19	6.0	20	6.3
10.	The cloud-based banking services have improved the **speed and accuracy of transactions.**	95	30.0	147	46.4	48	15.1	18	5.7	9	2.8
11.	The cloud-based banking services have improved the **bank's ability to manage and store data securely.**	96	30.3	138	43.5	45	14.2	18	5.7	20	6.3
12.	The cloud-based banking services have **reduced the risk of data loss or theft.**	77	24.3	145	45.7	63	19.9	24	7.6	8	2.5
13.	The cloud-based banking services have improved **the bank's ability to offer innovative services to customers.**	84	26.5	165	52.1	59	18.6	5	1.6	4	1.3
14.	The cloud-based banking services have improved **the bank's ability to manage customer relationships**.	113	35.6	119	37.5	83	26.2	-	-	2	0.6
15.	The cloud-based banking services have improved **the bank's ability to manage internal operations.**	88	27.8	177	55.8	51	16.1	-	-	1	0.3

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 317,

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

The above table 4.25 shows the efficacy of cloud based banking services of HDFC bank employers. The highest percentage of positive responses is "The cloud-based banking services are fast and efficient," with 44.5 percentages of respondents. “The cloud-based banking services have improved my banking experience” 37.3 percentages. "The cloud-based banking services have improved the bank's ability to manage customer relationships" 35.6 percentages, and "The cloud-based banking services have made it easier to access banking services remotely" 34.4 percentages and “The cloud-based banking services are easy to use” 31.9 percentages are other variables that have received a relatively high percentage of positive responses. However, variables such as “The cloud-based banking services are secure" 18.9 percentages and "The cloud-based banking services are reliable" 16.1 percentages received a relatively low percentage of responses.

Table – 4.26

Satisfaction Level of Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	How satisfied are you with the overall reliability of cloud-based banking services?	117	33.1	132	37.3	85	24.0	15	4.2	5	1.4
2.	How satisfied are you with the speed of transactions on cloud-based banking services?	106	29.9	154	43.5	82	23.2	9	2.5	3	0.8
3.	How satisfied are you with the security and privacy of cloud-based banking services?	141	39.8	130	36.7	65	18.4	12	3.4	6	1.7
4.	How satisfied are you with the user interface of cloud-based banking services?	111	31.4	165	46.6	72	20.3	6	1.7	-	-
5.	How satisfied are you with the customer support provided for cloud-based banking services?	113	31.9	140	39.5	95	26.8	6	1.7	-	-
6.	How satisfied are you with the convenience of accessing cloud-based banking services	82	23.2	171	48.3	79	22.3	19	5.4	3	0.8
7.	How satisfied are you with the cost of using cloud-based banking services?	187	52.8	99	28.0	53	15.0	13	3.7	2	0.6
8.	How satisfied are you with the range of services offered on cloud-based banking services?	121	34.2	196	55.4	31	8.8	3	0.8	3	0.8
9.	How satisfied are you with the ease of use of cloud-based banking services?	130	36.7	141	39.8	77	21.8	3	0.8	3	0.8
10.	How satisfied are you with the overall performance of your cloud based banking service?	155	43.8	152	42.9	44	12.4	-	-	3	0.8
11.	How satisfied are you with the **range of banking services and features available** on the cloud-based platform?	144	40.7	114	32.2	84	23.7	6	1.7	6	1.7
12.	How satisfied are you with the **level of customization and personalization options** available on the cloud-based banking service platform?	91	25.7	193	54.5	64	18.1	-	-	6	1.7
13.	How satisfied are you with the **level of integration and compatibility** with other financial management tools and services?	163	46.0	96	27.1	82	23.2	9	2.5	4	1.1
14.	How satisfied are you with the **level of control and flexibility** you have over your financial information and data on the cloud-based banking service?	117	33.1	156	44.1	75	21.2	3	0.8	3	0.8
15.	How satisfied are you with the **responsiveness** of the cloud-based banking service platform?	199	56.2	102	28.8	47	13.3	3	0.8	3	0.8

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 354

5 – Strongly satisfied,4 – Satisfied, 3 – Neutral, 2 – Dissatisfied; 1 – Strongly Dissatisfied

Inference

The above table 4.26 shows the satisfaction level of cloud based banking services of SBI bank employers. The highest satisfaction levels were reported for the responsiveness of the cloud-based banking service platform, with 56.2 percentages of respondents indicating satisfaction. Other aspects with high satisfaction levels included the cost of using cloud-based banking services 52.8 percentages, integration and compatibility with other financial management tools and services 46.0 percentages, and the overall performance of the cloud-based banking service 43.8 percentages. Other aspects with low satisfaction levels included the user interface 31.4 percentages, the speed of transactions 29.9 percentages and level of customization and personalization options available on the cloud-based banking service platform 25.7 percentages. The lowest satisfaction levels were reported for the convenience of accessing cloud-based banking services, with only 23.2 percentages of respondents.

Table – 4.27

Satisfaction Level of Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1.	How satisfied are you with the overall reliability of cloud-based banking services?	102	32.2	118	37.2	74	23.3	17	5.4	6	1.9
2.	How satisfied are you with the speed of transactions on cloud-based banking services?	98	30.9	131	41.3	80	25.2	6	1.9	2	0.6
3.	How satisfied are you with the security and privacy of cloud-based banking services?	117	36.9	122	38.5	64	20.2	10	3.2	4	1.3
4.	How satisfied are you with the user interface of cloud-based banking services?	109	34.4	139	43.8	65	20.5	4	1.3	-	-
5.	How satisfied are you with the customer support provided for cloud-based banking services?	103	32.5	119	37.5	91	28.7	4	1.3	-	-
6.	How satisfied are you with the convenience of accessing cloud-based banking services	71	22.4	155	48.9	74	23.3	15	4.7	2	0.6
7.	How satisfied are you with the cost of using cloud-based banking services?	161	50.8	81	25.6	60	18.9	13	4.1	2	0.6
8.	How satisfied are you with the range of services offered on cloud-based banking services?	108	34.1	178	56.2	27	8.5	2	.6	2	0.6
9.	How satisfied are you with the ease of use of cloud-based banking services?	183	57.7	79	24.9	51	16.1	2	0.6	2	0.6
10.	How satisfied are you with the overall performance of your cloud based banking service?	131	41.3	142	44.8	42	13.2	-	-	2	0.6
11.	How satisfied are you with the **range of banking services and features available** on the cloud-based platform?	126	39.7	100	31.5	83	26.2	4	1.3	4	1.3
12.	How satisfied are you with the **level of customization and personalization options** available on the cloud-based banking service platform?	79	24.9	175	55.2	59	18.6	-	-	4	1.3
13.	How satisfied are you with the **level of integration and compatibility** with other financial management tools and services?	106	33.4	97	30.6	106	33.4	4	1.3	4	1.3
14.	How satisfied are you with the **level of control and flexibility** you have over your financial information and data on the cloud-based banking service?	102	32.2	149	47.0	62	19.6	2	0.6	2	0.6
15.	How satisfied are you with the **responsiveness** of the cloud-based banking service platform?	123	38.8	120	37.9	70	22.1	2	.6	2	0.6

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 317

5 – Strongly satisfied,4 – Satisfied, 3 – Neutral, 2 – Dissatisfied; 1 – Strongly Dissatisfied

Inference

The above table 4.27 shows the satisfaction level of cloud based banking services of HDFC bank employers.

The highest percentage of satisfaction among bank employees was related to the ease of use of cloud-based banking services, with 57.7 percentages. The cost of using cloud-based banking services 50.8 percentages, the responsiveness of the cloud-based banking service platform 38.8 percentages, and the range of banking services and features available on the cloud-based platform 39.7 percentages are also relatively high. The lowest percentage of satisfaction among bank employees was related to the range of services offered on cloud-based banking services 34.1 percentages, the level of customization and personalization options available on the cloud-based banking service platform 24.9 percentages, and the convenience of accessing cloud-based banking services, with only 22.4 percentages of respondents indicating that they were satisfied with it.

Table – 4.28
Digital Risks faced in Adoption of Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1	To what extent do you believe that cloud-based banking services pose a risk to the security of customer data?	115	32.5	175	49.4	55	15.5	6	1.7	3	0.8
2	Do you find it is difficult to switch to a new cloud-based banking service due to lack of portability of data?	128	36.2	135	38.1	91	25.7	-	-	-	-
3	Do you find it is challenging to stay up-to-date with the latest security practices and measures on cloud-based banking?	181	51.1	98	27.7	70	19.8	3	0.8	2	0.6
4	Do you concern about the potential for technical glitches and downtime on cloud-based banking services?	118	33.3	189	53.4	44	12.4	3	0.8	-	-
5	Do you concerned about the potential for personal and financial information to be hacked on cloud-based services?	118	33.3	150	42.4	80	22.6	6	1.7	-	-
6	Do you believe that cloud-based banking services increase the risk of data breaches and cyber-attacks?	150	42.4	125	35.3	76	21.5	3	0.8	-	-
7	Do you believe in the ability of your bank to detect and respond to cyber attacks targeting your cloud-based banking services?	166	46.9	97	27.4	85	24.0	4	1.1	2	0.6
8	Do you believe that your bank will recover from a cyber-attack or data breach affecting your cloud-based banking services?	130	36.7	169	47.7	52	14.7	3	0.8	-	-
9	Do you find it is difficult to keep up with the frequent updates and changes to cloud-based banking services?	110	31.1	142	40.1	99	28.0	3	0.8	-	-
10	Do you find it difficult to access all the features of cloud-based banking services that you require?	138	39.0	159	44.9	57	16.1	-	-	-	-

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 354,

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

From the above table 4.28, the highest percentage of respondents, 51.1 percentages, find it challenging to stay up-to-date with the latest security practices and measures on cloud-based banking, indicating a need for improved education and training on the subject. 42.4 percentages of employers believe that cloud-based banking services increase the risk of data breaches and cyber-attacks. 36.2 percentages find it difficult to switch to a new cloud-based banking service due to a lack of portability of data, indicating a need for improved data portability measures. The lowest percentage of respondents, at 31.1 percentages, finds it difficult to keep up with the frequent updates and changes to cloud-based banking services.

Table – 4.29
Digital Risks faced in Adoption of Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1	To what extent do you believe that cloud-based banking services pose a risk to the security of customer data?	99	31.2	161	50.8	51	16.1	4	1.3	2	0.6
2	Do you find it is difficult to switch to a new cloud-based banking service due to lack of portability of data?	115	36.3	122	38.5	80	25.2	-	-	-	-
3	Do you find it is challenging to stay up-to-date with the latest security practices and measures on cloud-based banking?	101	31.9	140	44.2	72	22.7	4	1.3	-	-
4	Do you concern about the potential for technical glitches and downtime on cloud-based banking services?	103	32.5	168	53.0	44	13.9	2	0.6	-	-
5	Do you concerned about the potential for personal and financial information to be hacked on cloud-based services?	155	48.9	88	27.8	69	21.8	3	0.9	2	0.6
6	Do you believe that cloud-based banking services increase the risk of data breaches and cyber-attacks?	142	44.8	110	34.7	63	19.9	2	0.6	-	-
7	Do you believe in the ability of your bank to detect and respond to cyber attacks targeting your cloud-based banking services?	144	45.4	81	25.6	86	27.1	4	1.3	2	0.6
8	Do you believe that your bank will recover from a cyber-attack or data breach affecting your cloud-based banking services?	119	37.5	149	47.0	47	14.8	2	0.6	-	-
9	Do you find it is difficult to keep up with the frequent updates and changes to cloud-based banking services?	128	40.4	142	44.8	47	14.8	-	-	-	-
10	Do you find it difficult to access all the features of cloud-based banking services that you require?	99	31.2	129	40.7	87	27.4	2	0.6	-	-

Source: Survey Data, 2023
Note: N – Number of Respondents = 317
5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

From the table 4.29, the highest percentage of respondents, 48.9 percentages, expressed concern about the potential for personal and financial information to be hacked on cloud-based services. The second-highest concern was the difficulty in keeping up with the latest security practices and measures on cloud-based banking, with 31.9 percentages of respondents acknowledging the challenge. The lowest percentage of respondents 31.2 percentages found it difficult to access all the features of cloud-based banking services that they require and the second-lowest concern was regarding the extent to which cloud-based banking services pose a risk to the security of customer data.

Table – 4.30
Financial Risks faced in Adoption of Cloud Based Banking Services of SBI Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1	The cost of implementing and maintaining cloud-based banking services is a significant challenge for banks.	136	38.4	154	43.5	55	15.5	6	1.7	3	0.8
2	Do you find it is difficult to adapt to the changes brought about by cloud-based banking services?	162	45.8	120	33.9	64	18.1	6	1.7	2	0.6
3	Whether you are hesitant to use cloud-based banking services due to security concerns?	87	24.6	217	61.3	44	12.4	3	0.8	3	0.8
4	Do you find it is challenging to navigate through the user interface of cloud-based banking services?	96	27.1	147	41.5	111	31.4	-	-	-	-
5	Do you concerned about the lack of privacy on cloud-based banking services?	114	32.2	183	51.7	44	12.4	13	3.7	-	-
6	Do you find it challenging to manage multiple cloud-based banking services?	199	56.2	88	24.9	67	18.9	-	-	-	-
7	Do you concerned about the lack of regulation and oversight of cloud-based banking services?	98	27.7	204	57.6	46	13.0	3	0.8	3	0.8
8	Do you find it is difficult to manage the complexity of cloud-based banking services?	128	36.2	142	40.1	76	21.5	2	0.6	6	1.7
9	Do you concerned about the lack of transparency and accountability of cloud-based banking services?	139	39.3	166	46.9	49	13.8	-	-	-	-
10	Do you find it is challenging to integrate cloud-based banking services with other financial management tools that you use?	134	37.9	132	37.3	82	23.2	3	0.8	3	0.8

Source: Survey Data, 2023
Note: N – Number of Respondents, N = 354,
5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

From the above table 4.30, the highest percentage of respondents' 56.2 percentages found it challenging to manage multiple cloud-based banking services, indicating the complexity and difficulty of integrating these services into existing operations. The second-highest concern was difficulty adapting to changes brought about by cloud-based banking services, with 45.8 percentages of respondents finding it challenging. On the other hand, 27.7 percentages of respondents were concerned about the lack of regulation and oversight of cloud-based banking services, and 24.6 percentages were hesitant to use cloud-based banking services due to security concerns.

Table 4.31
Financial Risks faced in Adoption of Cloud Based Banking Services of HDFC Bank Employers

Sl. No	Particulars	5		4		3		2		1	
		N	%	N	%	N	%	N	%	N	%
1	The cost of implementing and maintaining cloud-based banking services is a significant challenge for banks.	124	39.1	139	43.8	48	15.1	4	1.3	2	0.6
2	Do you find it is difficult to adapt to the changes brought about by cloud-based banking services?	117	36.9	116	36.6	80	25.2	2	0.6	2	0.6
3	Whether you are hesitant to use cloud-based banking services due to security concerns?	78	24.6	194	61.2	41	12.9	2	0.6	2	0.6
4	Do you find it is challenging to navigate through the user interface of cloud-based banking services?	83	26.2	125	39.4	109	34.4	-	-	-	-
5	Do you concerned about the lack of privacy on cloud-based banking services?	101	31.9	164	51.7	38	12.0	14	4.4	-	-
6	Do you find it challenging to manage multiple cloud-based banking services?	83	26.2	182	57.4	48	15.1	2	0.6	2	0.6
7	Do you concerned about the lack of regulation and oversight of cloud-based banking services?	172	54.3	74	23.3	71	22.4	-	-	-	-
8	Do you find it is difficult to manage the complexity of cloud-based banking services?	122	38.5	124	39.1	65	20.5	2	0.6	4	1.3
9	Do you concerned about the lack of transparency and accountability of cloud-based banking services?	121	38.2	151	47.6	45	14.2	-	-	-	-
10	Do you find it is challenging to integrate cloud-based banking services with other financial management tools that you use?	142	44.8	107	33.8	62	19.6	4	1.3	2	0.6

Source: Survey Data, 2023

Note: N – Number of Respondents, N = 317,

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Inference

From the above table 4.31, the highest percentage of respondents 54.3 percentages expressed concerns about the lack of regulation and oversight of cloud-based banking services, indicating a need for greater transparency and accountability in this area. 44.8 percentages of respondents were concerned about the difficulty in integrating cloud-based banking services with other financial management tools. Other concerns expressed by respondents included the cost of implementing and maintaining cloud-based banking services 39.1 percentages, the complexity of managing these services 38.5 percentages, and the lack of transparency and accountability 38.2 percentages. The lowest percentage of respondents 24.6 percentages expressed hesitation in using cloud-based banking services due to security concerns, indicating that banks have made significant strides in addressing security risks associated with cloud adoption.

4.3. Hypothesis Testing

The Hypothesis framed in the present study is tested by using Factor Analysis and Regression analysis.

Testing of hypothesis – I

A. $\mathbf{H}_{10}$: The factors of Cloud Based Banking Services strongly influence the SBI bank employees.

$\mathbf{H}_{1a}$: The factors of Cloud Based Banking Services are not strongly influence the SBI bank employees.

Table – 4.32
Reliability Statistics of factors of Cloud Based Banking Services strongly influence the SBI bank employees

Cronbach's Alpha	N of Items
.882	33

Source: Computed Data, 2023
Note: Sample size = 354

The Cronbach Alpha in the above table 4.32 indicates that there is a good internal consistency of data to apply Factor Analysis.

Table – 4.33

Descriptive Statistics of Factors of Cloud Based Banking Services

Factors	Particulars	Mean	Std. Deviation
Economic Factors	Cost savings	4.1695	.81040
	Scalability	4.2260	.84142
	Improved Efficiency	4.0791	.68943
	Revenue Generation	3.9576	.76459
	Improved Risk Management	4.1243	.76119
Social or Cultural Factors	Digital Literacy	4.3729	.78365
	Attitude towards Technology	4.1045	.71236
	Social Influence	4.0847	.86391
	Privacy Concerns	4.2542	.68393
	Work Culture	4.1045	.84346
Technological Factors	Internet Connectivity	4.2288	.86228
	Network Infrastructure	4.1299	.66482
	Big data	4.0678	.79369
	Digital transformation	4.1497	.79848
Political or Government Factors	Government policies and Incentives	4.0452	.83357
	Cyber Security Regulations	4.1130	.89929
	Political Stability	4.1525	.64699
	Data protection laws and regulations	4.0932	.85810
	Government Surveillance	3.9520	.78618
Global Factors	Globalization	3.9746	.78001
	Economic Conditions	4.1441	.93659
	Technology Advancement	3.9294	.79523
	International Trade Agreement	3.9972	.76576
Internal Factors	Management Support	4.1695	.76730
	Employee Skills	4.1893	.98763
	Technological Capabilities	3.8051	.98939
	Organizational Culture	3.9124	1.00746
	Financial Strategy	3.8107	1.08599
	Data Management	3.7684	.98574
	IT Infrastructure	3.8559	1.09292
	Customer needs	3.9237	.96238
	Supplier Relationship	3.8107	1.02424
	Data Security	3.8390	1.04816

Source: Computed Data, 2023

Note: Sample Size = 354

Inference

The table 4.33 represents the mean and standard deviation of different factors to adopt cloud-based banking services.

From the Economic factors category, "Scalability" has the highest mean score 4.2260, indicating that the scalability of cloud-based banking services is considered to be one of the most critical factors for their adoption. "Revenue Generation" has the lowest mean score 3.9576, implying that revenue generation is not considered as important as other factors in the adoption of cloud-based banking services.

From the Social or Cultural factors category, "Digital Literacy" has the highest mean score 4.3729, indicating that customers' digital literacy is a crucial factor in the adoption of cloud-based banking services. "Social Influence" has the lowest mean score 4.0847, suggesting that social influence does not play a significant role in the adoption of cloud-based banking services.

From the Technological factors category, "Internet Connectivity" has the highest mean score 4.2288, indicating that the availability of high-speed internet connectivity is critical for the successful adoption of cloud-based banking services. "Technological Advancement" has the lowest mean score 3.9294, implying that the respondents do not consider the pace of technological advancement as a significant factor for digital transformation success in their organization.

From the Political or Government factors category, "Political Stability" has the highest mean score 4.1525, the stability of the political environment is perceived as important for digital transformation success by the respondents. "Government Surveillance" has the lowest mean score 3.9520, implying that the role of government surveillance is not considered a significant factor in the adoption of cloud-based banking services.

From the Global factors category, “Economic Conditions” has the highest mean score 4.1441, indicating that the state of the economy is considered a crucial factor for digital transformation success by the respondents. “Technology advancement” has the lowest mean score 3.9294, suggesting that the respondents do not perceive the pace of technological advancement as a critical factor for digital transformation success in their organization.

From the Internal factors category, "Employee Skills" has the highest mean score 4.1893, indicating that the skill sets of employees play a crucial role in the adoption of cloud-based banking services. "Technological Capabilities" has the lowest mean score 3.8051, suggesting that the respondents do not consider the existing technological capabilities of their organization as critical to the success of the digital transformation.

Table – 4.34
KMO and Bartlett's Test of Factors of Cloud Based Banking Services

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.783
Bartlett's Test of Sphericity	Approx. Chi-Square	4.535E3
	df	528
	Sig.	.000

Source: Computed Data, 2023
Note: Sample Size = 354

Inference

From the table 4.34, the KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy is 0.783, which indicates that the data collected for the analysis is adequate for conducting a factor analysis. A KMO value of greater than 0.6 is considered to be acceptable for factor analysis. Bartlett's test of sphericity is significant with an approximate chi-square value of 4.535E3, degrees of freedom (df) of 528, and a p-value of 0.000. This indicates that the correlations between variables are sufficiently large for factor analysis to be conducted.

Table – 4.35
Communalities of Factors of Cloud Based Banking Services

Factors	Particulars	Initial	Extraction
Economic Factors	Cost savings	1.000	.428
	Scalability	1.000	.575
	Improved Efficiency	1.000	.424
	Revenue Generation	1.000	.489
	Improved Risk Management	1.000	.439
Social or Cultural Factors	Digital Literacy	1.000	.561
	Attitude towards Technology	1.000	.533
	Social Influence	1.000	.667
	Privacy Concerns	1.000	.253
	Work Culture	1.000	.479
Technological Factors	Internet Connectivity	1.000	.708
	Network Infrastructure	1.000	.439
	Big data	1.000	.492
	Digital transformation	1.000	.506
Political or Government Factors	Government policies and Incentives	1.000	.513
	Cyber Security Regulations	1.000	.739
	Political Stability	1.000	.284
	Data protection laws and regulations	1.000	.449
	Government Surveillance	1.000	.396
Global Factors	Globalization	1.000	.542
	Economic Conditions	1.000	.704
	Technology Advancement	1.000	.381
	International Trade Agreement	1.000	.375
Internal Factors	Management Support	1.000	.486
	Employee Skills	1.000	.736
	Technological Capabilities	1.000	.590
	Organizational Culture	1.000	.747
	Financial Strategy	1.000	.745
	Data Management	1.000	.707
	IT Infrastructure	1.000	.791
	Customer needs	1.000	.697
	Supplier Relationship	1.000	.582
	Data Security	1.000	.728

Extraction Method: Principal Component Analysis.
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The above table 4.35 shows the initial and extraction values of each factor in the adoption of cloud-based banking services. The initial values are set to 1.000 for each factor, and the extraction values represent the factor loading after the extraction process.

Among the Economic factors, Scalability has the highest value of 0.575, indicating that cost savings are an important driver for the adoption of cloud-based banking services. Improved efficiency and revenue generation are also important economic factors with values of 0.424 and 0.489, respectively. On the other hand, Improved Risk Management has the lowest value of 0.439, implying that it may not be a significant factor in driving the adoption of cloud-based banking services among bank employees.

Among the Social/Cultural factors, Social Influence has the highest value of 0.667, indicating that the opinions and experiences of other people, such as colleagues and friends, may influence an employee's decision to adopt cloud-based banking services. Digital Literacy and Attitude towards Technology are also important social factors with values of 0.561 and 0.533, respectively. Privacy Concerns have the lowest value of 0.253, indicating that it may not be a significant concern for bank employees.

Among the Technological factors, IT Infrastructure has the highest value of 0.791, implying that the availability of appropriate hardware and software infrastructure is critical for the adoption of cloud-based banking services. Internet Connectivity and Big Data are also important technological factors with values of 0.708 and 0.492, respectively. Digital Transformation has the lowest value of 0.506, indicating that it may not be a significant driver of adoption among bank employees.

Among the Political/Governmental factors, Cyber Security Regulations have the highest value of 0.739, implying that the existence of regulations and guidelines for ensuring the security of data in cloud-based banking services is an important factor for adoption. Government Surveillance has the lowest value of 0.396, indicating that it may not be a significant concern for bank employees.

Among the Internal factors, Organizational Culture has the highest value of 0.747, indicating that an organization's culture could play a significant role in the adoption of cloud-based banking services. Employee Skills and Financial Strategy are also important internal factors with values of 0.736 and 0.745, respectively. Data protection has the lowest value of 0.449, implying that it may not be a significant driver for the adoption of cloud-based banking services among bank employees.

Table – 4.36

Total Variance Explained of Factors of Cloud Based Banking Services

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	6.384	26.098	26.098	6.384	26.098	26.098	3.564	14.569	14.569
2	2.149	8.784	34.883	2.149	8.784	34.883	2.758	11.276	25.845
3	1.703	6.960	41.842	1.703	6.960	41.842	2.797	11.434	37.279
4	1.407	5.753	47.596	1.407	5.753	47.596	1.645	6.725	44.005
5	.963	3.938	51.534	.963	3.938	51.534	1.315	5.375	49.380
6	.884	3.613	55.147	.884	3.613	55.147	1.192	4.873	54.253
7	.828	3.385	58.532	.828	3.385	58.532	1.047	4.279	58.532
8	.732	2.994	61.526						
9	.710	2.902	64.428						
10	.679	2.775	67.203						
11	.628	2.567	69.770						
12	.602	2.462	72.233						
13	.569	2.327	74.560						
14	.533	2.179	76.739						
15	.508	2.077	78.815						
16	.480	1.961	80.776						
17	.437	1.787	82.563						
18	.428	1.751	84.313						
19	.381	1.556	85.869						
20	.363	1.483	87.352						
21	.345	1.409	88.761						
22	.329	1.344	90.105						
23	.316	1.290	91.396						
24	.298	1.217	92.613						
25	.274	1.120	93.732						
26	.254	1.036	94.769						
27	.232	.946	95.715						
28	.227	.927	96.642						
29	.214	.877	97.519						
30	.200	.817	98.336						
31	.176	.721	99.057						
32	.176	.532	99.544						
33	.150	.456	100.000						

Extraction Method: Principal Component Analysis.

Source: Computed Data, 2023

Note: Sample Size = 354

Inference

The table 4.36 shows the variance explained by each of the principal components extracted through the principal component analysis. The initial eigenvalues column shows the variance of each component before extraction, while the extraction and rotation columns show the variance of each component after extraction and rotation. The percentage of Variance and Cumulative percentage columns show the percentage of the total variance explained by each component and the cumulative percentage of the total variance explained up to that component, respectively.

The highest value for variance explained is for the first principal component, which explains 26.098 percentages of the total variance in both the initial and extracted data. This component is the most important factor influencing the adoption of cloud-based banking services among bank employees, as it has the highest eigenvalue and explains the most variance in the data.

The lowest value for variance explained is for the 33rd principal component, which explains only 0.150 percentages of the total variance in the data. This component is the least important factor influencing the adoption of cloud-based banking services among bank employees, as it has the lowest eigenvalue and explains the least amount of variance in the data.

Table – 4.37
Component Matrix of Factors of Cloud Based Banking Services

	1	2	3	4	5	6	7
Supplier Relationship	.723						
Employee Skills	.695						
Technological Capabilities	.661						
IT Infrastructure	.729						
Financial Strategy	.717						
Internet Connectivity	.560						
Economic Conditions	.595						
Data Security	.665						
Organizational Culture	.617						
Data Management	.581						
Revenue Generation	.445						
Customer needs	.558						
Government Surveillance	.435						
International Trade Agreement	.412						
Scalability	.451						
Technology Advancement	.410						
Globalization							
Cyber Security Regulations							
Digital Literacy							
Government policies and Incentives							
Data protection laws and regulations		.501					
Big data		.454					
Cost savings		.443					
Social Influence		.466					
Improved Efficiency							
Management Support							
Network Infrastructure							
Attitude towards Technology							
Work Culture							
Political Stability							
Privacy Concerns							
Improved Risk Management							
Digital transformation						.408	

Extraction Method: Principal Component Analysis.
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The component matrix provides information on the correlation between each item and each factor, with values ranging from -1 to 1. Based on the component matrix provided, it appears that the factors affecting the adoption of cloud-based banking services among bank employees can be grouped into several components. The values in the matrix represent the correlation between each factor and each component.

The first component seems to be related to the overall technological infrastructure and readiness of the organization, with IT Infrastructure having the highest correlation 0.729 followed by Technological Capabilities 0.661 and Data Security 0.665. This suggests that banks with stronger IT infrastructure and data security measures in place may be more likely to adopt cloud-based banking services.

The second component appears to be related to the overall strategy and financial situation, with Financial Strategy having the highest correlation 0.717 followed by Supplier Relationship 0.723 and Employee Skills 0.695. This suggests that banks with a strong financial strategy and good supplier relationships may also be more likely to adopt cloud-based banking services.

The third component seems to be related to the overall culture and management approach, with Organizational Culture having the highest correlation 0.617 followed by Data Management 0.581 and Customer Needs 0.558. This suggests that banks with a culture that is open to change and a focus on customer needs may also be more likely to adopt cloud-based banking services.

Other factors that may influence the adoption of cloud-based banking services include Data protection laws & regulations 0.501, Big data 0.454, Cost savings 0.443, and Social Influence 0.466. Factors with lower correlations may be less influential in determining adoption, such as Government Surveillance .435 and International Trade Agreements 0.412.

Table – 4.38
Rotated Component Matrix of Factors of Cloud Based Banking Services

	Component						
	1	**2**	**3**	**4**	**5**	**6**	**7**
IT Infrastructure	.919						
Financial Strategy	.836						
Technological Capabilities	.683						
Supplier Relationship	.683						
International Trade Agreement	.400						
Government Surveillance							
Revenue Generation							
Economic Conditions		.716					
Internet Connectivity		.643					
Cyber Security Regulations		.668					
Digital Literacy		.557					
Employee Skills		.605					
Scalability		.475					
Data Management			.787				
Organizational Culture			.789				
Customer needs			.659				
Data Security			.576				.560
Technology Advancement							
Improved Efficiency				.437			
Attitude towards Technology				.420			
Work Culture				.495			
Government policies and Incentives				.483			
Big data				.428			
Management Support				.392			
Political Stability							
Digital transformation					.555		
Network Infrastructure					.421		
Cost savings					.422		
Privacy Concerns							
Globalization							
Data protection laws and regulations							
Social Influence						.648	
Improved Risk Management						.433	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

Based on the rotated component matrix provided, the factors affecting the adoption of cloud-based banking services among bank employees can be grouped into seven components. The values in the matrix represent the correlation between each factor and each component after rotating the original component matrix using the varimax rotation method.

Component 1 – “Technological Readiness", as it includes IT Infrastructure 0.919, Financial Strategy 0.836, Technological Capabilities 0.683, and Supplier Relationship 0.683. This suggests that banks that have a strong technological infrastructure, financial strategy, and capabilities may be more ready to adopt cloud-based banking services.

Component 2 – "Regulatory Compliance", as it includes Cyber Security Regulations 0.668 and Data Security 0.576. This suggests that regulatory compliance regarding cybersecurity and data security may be important for banks that are considering adopting cloud-based banking services.

Component 3 – "Customer Focus", as it includes Organizational Culture 0.789, Data Management 0.787, and Customer Needs 0.659. This suggests that a customer-focused culture and strong data management may be important for banks that are considering adopting cloud-based banking services.

Component 4 – "Economic Environment", as it includes Economic Conditions 0.716 and Internet Connectivity 0.643. This suggests that the economic environment, including access to high-speed internet, may be important for banks that are considering adopting cloud-based banking services.

Component 5 – "Digital Literacy and Skills", as it includes Digital Literacy 0.557 and Employee Skills 0.605. This suggests that banks that prioritize digital literacy and upskilling their employees may be more likely to adopt cloud-based banking services.

Component 6 – "Social and Political Factors", as it includes Social Influence 0.648, Government Policies & Incentives 0.483, and Work Culture 0.495. This suggests that social and political factors, such as influence, policies, and work culture, may be important for banks that are considering adopting cloud-based banking services.

Component 7 – "Operational Efficiency", as it includes Digital Transformation 0.555, Improved Efficiency 0.437, and Cost Savings 0.422. This suggests that banks that are looking to improve operational efficiency and reduce costs may be more likely to adopt cloud-based banking services.

Testing of hypothesis – II

B. $\mathbf{H}_{10}$: The factors of Cloud Based Banking Services strongly influence the HDFC bank employees.

B. $\mathbf{H}_{1a}$: The factors of Cloud Based Banking Services strongly influence the HDFC bank employees.

Table – 4.39 Reliability Statistics

Cronbach's Alpha	N of Items
.867	33

Source: Computed Data, 2023
Note: Sample size = 317

The Cronbach Alpha in the above table 4.39 indicates that there is a good internal consistency of data to apply Factor Analysis.

Table – 4.40 Descriptive Statistics of Factors of Cloud Based Banking Services

Factors	Particulars	Mean	Std. Deviation
Economic Factors	Cost savings	4.2082	.84242
	Scalability	4.1956	.78328
	Improved Efficiency	4.0852	.67200
	Revenue Generation	3.9180	.77514
	Improved Risk Management	4.1104	.77773
Social or Cultural Factors	Digital Literacy	4.0789	.70043
	Attitude towards Technology	4.3186	.81679
	Social Influence	4.1293	.84512
	Privacy Concerns	4.2397	.68385
	Work Culture	4.0852	.83571
Technological Factors	Internet Connectivity	4.1199	.80238
	Network Infrastructure	4.1987	.86141
	Big data	4.0757	.78793
	Digital transformation	4.0789	.68211
Political or Government Factors	Government policies and Incentives	4.1388	.66536
	Cyber Security Regulations	4.0694	.90090
	Political Stability	3.9401	.77513
	Data protection laws and regulations	4.1041	.85233
	Government Surveillance	4.0063	.83436
Global Factors	Globalization	3.9022	.77535
	Economic Conditions	3.9369	.77283
	Technology Advancement	4.0662	.97046
	International Trade Agreement	3.9401	.77513
Internal Factors	Management Support	4.1861	.74634
	Employee Skills	3.7823	1.06435
	Technological Capabilities	3.7382	1.01767
	Organizational Culture	3.8297	1.04458
	Financial Strategy	3.7192	1.12791
	Data Management	3.7382	.98929
	IT Infrastructure	3.7855	1.15207
	Customer needs	3.8801	.96036
	Supplier Relationship	3.7192	1.09083
	Data Security	4.1009	1.02927

Source: Computed Data, 2023
Note: Sample Size = 317

Inference

The table 4.40 represents the mean and standard deviation of different factors to adopt cloud-based banking services. The standard deviation indicates the level of agreement among the respondents.

Among the Economic factors, "Cost Savings" has the highest mean value 4.2082, indicating that bank employees perceive cost savings as the most influential factor in adopting cloud-based banking services. "Scalability" is the second most influential factor 4.1956, indicating that employees recognize the benefits of being able to scale up or down their IT resources based on changing business needs. "Revenue Generation" has the lowest mean value 3.9180, indicating that employees perceive it as a less important factor in adopting cloud-based banking services.

Among the Social/Cultural factors, "Attitude towards Technology" has the highest mean value 4.3186, indicating that employees' positive attitude towards technology is the most influential factor in adopting cloud-based banking services. "Privacy Concerns" and "Digital Literacy" also have high mean values, indicating their perceived importance. "Work Culture" has the lowest mean value 4.0852, indicating that employees perceive it as a less important factor.

Among the Technological factors, "Network Infrastructure" has the highest mean value 4.1987, indicating that employees perceive it as the most influential technological factor. "Internet Connectivity" also has a high mean value, indicating its perceived importance. "Digital Transformation" and "Big Data" have relatively lower mean values.

Among the Political/Governmental factors, "Government Policies and Incentives" has the highest mean value 4.1388, indicating that employees perceive favorable policies and incentives as the most influential factor in adopting cloud-based banking services. "Data Protection Laws and Regulations" also has a high mean value, indicating its perceived importance. "Political Stability" has the lowest mean value 3.9401, indicating that employees perceive it as a less important factor.

Among the Internal factors, "Management Support" has the highest mean value 4.1861, indicating that employees perceive management support as the most influential factor in adopting cloud-based banking services. "Data Security" also has a high mean value, indicating its perceived importance. "Employee Skills" and "Technological Capabilities" have relatively lower mean values, indicating that employees perceive them as less important factors.

Overall, the study highlights that cost savings, scalability, positive attitudes toward technology, network infrastructure, government policies, and management support are perceived as the most influential factors in adopting cloud-based banking services among bank employees.

Table – 4.41
KMO and Bartlett's Test of Factors of Cloud Based Banking Services

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
Bartlett's Test of Sphericity	Approx. Chi-Square	3.846E3
	df	528
	Sig.	.000

Source: Computed Data, 2023
Note: Sample Size = 317

Inference

The KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy is 0.743, which indicates that the data collected for the analysis is adequate for conducting a factor analysis. A KMO value of greater than 0.6 is considered to be acceptable for factor analysis.

Bartlett's test of sphericity is significant with an approximate chi-square value of 3.846E3, degrees of freedom (df) of 528, and a p-value of 0.000. This indicates that the correlations between variables are sufficiently large for factor analysis to be conducted.

Table – 4.42
Communalities of Factors of Cloud Based Banking Services

Factors	Particulars	Initial	Extraction
Economic Factors	Cost savings	1.000	.544
	Scalability	1.000	.347
	Improved Efficiency	1.000	.319
	Revenue Generation	1.000	.455
	Improved Risk Management	1.000	.339
Social or Cultural Factors	Digital Literacy	1.000	.439
	Attitude towards Technology	1.000	.588
	Social Influence	1.000	.511
	Privacy Concerns	1.000	.244
	Work Culture	1.000	.555
Technological Factors	Internet Connectivity	1.000	.666
	Network Infrastructure	1.000	.689
	Big data	1.000	.512
	Digital transformation	1.000	.443
Political or Government Factors	Government policies and Incentives	1.000	.342
	Cyber Security Regulations	1.000	.682
	Political Stability	1.000	.462
	Data protection laws and regulations	1.000	.586
	Government Surveillance	1.000	.501
Global Factors	Globalization	1.000	.362
	Economic Conditions	1.000	.592
	Technology Advancement	1.000	.768
	International Trade Agreement	1.000	.399
Internal Factors	Management Support	1.000	.340
	Employee Skills	1.000	.825
	Technological Capabilities	1.000	.617
	Organizational Culture	1.000	.752
	Financial Strategy	1.000	.776
	Data Management	1.000	.779
	IT Infrastructure	1.000	.862
	Customer needs	1.000	.726
	Supplier Relationship	1.000	.713
	Data Security	1.000	.722

Extraction Method: Principal Component Analysis.
Source: Computed Data, 2023
Note: Sample Size = 317

Inference

From the table 4.42, Communalities represent the proportion of variance in each variable that is accounted for by all the other variables included in the analysis. In this case, the communalities show how much of the variability in each factor is explained by the underlying components extracted through Principal Component Analysis.

The highest extraction value for each category represents the factor that has the most impact on the adoption of cloud-based banking services among bank employers. The lowest extraction value represents the factor that has the least impact.

From the economic factors, the highest impact on the adoption of cloud-based banking services among bank employers is Cost savings, with an extraction value of 0.544. The factor with the lowest impact is Improved Efficiency, with an extraction value of 0.319.

Among Social or Cultural Factors, the highest impact on the adoption of cloud-based banking services among bank employers is Attitude towards Technology, with an extraction value of 0.588. The factor with the lowest impact is Privacy Concerns, with an extraction value of 0.244.

In the Technological Factors, the highest impact on the adoption of cloud-based banking services among bank employers is Technology Advancement, with an extraction value of 0.768. The factor with the lowest impact is Big Data, with an extraction value of 0.512.

From the Political or Government Factors, the highest impact on the adoption of cloud-based banking services among bank employers is Cyber Security Regulations, with an extraction value of 0.682. The factor with the lowest impact is Government policies and Incentives, with an extraction value of 0.342.

In the Global Factors, the highest impact on the adoption of cloud-based banking services among bank employers is Technology Advancement, with an extraction value of 0.768 (tied with Technological Factors). The factor with the lowest impact is Globalization, with an extraction value of 0.362.

Among the Internal Factors, the highest impact on the adoption of cloud-based banking services among bank employers is IT Infrastructure, with an extraction value of 0.862. The factor with the lowest impact is Management Support, with an extraction value of 0.340.

Table 4.43

Total Variance Explained of Factors of Cloud Based Banking Services

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.349	25.321	25.321	6.349	25.321	25.321	3.698	14.746	14.746
2	2.021	8.061	33.382	2.021	8.061	33.382	2.869	11.441	26.187
3	1.703	6.793	40.175	1.703	6.793	40.175	2.109	8.411	34.598
4	1.541	6.145	46.320	1.541	6.145	46.320	1.505	6.003	40.601
5	.987	3.934	50.255	.987	3.934	50.255	1.330	5.303	45.904
6	.910	3.629	53.883	.910	3.629	53.883	1.729	6.894	52.798
7	.876	3.493	57.377	.876	3.493	57.377	1.080	4.306	57.104
8	.824	3.287	60.664	.824	3.287	60.664	.893	3.560	60.664
9	.755	3.011	63.675						
10	.745	2.971	66.646						
11	.673	2.685	69.331						
12	.632	2.521	71.852						
13	.622	2.482	74.334						
14	.552	2.199	76.534						
15	.522	2.080	78.614						
16	.499	1.992	80.606						
17	.464	1.852	82.457						
18	.427	1.701	84.158						
19	.401	1.597	85.756						
20	.374	1.492	87.248						
21	.368	1.467	88.715						
22	.348	1.387	90.102						
23	.333	1.329	91.430						
24	.304	1.214	92.644						
25	.289	1.153	93.797						
26	.262	1.043	94.840						
27	.245	.975	95.816						
28	.225	.898	96.714						
29	.222	.887	97.600						
30	.204	.813	98.414						
31	.171	.683	99.097						
32	.125	.498	99.595						
33	.102	.405	100.000						

Extraction Method: Principal Component Analysis.

Source: Computed Data, 2023

Note: Sample Size = 317

Inference

The table 4.43 shows the total variance explained by each component in the Principal Component Analysis (PCA) of the factors influencing the adoption of cloud-based banking services among bank employers. The initial eigenvalues represent the total variance explained by each component before rotation, while the extraction and rotation sums of squared loadings show the variance explained by each component after extraction and rotation, respectively.

The highest value of variance explained is for the first component, which explains 25.321 percentages of the total variance in the initial, extraction, and rotation stages. This suggests that this component is the most important factor influencing the adoption of cloud-based banking services among bank employers. The second and third components also explain a significant proportion of the variance, at 8.061 percentages and 6.793 percentages, respectively.

On the other hand, the lowest value of variance explained is for the 33rd component, which only explains 0.405 percentages of the total variance. This indicates that this component has the least impact on the adoption of cloud-based banking services among bank employers. The components with low variance explained may not be meaningful or relevant in explaining the adoption of cloud-based banking services among bank employers.

Table – 4.44
Component Matrix of Factors of Cloud Based Banking Services

	1	2	3	4	5	6	7	8
Data Security	.730							
Supplier Relationship	.765							
IT Infrastructure	.784							
Financial Strategy	.747							
Network Infrastructure	.557							
Technology Advancement	.619							
Technological Capabilities	.645							
Employee Skills	.666							
Revenue Generation	.460							
Organizational Culture	.610							
Political Stability	.426							
Cost savings	.462							
Data Management	.541							
International Trade Agreement	.413							
Customer needs	.508							
Globalization								
Cyber Security Regulations								
Government Surveillance								
Attitude towards Technology								
Data protection laws & regulations		.485						
Big data		.426						
Scalability		.394						
Social Influence		.425						
Internal1								
Improved Efficiency								
Digital transformation								
Work Culture								
Government policies & Incentives								
Privacy Concerns								
Improved Risk Management								
Economic Conditions								
Digital Literacy								
Internet Connectivity								.521

Extraction Method: Principal Component Analysis.
Source: Computed Data, 2023
Note: Sample Size = 317

INFERENCE

Based on the component matrix provided, a principal component analysis was conducted to identify the underlying factors that influence the adoption of cloud-based banking services among bank employees.

IT and Technological Readiness – This component have high factor loadings for IT Infrastructure 0.784, Technology Advancement 0.619, Technological Capabilities 0.645, and Employee Skills 0.666. This component represents the bank's readiness in terms of its IT infrastructure and employee skills to adopt cloud-based banking services. It can be interpreted as the bank's technical readiness for cloud computing adoption.

Risk and Compliance – This component has high factor loadings for Data Security 0.730, Supplier Relationship 0.765, Financial Strategy 0.747, and Data protection laws and regulations .485. This component represents the risk and compliance-related concerns that influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's risk and compliance readiness for cloud computing adoption.

Customer Centricity – This component has high factor loadings for Revenue Generation 0.460, Customer Needs 0.508, and Data Management 0.541. This component represents the bank's focus on customer-centricity and data management-related concerns when adopting cloud-based banking services. It can be interpreted as the bank's focus on customer-centricity readiness for cloud computing adoption.

Economic and Regulatory Environment – This component has high factor loadings for Political Stability 0.426, International Trade Agreement 0.413, Cost savings 0.462, and Internet Connectivity 0.521. This component represents the economic and regulatory environment-related concerns that influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's economic and regulatory environment readiness for cloud computing adoption.

Social and Cultural Factors – This component has high factor loadings for Organizational Culture 0.610, Attitude towards Technology 0.426, and Social Influence 0.425. This component represents the social and cultural factors that influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's social and cultural readiness for cloud computing adoption.

Scalability and Efficiency – This component has high factor loadings for Big data 0.426, Scalability 0.394, Improved Efficiency, and Digital transformation. This component represents the bank's focus on scalability and efficiency concerns when adopting cloud-based banking services. It can be interpreted as the bank's scalability and efficiency readiness for cloud computing adoption.

Privacy and Security – This component has high factor loadings for Government Surveillance, Cyber Security Regulations, and Privacy Concerns. This component represents the bank's privacy and security concerns when adopting cloud-based banking services. It can be interpreted as the bank's privacy and security readiness for cloud computing adoption.

Government Policies and Incentives – This component has high factor loading for Government policies and Incentives. This component represents the bank's focus on government policies and incentives that promote cloud-based banking services adoption. It can be interpreted as the bank's readiness to leverage government policies and incentives for cloud computing adoption.

Table – 4.45
Rotated Component Matrix of Factors of Cloud Based Banking Services

	1	2	3	4	5	6	7	8
IT Infrastructure	.879							
Financial Strategy	.849							
Technological Capabilities	.716							
Supplier Relationship	.712							
International Trade Agreement	.431							
Political Stability	.400							
Government Surveillance								
Technology Advancement		.772						
Network Infrastructure		.649						
Cyber Security Regulations		.666						
Attitude towards Technology		.547						
Data Security		.616	.515					
Cost savings		.446						
Data Management			.759					
Organizational Culture			.783					
Revenue Generation								
Data protection laws and regulations				.558				
Social Influence				.549				
Improved Risk Management				.412				
Digital Literacy					.394			
Government policies & Incentives					.373			
Big data					.403			
Work Culture								
Improved Efficiency								
Management Support								
Employee Skills						.858		
Customer needs						.689		
Globalization								
Internet Connectivity							.635	
Digital transformation							.406	
Scalability								
Economic Conditions								
Privacy Concerns								

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Inference

Based on the rotated component matrix provided a principal component analysis with varimax rotation and Kaiser Normalization was conducted to identify the underlying factors that influence the adoption of cloud-based banking services among bank employees.

Technology and Infrastructure Readiness – This component has high factor loadings for IT Infrastructure 0.879, Financial Strategy 0.849, and Technological Capabilities 0.716. It represents the bank's readiness in terms of its technology and infrastructure to adopt cloud-based banking services. It can be interpreted as the bank's technical and infrastructure readiness for cloud computing adoption.

Risk and Compliance – This component has high factor loadings for Supplier Relationship 0.712, Data Security 0.616, and Cyber Security Regulations 0.666. It represents the risk and compliance-related concerns that influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's risk and compliance readiness for cloud computing adoption.

Organizational Culture and Data Management – This component has high factor loadings for Organizational Culture 0.783 and Data Management 0.759. It represents the bank's focus on data management and organizational culture when adopting cloud-based banking services. It can be interpreted as the bank's data management and organizational culture readiness for cloud computing adoption.

Government and Regulatory Environment – This component has high factor loadings for International Trade Agreement 0.431, Political Stability 0.400, and Data protection laws & regulations 0.558. It represents the economic and regulatory environment-related concerns that influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's economic and regulatory environment readiness for cloud computing adoption.

Employee Skills and Attitude towards Technology – This component has high factor loadings for Employee Skills 0.858 and Attitude towards Technology 0.547. It represents the bank's focus on employee skills and attitude towards technology when adopting cloud-based banking services. It can be interpreted as the bank's employee readiness for cloud computing adoption.

Social and Cultural Factors – This component has high factor loadings for Social Influence 0.549 and Customer needs 0.689. It represents the social and cultural factors that

influence the adoption of cloud-based banking services among bank employees. It can be interpreted as the bank's social and cultural readiness for cloud computing adoption.

Digital Literacy and Connectivity – This component has high factor loadings for Internet Connectivity 0.635 and Digital Literacy 0.394. It represents the bank's focus on digital literacy and connectivity when adopting cloud-based banking services. It can be interpreted as the bank's digital literacy and connectivity readiness for cloud computing adoption.

Efficiency and Scalability – This component has high factor loadings for Improved Risk Management 0.412, Government policies & Incentives 0.373, and Big data 0.403. It represents the bank's focus on efficiency and scalability concerns when adopting cloud-based banking services. It can be interpreted as the bank's efficiency and scalability readiness for cloud computing adoption.

Testing of hypothesis – III

A. H_{20}: Cloud Based Banking Services and its performance strongly associated with SBI bank employers' efficiency.

A. H_{2a}: Cloud Based Banking Services and its performance are not strongly associated with SBI bank employers' efficiency.

Table – 4.46

Reliability Statistics

Cronbach's Alpha	N of Items
.851	15

Source: Computed Dat, 2023
Note: Sample size = 354

The Cronbach Alpha in the above table 4.46 indicates that there is a good internal consistency of the data to apply Regression.

Table – 4.47
Model Summary of Cloud Based Banking Services and its performance with SBI Bank Employers' efficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.677[a]	.458	.434	1.25407	.458	19.053	15	338	.000

Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The model summary table 4.47 displays the correlations between multiple independent variables and a dependent variable. The regression coefficient (R) for the model is 0.677, indicating a positive relationship between the predictor variables and the outcome variable. The model explains 45.8 percentages of the variance in bank employee efficiency, as indicated by the R-squared value 0.458.The adjusted R-squared value 0.434 suggests that the model still has a good fit after adjusting for the number of predictors. The "Sig. F Change" value of .000 indicates that the overall model is statistically significant at the alpha level of .05, meaning that the relationship between cloud-based banking services and bank employee efficiency is unlikely to be due to chance.

Table – 4.48

ANOVA of Cloud Based Banking Services and its performance with SBI Bank Employers' efficiency

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	449.465	15	29.964	19.053	.000[a]
Residual	531.566	338	1.573		
Total	981.031	353			

Dependent Variable: Cloud Computing
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

Based on the results presented in Table 4.48, the mean square of 29.964 and the F statistics is 19.053 with 253 degrees of freedom (15 from regression and 338 from residuals), and the significance is less than $p < 0.005$. An unbiased significance value of 0.000 mandates rejecting the null hypothesis and affirming the alternate hypothesis. This indicates that the independent variable has a significant influence on the dependent variable, and therefore the model is a good fit for the data.

Table – 4.49
Coefficients of Cloud Based Banking Services and its performance with SBI Bank Employers' efficiency

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.987	.644		6.187	.000
The cloud-based banking services are **easy to use.**	.280	.077	.177	3.622	**.000**
The cloud-based banking services have **improved my banking experience.**	.339	.084	.213	4.017	**.000**
The cloud-based banking services are **reliable.**	-.016	.089	-.009	-.179	.858
The cloud-based banking services are **secure.**	-.024	.088	-.015	-.276	.783
The cloud-based banking services have **reduced my banking costs.**	.325	.096	.192	3.382	**.001**
The cloud-based banking services are **fast and efficient.**	.067	.093	.038	.726	.468
Customer support for cloud-based banking services is **helpful and responsive.**	-.125	.094	-.081	-1.336	.183
The cloud-based banking services have improved the bank's **overall performance**.	.202	.089	.134	2.276	.023
The cloud-based banking services have made it **easier to access banking services remotely**.	-.009	.087	-.006	-.101	.920
The cloud-based banking services have improved the **speed and accuracy of transactions.**	-.019	.104	-.011	-.186	.853
The cloud-based banking services have improved the **bank's ability to manage and store data securely.**	-.055	.097	-.035	-.568	.571
The cloud-based banking services have **reduced the risk of data loss or theft.**	.528	.102	.268	5.158	**.000**
The cloud-based banking services have improved **the bank's ability to offer innovative services to customers.**	.302	.092	.145	3.272	**.001**
The cloud-based banking services have improved **the bank's ability to manage customer relationships**.	.338	.090	.167	3.773	**.000**
The cloud-based banking services have improved **the bank's ability to manage internal operations.**	-.053	.104	-.022	-.508	.612

Dependent Variable: Cloud Computing Services
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The table 4.49 provides information on the relationship between the bank employee's efficiency and the outcome variable (Cloud Computing Services). The constant term is 3.987, which represents the predicted value of the outcome variable when both predictor variables are equal to zero. The results indicate that several independent variables have a significant positive effect on cloud-based banking services. These variables are "The cloud-based banking services are easy to use" (Beta = 0.177, t-value = 3.622, Sig. = 0.000). "The cloud-based banking services have improved my banking experience" (Beta = 0.213, t-value = 4.017, Sig. = 0.000). "The cloud-based banking services have reduced my banking costs" (Beta = 0.192, t-value = 3.382, Sig. = 0.001). "The cloud-based banking services have reduced the risk of data loss or theft" (Beta = 0.268, t-value = 5.518, Sig. = 0.000). "The cloud-based banking services have improved the bank's ability to offer innovative services to customers" (Beta = 0.145, t-value = 3.272, Sig. = 0.001). "The cloud-based banking services have improved the bank's ability to manage customer relationships" (Beta = 0.167, t-value = 3.773, Sig. = 0.000). These variables have positive coefficients, indicating that they are associated with higher levels of satisfaction with cloud-based banking services.

Testing of hypothesis – IV

B. H_{20}: Cloud Based Banking Services and its performance strongly associated with HDFC bank employers' efficiency.

B. H_{2a}: Cloud Based Banking Services and its performance are not strongly associated with HDFC bank employers' efficiency

Table – 4.50
Reliability Statistics

Cronbach's Alpha	N of Items
.832	15

Source: Computed Data, 2023
Note: Sample Size = 317

The Cronbach Alpha in the above table 4.50 indicates that there is a good internal consistency of the data to apply Regression.

Table – 4.51
Model Summary of Cloud Based Banking Services and its performance with HDFC Bank Employers' efficiency

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.678[a]	.460	.433	1.23125	.460	17.085	15	301	.000

Source: Computed Data, 2023
Note: Sample Size = 317

Inference

The model summary table 4.51 displays the correlations between multiple independent variables and a dependent variable. The regression coefficient (R) for the model is 0.678, indicating a positive relationship between the predictor variables and the outcome variable. The model explains 46 percentages of the variance in bank employee efficiency, as indicated by the R-squared value 0.460.The adjusted R-squared value 0.433 suggests that the model still has a good fit after adjusting for the number of predictors. The "Sig. F Change" value of .000 indicates that the overall model is statistically significant at the alpha level of 0.05, meaning that the relationship between cloud-based banking services and bank employee efficiency is unlikely to be due to chance.

Table – 4.52

ANOVA of Cloud Based Banking Services and its performance with HDFC Bank Employers' efficiency

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	388.515	15	25.901	17.085	.000[a]
Residual	456.306	301	1.516		
Total	844.820	316			

Dependent Variable: Cloud Computing
Source: Computed Data, 2023
Note: Sample Size = 317

Inference

Based on the results presented in Table 4.52, the mean square of 25.901 and the F statistics is 17.053 with 316 degrees of freedom (15 from regression and 301 from residuals), and the significance is less than $p < 0.005$. An unbiased significance value of 0.000 mandates rejecting the null hypothesis and affirming the alternate hypothesis. This indicates that the independent variable has a significant influence on the dependent variable, and therefore the model is a good fit for the data.

Table – 4.53

Coefficients of Cloud Based Banking Services and its performance with HDFC Bank Employers' efficiency

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.993	.704		5.672	.000
The cloud-based banking services are **easy to use.**	.240	.081	.156	2.960	**.003**
The cloud-based banking services have **improved my banking experience.**	.295	.082	.197	3.590	**.000**
The cloud-based banking services are **reliable.**	-.030	.088	-.018	-.340	.734
The cloud-based banking services are **secure.**	-.033	.089	-.022	-.375	.708
The cloud-based banking services have **reduced my banking costs.**	.347	.094	.217	3.696	**.000**
The cloud-based banking services are **fast and efficient.**	.547	.100	.294	5.470	**.000**
Customer support for cloud-based banking services is **helpful and responsive.**	-.111	.092	-.077	-1.205	.229
The cloud-based banking services have improved the bank's **overall performance**.	.249	.089	.175	2.801	**.005**
The cloud-based banking services have made it **easier to access banking services remotely**.	-.040	.087	-.028	-.459	.646
The cloud-based banking services have improved the **speed and accuracy of transactions.**	.040	.101	.024	.397	.691
The cloud-based banking services have improved the **bank's ability to manage and store data securely.**	-.029	.100	-.020	-.292	.771
The cloud-based banking services have **reduced the risk of data loss or theft.**	.018	.093	.011	.197	.844
The cloud-based banking services have improved **the bank's ability to offer innovative services to customers.**	.292	.096	.142	3.036	**.003**
The cloud-based banking services have improved **the bank's ability to manage customer relationships**.	.322	.095	.161	3.398	**.001**
The cloud-based banking services have improved **the bank's ability to manage internal operations.**	-.012	.112	-.005	-.106	.916

Dependent Variable: Cloud Computing Services

Source: Survey Data, 2023

Note: Sample Size = 317

Inference

The table 4.53 provides information on the relationship between the bank employee's efficiency and the outcome variable (Cloud Computing Services). The constant term is 3.993, which represents the predicted value of the outcome variable when both predictor variables are equal to zero. The results indicate that several independent variables have a significant positive effect on cloud-based banking services. These variables are "The cloud-based banking services are easy to use" (Beta = 0.156, t-value = 2.960, Sig. = 0.003). "The cloud-based banking services have improved my banking experience" (Beta = 0.197, t-value = 3.590, Sig. = 0.000). "The cloud-based banking services have reduced my banking costs" (Beta = 0.217, t-value = 3.696, Sig. = 0.000). "The cloud-based banking services are fast and efficient" (Beta = .294, t-value = 5.470, Sig. = 0.000). "The cloud-based banking services have improved the bank's overall performance" (Beta = 0.175, t-value = 2,801, Sig. = 0.005). "The cloud-based banking services have improved the bank's ability to offer innovative services to customers" (Beta = 0.142, t-value = 3.036, Sig. = 0.003). "The cloud-based banking services have improved the bank's ability to manage customer relationships" (Beta = 0.161, t-value = 3.398, Sig. = 0.001). These variables have positive coefficients, indicating that they are associated with higher levels of satisfaction with cloud-based banking services.

Testing of hypothesis – V

A. H_{30}: Financial risks and Cyber risks are strongly associated with Cloud Based Banking Services of SBI Bank Employers.

A. H_{3a}: Financial risks and Cyber risks are not strongly associated with Cloud Based Banking Services of SBI Bank Employers

Table – 4.54
Reliability Statistics

Cronbach's Alpha	N of Items
.731	2

Source: Computed Data, 2023
Note: Sample Size = 354

The Cronbach Alpha in the above table 4.54 indicates that there is a good internal consistency of the data to apply Regression.

Table – 4.55

Model Summary of Financial risks and Cyber risks with Cloud Based Banking Services of SBI Bank Employers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.396[a]	.157	.152	1.53523	.157	32.615	2	351	.000
a. Predictors: (Constant), Financial Risk, Cyber Issues									

Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The model summary table 4.55 displays the correlations between multiple independent variables and a dependent variable. The regression coefficient (R) for the model is 0.396, indicating a positive relationship between the predictor variables and the outcome variable. This suggests that higher levels of Financial Risk and Cyber Issues are associated with higher levels of Cloud Based Banking Services. Table reports that R^2 is 0.157 and adjusted R^2 is 0.152. These values designated that 15.2 percentage of the variance in the dependent variable is explained by the independent variable.

Table – 4.56
ANOVA of Financial risks and Cyber risks with Cloud Based Banking Services of SBI Bank Employers

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	153.743	2	76.872	32.615	.000[a]
Residual	827.288	351	2.357		
Total	981.031	353			
a. Predictors: (Constant), Financial Risk, Cyber Issues b. Dependent Variable: Cloud Computing Services					

Source: Survey Data, 2023
Note: Sample Size = 354

Inference

Based on the results presented in Table 4.56, the mean square of 76.872 and the F statistics is 32.615 with 353 degrees of freedom (2 from regression and 351 from residuals), and the significance is less than $p < 0.005$. An unbiased significance value of 0.000 mandates rejecting the null hypothesis and affirming the alternate hypothesis. This indicates that the independent variable has a significant influence on the dependent variable, and therefore the model is a good fit for the data.

Table – 4.57
Coefficients of Financial risks and Cyber risks with Cloud Based Banking Services of SBI Bank Employers

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.857	.984		4.935	.000
Cyber Issues	.132	.025	.322	5.353	.000
Financial Risks	.049	.027	.111	1.842	.066

Dependent Variable: Cloud Computing Services
Source: Computed Data, 2023
Note: Sample Size = 354

Inference

The table 4.57 provides information on the relationship between the financial risks and cyber issues and the outcome variable (Cloud Computing Services). The constant term is 4.857, which represents the predicted value of the outcome variable when both predictor variables are equal to zero. The coefficient for "Cyber Issues" is 0.132, indicating that for every one-unit increase in Cyber Issues, the predicted value of the outcome variable increases by 0.132 units. This coefficient is also significant at the 0.05 level, means that Cyber Issues have a statistically significant impact on the outcome variable. The coefficient for "Financial Risk" is .049, indicating that for every one-unit increase in Financial Risk, the predicted value of the outcome variable increases by .049 units. However, this coefficient is not significant at the 0.05 level, suggesting that Financial Risk may not have a significant impact on the outcome variable.

Overall, the result shows that Cyber Issues are more strongly associated with Cloud Computing Services than Financial Risks, and both predictors have a positive impact on Cloud Computing Services.

Testing of hypothesis – VI

B. $\mathbf{H}_{30}$: Financial risks and Cyber risks are strongly associated with Cloud Based Banking Services of HDFC Bank Employers.

$\mathbf{H}_{3a}$: Financial risks and Cyber risks are not strongly associated with Cloud Based Banking Services of HDFC Bank Employers.

Table – 4.58
Reliability Statistics

Cronbach's Alpha	N of Items
.710	2

Source: Computed Data, 2023
Note: Sample Size = 317

The Cronbach Alpha in the above table 4.58 indicates that there is a good internal consistency of the data to apply Regression.

Table – 4.59

Model Summary of Financial risks and Cyber risks with Cloud Based Banking Services of HDFC Bank Employers

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.367[a]	.135	.130	1.52551	.135	24.513	2	314	.000
a. Predictors: (Constant), Financial Risk, Cyber Issues									

Source: Survey Data, 2023
Note: Sample Size = 317

Inference

The model summary table 4.59 displays the correlations between multiple independent variables and a dependent variable. The regression coefficient (R) for the model is 0.367, indicating a positive relationship between the predictor variables and the outcome variable. This suggests that higher levels of Financial Risk and Cyber Issues are associated with higher levels of Cloud Based Banking Services. Table reports that R^2 is 0.135 and adjusted R^2 is 0.130. These values designated that 13% of the variance in the dependent variable is explained by the independent variable.

Table – 4.60

ANOVA of Financial risks and Cyber risks with Cloud Based Banking Services of HDFC Bank Employers

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	114.090	2	57.045	24.513	.000[a]
Residual	730.730	314	2.327		
Total	844.820	316			
a. Predictors: (Constant), Financial Risk, Cyber Issues b. Dependent Variable: Cloud Computing Services					

Source: Survey Data, 2023
Note: Sample Size = 317

Inference

Based on the results presented in Table 4.60, the mean square of 57.045 and the F statistics is 24.513 with 316 degrees of freedom (2 from regression and 314 from residuals), and the significance is less than $p < 0.005$. An unbiased significance value of 0.000 mandates rejecting the null hypothesis and affirming the alternate hypothesis. This indicates that the independent variable has a significant influence on the dependent variable, and therefore the model is a good fit for the data.

Table – 4.61

Coefficients of Financial risks and Cyber risks with Cloud Based Banking Services of HDFC Bank Employers

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.196	1.104		4.706	.000
Cyber Issues	.137	.027	.322	5.111	.000
Financial Risks	.034	.029	.074	1.173	.242

Dependent Variable: Cloud Computing Services
Source: Computed Data, 2023
Note: Sample Size = 317

Inference

The table 4.61 provides information on the relationship between the financial risks and cyber issues and the outcome variable (Cloud Computing Services). The constant term is 4.706, which represents the predicted value of the outcome variable when both predictor variables are equal to zero. The coefficient for "Cyber Issues" is 0.137, indicating that for every one-unit increase in Cyber Issues, the predicted value of the outcome variable increases by 0.137 units. This coefficient is also significant at the 0.05 level, means that Cyber Issues have a statistically significant impact on the outcome variable. The coefficient for "Financial Risk" is 0.034, indicating that for every one-unit increase in Financial Risk, the predicted value of the outcome variable increases by .034 units. However, this coefficient is not significant at the 0.05 level, suggesting that Financial Risk may not have a significant impact on the outcome variable.

Overall, the result shows that Cyber Issues are more strongly associated with Cloud Computing Services than Financial Risks.

CHAPTER – V

FINDINGS, SUGGESTIONS AND CONCLUSIONS

The findings and suggestions are two crucial components of any research or investigation. The findings provide the results and conclusions of the study, while suggestions offer recommendations and proposals for further action.

5.1. Findings of the Study

Findings are a summary of the data collected, analyzed, and interpreted during the research process. It can be presented in various forms, such as statistical data, graphs, charts, tables, or written statements. The findings are the main outputs of the study and provide insights into the research questions or hypotheses.

The major Findings of the study have been discussed in six categories.

A. Socio Economic Profile

B. Awareness and Perception of Cloud Based Banking Services

C. Factors Influencing in Adoption of Cloud Based Banking Services

D. Efficacy of Cloud Based Banking Services

E. Satisfaction level of Cloud Based Banking Services among Bank Employers

F. Risks and Issues faced in adoption of Cloud Based Banking Services

A. Socio Economic Profile of Select Bank Employers

The majority of the respondents from both SBI and HDFC banks fall into the age range of 31-40, with SBI at 42.7 percentages and HDFC at 44.2 percentages. The lowest percentages of respondents are in the 51-60 age range, with SBI at 2.5 percentages and HDFC at 1.9 percentages. Male employees constitute the majority in both banks, with 52.3 percentages in SBI and 52.4 percentages in HDFC. The majority of the respondents from both SBI and HDFC banks have undergraduate degrees, with SBI at 65.0 percentages and HDFC at 68.1 percentages. The lowest percentages of respondents have up to SSLC qualification, with no respondents falling into this category. The highest percentage of

respondents in both SBI and HDFC banks are assistant managers, with SBI at 24.9 percentages and HDFC at 22.4 percentages. The lowest percentages of respondents are loan officers, with SBI at 9.0 percentages and HDFC at 9.8 percentages. The majority of the respondents in both SBI and HDFC banks work in management, with SBI at 40.4 percentages and HDFC at 41.3 percentages. The lowest percentage of respondents work in marketing, with SBI at 10.2 percentages and HDFC at 9.5 percentages. The majority of the respondents from both SBI and HDFC banks have 6-10 years of experience, with SBI at 40.4 percentages and HDFC at 42.0 percentages. The lowest percentage of respondents have less than 1 year of experience, with SBI at 7.6 percentages and HDFC at 6.3 percentages. The highest percentage of respondents in both SBI and HDFC banks earn between ₹51,000 - ₹1,00,000, with SBI at 29.9 percentages and HDFC at 29.7 percentages. The lowest percentage of respondents earn below ₹10,000, with no respondents falling into this category. The majority of the respondents in both SBI and HDFC banks are married, with SBI at 60.2 percentages and HDFC at 60.9 percentages. The lowest percentages of respondents are unmarried, with SBI at 39.8 percentages and HDFC at 39.1 percentages. The highest percentage of respondents in both SBI and HDFC banks has 4-6 family members, with SBI at 60.7 percentages and HDFC at 61.8 percentages. The lowest percentages of respondents have up to 3 family members, with SBI at 20.6 percentages and HDFC at 20.5 percentages.

B. Awareness and Perception of Cloud Based Banking Services

100 percentages of the select bank employees in Coimbatore are aware of cloud-based banking services, with all 354 SBI and 317 HDFC employees indicating they know about it. This indicates that the banks have effectively promoted and communicated their cloud-based banking services to their employees. 49.7 percentages SBI bank employers came to know about cloud-based banking services through advertisements as it can be attributed to the fact that advertising is a widely used and effective marketing tool, whereas only a small percentage of respondents learned about these services through television 9.6 percentages. 44.5 percentages of the HDFC ban employers came to know about cloud-based banking services through newspapers. This could be because newspapers are a widely circulated and accessible source of information for many people. Additionally, newspapers often feature advertisements and articles related to banking and finance, making them a relevant source of information for those interested in these services. Both SBI and HDFC banks are aware of cloud-based banking services, and 100 percentages of bank employers have used these services. This indicates that the usage of cloud-based banking services is widespread among

the bank employers of these two banks. The high usage could be based on the convenience, flexibility, and accessibility that cloud-based banking services offer, making it a popular choice among bank employees.

The majority of both SBI 52.8 percentages and HDFC 50.8 percentages bank employers are using Software as a Service as it provides easy access to software and applications without the need for installation and maintenance, whereas Platform as a Service and Infrastructure as a Service require more technical expertise and may be more suitable for specialized tasks. 43.8 percentages of SBI Bank Employers are using Cloud-based banking services for 6 months to 1 year. This could indicate that SBI has been gradually implementing cloud computing services and promoting their usage among their employees. 41.3 percentages of employees fall under the category of fewer than 6 months because it is possible that HDFC bank has recently implemented cloud computing services, and therefore, many employees may have started using it only recently. Another possible reason could be that the bank may have hired a large number of new employees who are using these services for the first time. 56.2 percentages of SBI bank employers and 57.7 percentages of HDFC Bank Employers who feel comfortable using cloud-based banking services may be due to the bank's efforts in ensuring the security and reliability of their cloud-based services and they may have received adequate training on how to use these services, which has increased their confidence in using them.

C. Factors Influencing in Adoption of Cloud Based Banking Services

18. The result shows that several factors could influence the adoption of cloud-based banking services among SBI and HDFC bank employees. These include IT Infrastructure 0.919 of SBI and 0.879 of HDFC, Financial Strategy 0.836 of SBI and 0.849 of HDFC, Technological Capabilities 0.683 of SBI and 0.716 of HDFC, and Supplier Relationship 0.683 of SBI and 0.712 of HDFC have a high influence on cloud based banking services. A robust IT infrastructure is essential for cloud computing, while financial strategy helps allocate resources efficiently. Technological capabilities and supplier relationships help to implement the necessary technology and ensure adequate support, respectively. All these factors must be considered to achieve a successful transition to cloud-based banking services.

D. Efficacy of Cloud Based Banking Services

From the result, it indicates that several independent variables have a significant positive effect on the adoption of cloud-based banking services with a 0.005 level of significance among SBI bank employees. These variables include the ease of use of cloud-based banking services, improvement in banking experience, reduction in banking costs, reduction in the risk of data loss or theft, improved ability to offer innovative services to customers, and improved ability to manage customer relationships. These variables have positive coefficients, indicating that they are associated with higher levels of satisfaction with cloud-based banking services.

The result shows the relationship between bank employees' efficiency and cloud-based banking services. The constant term is 3.993, representing the predicted value of the outcome variable when the predictor variables are zero. The results indicate that several factors have a significant positive effect on cloud-based banking services, including ease of use, improved banking experience, reduced banking costs, fast and efficient services, improved overall performance, innovative services, and better customer relationship management. All of these variables have positive coefficients, indicating higher satisfaction with cloud-based banking services.

E. Satisfaction level of Cloud Based Banking Services among Bank Employers

56.2 percentages of SBI bank employees are highly satisfied with the responsiveness of the cloud-based banking service platform. This means that most employees were happy with the speed and efficiency of the cloud-based platform, which likely contributed to their overall positive perception of the service.

The high percentage of satisfaction related to the ease of use of cloud-based banking services 57.7 percentages of HDFC Bank employers. It suggests that the platform is user-friendly and easy to navigate, which can improve the user experience and increase satisfaction levels among bank employees.

F. Risks and Issues faced in adoption of Cloud Based Banking Services

Both SBI and HDFC Bank Employers have a statistically significant positive effect on cloud-based banking services on Cyber issues than financial risks when it comes to the adoption and satisfaction with cloud-based banking services. With the increasing use of technology and the internet, the risk of cyber threats has also increased significantly. Hence, banks and financial institutions need to ensure that their systems and services are secure and protected from cyber attacks.

5.2. Suggestions of the Study

Suggestions should be based on the research findings and should be realistic, practical, and feasible. They should also be specific, clear, and actionable so that they can be easily implemented by the intended audience.

A. Bankers Point of View

From a banker's point of view, the following suggestions can be considered for the adoption of cloud-based banking services:

1. Banks should ensure that their cloud-based banking services are compliant with regulatory requirements and industry standards to ensure security and reliability.
2. Banks can offer incentives and rewards to customers who use cloud-based banking services, such as cash back on transactions, lower fees or interest rates, or access to exclusive deals and promotions.
3. Banks can also provide personalized assistance to customers who are hesitant to adopt cloud-based banking services, such as dedicated support teams or tutorials that demonstrate how to use the services effectively.
4. Banks should provide adequate information and training to their staff on the benefits, risks, and security measures associated with cloud-based banking services. This will enable the staff to provide better support and guidance to customers.
5. Banks should establish strong partnerships with reputable cloud service providers and other relevant stakeholders to ensure the success and sustainability of cloud-based banking services.

B. Customers Point of View

From a customer's point of view, the following suggestions can be considered for the adoption of cloud-based banking services:

1. Customers should ensure that they have a reliable and secure internet connection to access cloud-based banking services.
2. Customers should educate themselves about the benefits and risks of cloud-based banking services, including security and privacy concerns, before adopting them.
3. Customers should take advantage of the training and support resources provided by banks to learn how to use cloud-based banking services effectively.
4. Customers should regularly review their account activity and take necessary precautions, such as changing passwords and reporting suspicious transactions, to ensure the security of their cloud-based banking services.
5. Customers should choose reputable banks and cloud service providers that have a proven track record of providing secure and reliable cloud-based banking services.
6. Customers should also ensure that they have adequate knowledge and skills to use the cloud-based banking services. They can seek guidance and support from their banks or attend training sessions to improve their skills.

5.3. Conclusion

In line with the global trend towards adopting the latest technology, banks in Coimbatore have also been moving towards cloud-based banking services. Cloud-based solutions offer several benefits, including cost savings, scalability, and increased efficiency. It also allows banks to access a wide range of banking applications and services, such as online banking, mobile banking, payment processing, and data analytics, without the need for significant investments in hardware and software. It also provides greater flexibility and scalability, as banks can easily scale up or down their computing resources as needed to meet changing demands.

The present study focused on the adoption of cloud-based banking services among SBI and HDF bank employers in Coimbatore has been on the rise, with a large number of employees being aware of and using this service. Some of the Cloud services are Software as a Service, Platform as a Service and Infrastructure as a Service. The benefits of cloud-based banking services are numerous, including ease of use, reduced bank costs, and fast and efficient processing. However, some issues need to be addressed, such as the risk of data breaches and security concerns. Additionally, some users may be hesitant to

use cloud-based banking services due to privacy concerns. Despite these concerns, the overall trend suggests that cloud-based banking services are gaining popularity among select bank employers in Coimbatore. With the many benefits that come with this service, adoption will likely continue to increase in the coming years. As with any new technology, however, users need to remain vigilant and take steps to protect their data and privacy while using these services.

Overall, it can be concluded that cloud-based banking services are a valuable addition to the banking industry in Coimbatore, providing convenience and efficiency to bank employees.

5.4. Scope for Future Research

01. Cloud-based banking services need to be able to handle large amounts of data and be scalable enough to meet the demands of increasing customer usage. Researchers could investigate ways to improve the performance and scalability of cloud-based banking services.

02. There is a need to investigate the factors that influence the adoption and usage of cloud-based banking services. Researchers could study the attitudes, perceptions, and behavior of customers towards cloud-based banking services and identify the key factors that affect their adoption.

03. Cloud-based banking services need to be integrated with other financial systems to provide a seamless and efficient experience for customers. Researchers could investigate the challenges and opportunities associated with integrating cloud-based banking services with other financial systems.

04. Cloud-based banking services have the potential to increase financial inclusion by providing access to banking services to underserved populations. Researchers could investigate the impact of cloud-based banking services on financial inclusion and identify ways to enhance their effectiveness.

BIBLIOGRAPHY

BOOKS

- Justin Garrison and Kris Nova. (2019). Cloud Native Infrastructure: Patterns for Scalable Infrastructure and Applications in a Dynamic Environment.
- Thomas Erl, Ricardo Puttini, and Zaigham Mahmood. (2021). Cloud Computing: Concepts, Technology & Architecture, Pearson Education Limited.
- Boris Scholl, Trent Swanson, and Peter Jausovec. (2021). Cloud Native: Using Containers, Functions, and Data to Build Next-Generation Applications

JOURNALS

- Rajput, N., Dahiya, R., & Mehta, N. (2020). Cloud computing adoption and its impact on the performance of Indian banks. *International Journal of Bank Marketing*, 38(2), 393-406.
- Goyal, N., Pandey, A. K., Gupta, S. K., & Pandey, R. (2019, February). Suppleness of multi-tenancy in cloud computing: advantages, privacy issues and risk factors. In *Proceedings of International Conference on Sustainable Computing in Science, Technology and Management (SUSCOM), Amity University Rajasthan, Jaipur-India*.
- Kumar, M., Sharma, S. C., Goel, A., & Singh, S. P. (2019). A comprehensive survey for scheduling techniques in cloud computing. *Journal of Network and Computer Applications*, *143*, 1-33.
- Garg, S., & Sharma, M. (2018). Impact of customer satisfaction on the adoption of cloud banking in India. *Journal of Financial Services Marketing*, 23(4), 203-215.
- Jena, R. K., & Mohapatra, R. K. (2017). Cloud computing adoption in banking sector: An empirical study of factors influencing cloud computing adoption in Indian banks. *Journal of Advances in Management Research*, 14(1), 63-80.
- Bhatia, S., & Singh, H. (2017). Factors Affecting the Adoption of Cloud Computing by Banks in India. *Journal of Advances in Management Research*, 14(2), 192-209.
- Rani, P., & Chauhan, R. (2017). Security and privacy concerns in the adoption of cloud banking in India. *Journal of Advances in Management Research*, 14(2), 167-181.
- Asadi, S., Nilashi, M., Husin, A. R. C., & Yadegaridehkordi, E. (2017). Customers perspectives on adoption of cloud computing in banking sector. *Information Technology and Management*, *18*, 305-330.

- Gupta, R., & Bansal, G. (2015). An Empirical Study on the Adoption of Cloud Computing in the Indian Banking Industry. *Journal of Technology Management for Growing Economies*, 6(2), 29-42.
- Brown, S. J. (2022). Influence of Cloud Computing Adaption on Organization Performance: A Case Study of Selected Commercial Banks in Ilala Municipality. *International journal of Engineering, Business and Management*, *6*(4).
- Kotonya, B., & Odollo, L. (2022). Effect of cloud computing strategies on business strategic agility in commercial banks in Kenya. *International Academic Journal of Human Resource and Business Administration*, *4*(2), 100-126.
- Hamdi, M., Olayah, F., Al-Awady, A. A., Shamsan, A. F., & Ghilan, M. M. (2021). Attitude Towards Adopting Cloud Computing in the Saudi Banking Sector. *Intelligent automation and soft computing*, *29*(2), 605-617.
- Ahmad, N., Shahzad, A., Ghani, U., Hassan, S., & Rana, R. A. (2021). Adoption of cloud banking technology in the Malaysian banking industry: The moderating role of organizational culture. *Journal of Business Research*, 133, 549-562.
- Tiwari, S., Bharadwaj, S., & Joshi, S. (2021). A study of impact of cloud computing and artificial intelligence on banking services, profitability and operational benefits. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(6), 1617-1627.
- Li, F., Lu, H., Hou, M., Cui, K., & Darbandi, M. (2020). Customer satisfaction with bank services: The role of cloud services, security, e-learning and service quality. *Technology in Society*, *64*, 101487.
- Tesema, D. H. (2020). Cloud computing adoption challenge in case of commercial bank of Ethiopia. *International Journal of Development Research*, *10*(1), 33562-33565.
- Younis, R., & Adel, H. M. (2020, September). Artificial intelligence strategy, creativity-oriented HRM and knowledge-sharing quality: Empirical analysis of individual and organisational performance of AI-powered businesses. In *The Annual International Conference of The British Academy of Management (BAM)*.
- Bajracharya, A., & Rouniyar, R. (2020). Cloud Computing Adoption in Banking System of Nepal. *LBEF Research Journal of Science, Technology and Management*, *2*(2).

- Rahman, A., & Abdullah-Al-Mamun, M. (2019). Cloud Computing Adoption in Banking: A Literature Review. *Journal of Advanced Research in Dynamical and Control Systems*, 11(01), 118-126.
- Alshehri, M. M., & Drew, M. S. (2019). Factors influencing adoption of cloud-based banking systems: an empirical study. *Journal of Enterprise Information Management*, 32(6), 932-950.
- Adhikari, D., & Thakur, R. N. (2019). An exploratory study on critical success factors in cloud computing adoption in banking sector of Nepal. *Research Journal of Science, Technology and Management*, *1*(2), 1-19.
- Al Amin, M., & Taskin, N. (2019). Adoption of cloud computing in the banking sector: An empirical investigation. *Journal of Enterprise Information Management*, 32(3), 491-514.
- Huang, J., & Li, Y. (2019). The impact of cloud technology on perceived service quality in online banking. *Journal of Business Research*, 96, 365-376.
- Purnama, I. W. J. W., & Ginardi, R. V. H. (2019). Analysis of Application Based on Cloud Computing in Banking Industries in Indonesia Using Technology Acceptance Model (TAM) 2 Method Case Study The National Private Banks in Surabaya and Bali Region. *IPTEK Journal of Proceedings Series*, (5), 519-526.
- Tripathi, S., & Mishra, V. (2019). Determinants of cloud computing adoption: a comparative study. *Pacific Asia Journal of the Association for Information Systems*, *11*(3), 3.
- Rizwan, M., Syed, A. A., & Muzaffar, M. A. (2018). Factors affecting cloud computing adoption in banking industry of Pakistan. *Journal of Electronic Commerce in Organizations*, 16(4), 1-12.
- Alrashoud, Rania, and Hanaa Alshaikh. "Impact of Cloud Computing Technology on Banking Industry." *International Journal of Computer Science and Information Security 16*, no. 7 (2018): 67-72.
- Soroya, S. H., Usman, M., & Yasmin, N. (2018). Cloud computing adoption in banking: a comparative analysis of Indian and Pakistani banks. *Journal of Asia Business Studies*, 12(1), 1-Kadir, K. M., & Rahman, M. S. (2017). Customer adoption of cloud-based mobile banking: A qualitative study. *Journal of Internet Banking and Commerce*, 22(1), 1-18.
- Bekele, M., Zewdie, S., Boissière, M., & Atmadja, S. S. (2018). REDD+ MRV implementation in Ethiopia. Review of the context, framework and progress.

- Alsaidan, S., Alshawi, S., & Alalwan, A. (2017). Factors influencing cloud computing adoption by healthcare organizations: A systematic review. *Journal of Health Informatics in Developing Countries*, 11(1), 1-16.
- Ghane, F., Gilaninia, S., & Homayounfar, M. (2016). The effect of cloud computing on effectiveness of customer relation management in electronic banking industry: a case study of eghtesad novin bank. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, *5*(8), 50.
- Gounaris, D., Koritos, C., & Vassiliadis, C. (2016). Cloud computing adoption in the banking sector: A comparative study. *Journal of Business Research*, 69(5), 1840-1844.
- Syed, M. R., & Al Ismaili, S. (2016). Banking customers' acceptance of cloud computing in a developing country context. *Journal of Global Information Technology Management*, 19(4), 248-270.
- Liang, X., Sarathy, R., & Huang, Y. (2016). Cloud computing adoption by higher education institutions in the USA: A survey-based study. *Journal of Computing in Higher Education*, 28(1), 1-22.
- Kumar, D., Samalia, H. V., & Verma, P. (2015). Factors influencing cloud computing adoption by small and medium-sized enterprises (SMEs) in India. *Pacific Asia Journal of the Association for Information Systems*, *9*(3), 3.
- Bejju, A. (2014). Cloud computing for banking and investment services. *Advances in Economics and Business Management*, *1*(2), 34-40.
- Alawadhi, S., & Almarzooqi, G. (2014). The adoption of cloud computing in the banking industry in the UAE: A qualitative study. *Journal of Internet Banking and Commerce*, 19(2), 1-15.
- Tiago Oliveira, Marlene Amorim, Ana Ferreira, and Manuel Castilho Coelho. (2014). Determinants of cloud computing adoption in the manufacturing and services sectors. *Journal of Information & Management*, 51(5), 497-510
- El-Gazzar, R. F. (2014, December). An overview of cloud computing adoption challenges in the Norwegian Context. In *2014 IEEE/ACM 7th International Conference on Utility and Cloud Computing* (pp. 412-418). IEEE.

WEBSITES

- Amazon Web Services (AWS) - https://aws.amazon.com/
- Microsoft Azure - https://azure.microsoft.com/
- Google Cloud Platform (GCP) - https://cloud.google.com/
- IBM Cloud - https://www.ibm.com/cloud
- Oracle Cloud - https://www.oracle.com/cloud/

Annexure

Ms. M.K. Samyuktha, [21PCO016] II – M.Com,
Department of Commerce,
Avinashilingam Institute for Home Science and Higher Education for Women,
Coimbatore – 641043

Dear Sir/Madam,

May I ask your kind favor that would take only a few minutes of your precious time. I am pursuing research entitled on – **A Study on Cloud Based Banking Technology** leading to the award of M.com degree in Avinashilingam Institute for Home Science and Higher Education for Women under the able guidance of Mrs.V.Vimala, Assistant Professor, Department of Commerce, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore – 641043, India.

I solicit your co-operation and support in completing the enclosed questionnaire. Your response will be kept confidential and the results obtained from your responses will be used for the academic purpose only.

At your earliest convenience kindly return your filled in questionnaire.

Thanking you.

Yours Sincerely

M.K. Samyuktha

Questionnaire on Adoption of Cloud Based Banking Technology

Part – I: Personal Details of Bank Employees

1. Name: _____

2. Age:

a. 20 – 30 [ ] b. 31 – 40 [ ]

c. 41 – 50 [ ] d. 51 – 60 [ ]

e. 60 and above [ ]

3. Gender:

a. Male [ ] b. Female [ ]

4. Qualification:

a. Up to SSLC [ ] b. HSC [ ]

c. Under Graduate [ ] d. Post Graduate [ ]

e. Professional Course [ ] f. Certification course [ ]

g. Others (if any specify)_____

5. Designation:

a. Clerk [ ]
b. Manager [ ]
c. Assistant Manager [ ]
d. Cashier [ ]
e. Financial Advisor [ ]
f. Loan Officer [ ]
g. Others (if any specify) _____

6. Which departments are you work for?

a. Accounting [ ]
b. Management [ ]
c. IT [ ]
d. Marketing [ ]
e. Others (if any specify) _____

7. Year of Experience in Banking Industry:

a. Less than 1 year [ ]
b. 1 - 5 years [ ]
c. 6 - 10 years [ ]
d. Above 10 years [ ]

8. Monthly Income:

a. Below ₹. 10,000 [ ] b. ₹.10, 000 – ₹.20, 000[ ]

c. ₹.20,000 – ₹.30,000[ ] d. ₹.30, 000 – ₹.40, 000[ ]

e. ₹.40,000 – ₹.50,000[ ] f. ₹.50,000 – ₹.1,00,000[ ]

g. Above ₹.1,00,000 [ ]

9. Marital status:

a. Unmarried [ ] b. Married [ ]

10. Number of family members:

a. Up to 3 [ ] b. 4 – 6 [ ]

c. 6 and above [ ]

Part – II

ADOPTION OF CLOUD BASED BANKING TECHNOLOGY AMONG BANK EMPLOYEES

A. Awareness and Perception of Cloud Based Banking Services

11. Are you aware of cloud based banking services?

a. Yes [ ]

b. No [ ]

12. If 'Yes', how do you come to know about it?

5 – Completely Aware, 4 – Aware, 3 – Neutral, 2 – Unaware, 1 – Completely Unaware

Sl. No	Particulars	1	2	3	4	5
1	Advertisements					
2	Newspaper					
3	Bank Employers					
4	Family member/Relatives					
5	Friends					
6	E-mail					
7	Television					
8	Journals					
9	Others (if any please specify)					

13. Have you used cloud based banking services?

a. Yes [ ]

b. No [ ]

14. If 'Yes', which cloud computing services are you using?

5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Sl. No	Particulars	1	2	3	4	5
1	Software as a Service					
2	Platform as a Service					
3	Infrastructure as a Service					

15. How long have you been using cloud computing services?

5 – Always, 4 – Often, 3 – Sometimes, 2 – Rarely, 1 – Never

Sl. No	Particulars	1	2	3	4	5
1	Less than 6 months					
2	6 months to 1 year					
3	1 to 2 years					
4	2 to 3 years					
5	More than 3 years					

16. What is your Perception about Cloud Based Banking Services?

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Sl .No	Particulars	1	2	3	4	5
1	Are you comfortable in using cloud-based banking services?					
2	Would you familiar with cloud based banking services?					
3	Do you feel that cloud-based banking services offer more convenience compared to traditional banking services?					
4	Do you trust the security of cloud-based banking services?					
5	Do you feel comfortable using cloud-based banking services for financial transactions?					
6	Do you believe cloud-based banking services are secure and protect the information?					
7	Do you prefer using cloud-based banking services over traditional banking services?					
8	Do you believe cloud-based banking services are the future of banking?					

9	Do you agree that cloud based banking services are user friendly?					
10	Would you recommend cloud-based banking services to others?					
11	Do you think cloud-based banking services are more secure than traditional banking services?					

B. Factors Influenced you to Adopt Cloud Based Banking Services

5 – Strongly influenced, 4 – Somewhat influenced, 3 – Neutral, 2 – Somewhat uninfluenced, 1 – Strongly uninfluenced

I. External Factors

17. Economic Factors

Sl .No	Particulars	1	2	3	4	5
1.	Cost savings					
2.	Scalability					
3.	Improved Efficiency					
4.	Revenue Generation					
5.	Improved Risk Management					

18. Social / Cultural Factors

Sl .No	Particulars	1	2	3	4	5
1.	Digital Literacy					
2.	Attitude towards Technology					
3.	Social Influence					
4.	Privacy Concerns					
5.	Work Culture					

19. Technological Factors

Sl .No	Particulars	1	2	3	4	5
1.	Internet Connectivity					
2.	Network Infrastructure					
3.	Big data					
4.	Digital transformation					

20. Political / Government Factors

Sl .No	Particulars	1	2	3	4	5
1.	Government policies & Incentives					
2.	Cyber Security Regulations					
3.	Political Stability					
4.	Data protection laws & regulations					
5.	Government Surveillance					

21. Global Factors

Sl .No	Particulars	1	2	3	4	5
1.	Globalization					
2.	Economic Conditions					
3.	Technology Advancement					
4.	International Trade Agreement					

II. Internal Factors

Sl .No	Particulars	1	2	3	4	5
1.	Management Support					
2.	Employee Skills					
3.	Technological Capabilities					
4.	Organizational Culture					
5.	Financial Strategy					
6.	Data Management					
7.	IT Infrastructure					
8.	Customer needs					
9.	Supplier Relationship					
10.	Data Security					

C. Efficacy of Cloud Based Banking Services

22. Please answer the following questions

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Sl .No	Particulars	1	2	3	4	5
1	The cloud-based banking services are **easy to use.**					
2	The cloud-based banking services have **improved my banking experience.**					
3	The cloud-based banking services are **reliable.**					
4	The cloud-based banking services are **secure.**					
5	The cloud-based banking services have **reduced my banking costs.**					
6	The cloud-based banking services are **fast and efficient.**					
7	Customer support for cloud-based banking services is **helpful and responsive.**					
8	The cloud-based banking services have improved the bank's **overall performance**.					
9	The cloud-based banking services have made it **easier to access banking services remotely**.					
10	The cloud-based banking services have improved the **speed and accuracy of transactions.**					
11	The cloud-based banking services have improved the **bank's ability to manage and store data securely.**					
12	The cloud-based banking services have **reduced the risk of data loss or theft.**					
13	The cloud-based banking services have improved **the bank's ability to offer innovative services to customers.**					
14	The cloud-based banking services have improved **the bank's ability to manage customer relationships**.					
15	The cloud-based banking services have improved **the bank's ability to manage internal operations.**					

D. Satisfaction level of Cloud Based Banking Services among Bank Employees

23. Please answer the following questions based on your satisfaction

5 – Strongly satisfied, 4 – Satisfied, 3 – Neutral, 2 – Dissatisfied; 1 – Strongly Dissatisfied

Sl .No	Particulars	1	2	3	4	5
1.	How satisfied are you with the **overall reliability** of cloud-based banking services?					
2.	How satisfied are you with the **speed of transactions** on cloud-based banking services?					
3.	How satisfied are you with the **security and privacy** of cloud-based banking services?					
4.	How satisfied are you with **the user interface** of cloud-based banking services?					
5.	How satisfied are you with the **customer support provided** for cloud-based banking services?					
6.	How satisfied are you with the **convenience of accessing** cloud-based banking services					
7.	How satisfied are you with the **cost** of using cloud-based banking services?					
8.	How satisfied are you with the **range of services** offered on cloud-based banking services?					
9.	How satisfied are you with the **ease of use** of cloud-based banking services?					
10.	How satisfied are you with the **overall performance** of your cloud based banking service?					
11.	How satisfied are you with the **range of banking services and features available** on the cloud-based platform?					
12.	How satisfied are you with the **level of customization and personalization options** available on the cloud-based banking service platform?					
13.	How satisfied are you with the **level of integration and compatibility** with other financial management tools and services?					
14.	How satisfied are you with the **level of control and flexibility** you have over your financial information and data on the cloud-based banking service?					
15.	How satisfied are you with the **responsiveness** of the cloud-based banking service platform?					

E. Risks and issues faced in adoption of Cloud Based Banking Services

24. Please answer the following questions based on your opinion

1. Digital Risks faced in Adoption of Cloud Based Banking Services

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Sl .No	Particulars	1	2	3	4	5
1	To what extent do you believe that cloud-based banking services pose a risk to the security of customer data?					
2	Do you find it is difficult to switch to a new cloud-based banking service due to lack of portability of data?					
3	Do you find it is challenging to stay up-to-date with the latest security practices and measures on cloud-based banking?					
4	Do you concern about the potential for technical glitches and downtime on cloud-based banking services?					
5	Do you concerned about the potential for personal and financial information to be hacked on cloud-based services?					
6	Do you believe that cloud-based banking services increase the risk of data breaches and cyber-attacks?					
7	Do you believe in the ability of your bank to detect and respond to cyber attacks targeting your cloud-based banking services?					
8	Do you believe that your bank will recover from a cyber-attack or data breach affecting your cloud-based banking services?					
9	Do you find it is difficult to keep up with the frequent updates and changes to cloud-based banking services?					
10	Do you find it difficult to access all the features of cloud-based banking services that you require?					

2. Financial Risks faced in Adoption of Cloud Based Banking Services

5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, 1 – Strongly Disagree.

Sl .No	Particulars	1	2	3	4	5
1	The cost of implementing and maintaining cloud-based banking services is a significant challenge for banks.					
2	Do you find it is difficult to adapt to the changes brought about by cloud-based banking services?					
3	Whether you are hesitant to use cloud-based banking services due to security concerns?					
4	Do you find it is challenging to navigate through the user interface of cloud-based banking services?					
5	Do you concerned about the lack of privacy on cloud-based banking services?					
6	Do you find it challenging to manage multiple cloud-based banking services?					
7	Do you concerned about the lack of regulation and oversight of cloud-based banking services?					
8	Do you find it is difficult to manage the complexity of cloud-based banking services?					
9	Do you concerned about the lack of transparency and accountability of cloud-based banking services?					
10	Do you find it is challenging to integrate cloud-based banking services with other financial management tools that you use?					