

**A STUDY ON TECHNOSTRESS AMONG BANK EMPLOYEES IN  
ERNAKULAM DISTRICT**

*Dissertation submitted to Mahatma Gandhi University, Kottayam in partial  
fulfilment of the requirement for the degree of*

**MASTER OF COMMERCE**

*Submitted by*

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**SCHOOL OF COMMERCE AND MANAGEMENT STUDIES**

**BHARATA MATA COLLEGE**

**THRIKKAKARA**

**2021-2023**

## **DECLARATION**

I hereby declare that the project on **“A STUDY ON TECHNOSTRESS AMONG BANK EMPLOYEES IN ERNAKULAM DISTRICT”** submitted in partial fulfilment of the Master of Commerce in Mahatma Gandhi University is a record of bonafide research work carried out by me under the guidance and supervision of **Dr. AJAY JOSEPH**, and no part of it has been submitted for any other degree or diploma.

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DATE: 31/05/2023

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**CERTIFICATE**

I hereby declare that the Dissertation entitled “**A STUDY ON TECHNOSTRESS AMONG BANK EMPLOYEES IN ERNAKULAM DISTRICT**” is bonafide piece of research work done by **ATHIRA ASHOKAN** in partial fulfilment of the Master of Commerce in Mahatma Gandhi University under my supervision.

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## ABSTRACT

*The word "technostress," which was first used in the 1980s, refers to the difficulties and pressures people face as a result of the quick development and extensive integration of technology in their life. People may struggle with overwhelming, anxious, and disconnected sentiments as technology becomes more and more necessary for work, communication, and daily activities. Information overload, continual connectedness, and the need to adjust to rapidly evolving digital technologies are some of the causes of this syndrome. Understanding the causes, impacts, and coping mechanisms for technostress becomes crucial in this situation for preserving a positive and balanced connection with technology. The current study examines the idea of technostress in contemporary Indian banking organizations as well as its various manifestations, such as the factors which creates technostress in the Indian banking sector. A well-structured questionnaire was created during the study to gather data from 100 bank employees in order to achieve the study's goals and determine the outlook of the technostress factors in banks. Both primary and secondary data are used in the investigation. The non-probability sampling method was used to achieve the goals of the study. In the investigation, a total of five null hypotheses were developed. To address the research's aim, topic, and objectives, data were subjected to a variety of methods, including reliability analysis, t-test, ANOVA, correlation analysis and regression analysis. The internal consistency of the research instrument utilized in the study was examined using a reliability analysis. It was discovered that the scale's dependability was 0.7, reflecting a respectable level of reliability and analysis fit. The whole hypotheses are rejected by the factors of technostress that are prevalent in banks. Therefore, it can be said that techno-insecurity, techno-overload, techno-invasion, techno-uncertainty and techno-complexity (technostress factors) have a significant role in the creation of Technostress. The thesis finished with suggested actions for enhancing the current technology service in banks, scope for further study, and a statement about the limitations and conclusion of the study.*

**Keywords:** Technostress, Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty, Techno-complexity.



## **CHAPTER I**

### **INTRODUCTION**

## 1.1 INTRODUCTION

Technostress defined as a “modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner”. - Craig Brod’s book (Brod,1984)

In this present study, interested in one of the downsides of ICTs which is known as ‘Technostress’ and which is a kind of stress resulting of inappropriate use of ICTs by employees in organisations (Tarafdar et al., 2017; Ragu-Nathan et al., 2008)

The stability of the country's banking system has a direct impact on the economy. Receiving deposits, lending money to those in need of it, and providing other helpful services comprise the banking industry. The banking industry is regarded as the hub and gauge of the financial system. This industry is the foundation of the economy and is crucial to the growth of the nation's economy. The banking sector has undergone significant upheaval over the past ten years. The creation of new products, improved information technology, and more automation will all have a big impact on bank workers. Workloads that are too heavy for an individual, unclear job descriptions, a lack of support from superiors, a lack of power over resources, a lack of autonomy in decision-making, imbalances in work and personal life, and other factors are some of the sources of stress in organizations that have an impact on employees' mental and physical health. In the banking sector, technology use is pervasive and permeates every aspect of bank operations. The use of technology in financial operations has become essential. However, the current use of technology also causes stress, worry, and an unbalanced work-life for bank personnel. The stress level among bank employees has increased as a result of technological innovation.

The book Technostress by Craig Brod (Brod, 1984) is where the phrase originally appeared. Human suffering as a result of the computer revolution. The phrase describes a person's distressing incapacity to deal with technology. Technostress is a newly recognized phenomena connected to the pervasive use of technology and is a result of the recent rise in computerization and digitalization. This cross-sectional observational study intends to evaluate the effects of technological stress (technostress) on an individual's productivity and quality of life. If not addressed, the anxiety experienced by persons who are under the influence of technology can lead to poor decision-making and subpar work performance. It happens when someone's experience using technology for work-related tasks is negatively evaluated.

## **1.2 SIGNIFICANCE OF THE STUDY**

The banking sector in India is embracing technology at a rapid rate. Since using technology improves employee productivity and effectiveness, it is also necessary to offer bank services everywhere in the most effective and creative ways possible in order to keep up with the growing competition among domestic, foreign, and private players. As we all know, technology use results in a rise in work load and a never-ending emergence of work, which affects employees' ability to balance their work and personal lives. There is an urgent need to focus on this concern in order to find an effective solution for the soundness of the banking industry because it is an alarming situation that needs to be addressed promptly. If it is not, there is a risk that working conditions for bank employees will worsen, leading to decreased productivity, job insecurity, and job dissatisfaction, among other things. Therefore, this study is useful to the bank employees who suffer from technostress.

## **1.3 STATEMENT OF THE PROBLEM**

Technostress is a modern adaption disorder brought on by an inability to deal with new technologies in a healthy way. Either people have a hard time accepting computers or they become too dependent on them. An aberrant response to stress, with distinct physical, emotional, and mental symptoms, is caused by information overload and continual contact with digital technology gadgets and applications. It is a form of stress brought on by technical advancements that is distinct from traditional stress. The stress levels among bank personnel have risen as a result of technological improvements. Technostress is a product of stress. Due to the banking industry's high level of technological tool adoption, necessary evil technostress is growing with each new technology development. Prevention strategies are thus required to lessen the impacts of technostress. In the present scenario it is important to know the technostress among the bank employees and to minimize the consequences of technostress for a better functioning of the banks.

## **1.4 OBJECTIVES OF THE STUDY**

The present study “A Study on Technostress among Bank Employees in Ernakulam District” is carried out with following specific objectives:

- To explore the antecedence of technostress among bank employees.
- To measure the level of technostress among bank employees.
- To study the effect of antecedence on technostress among bank employees.

## 1.5 HYPOTHESIS

H01: There is no significant effect of Techno-insecurity on Technostress.

H02: There is no significant effect of Techno-overload on Technostress.

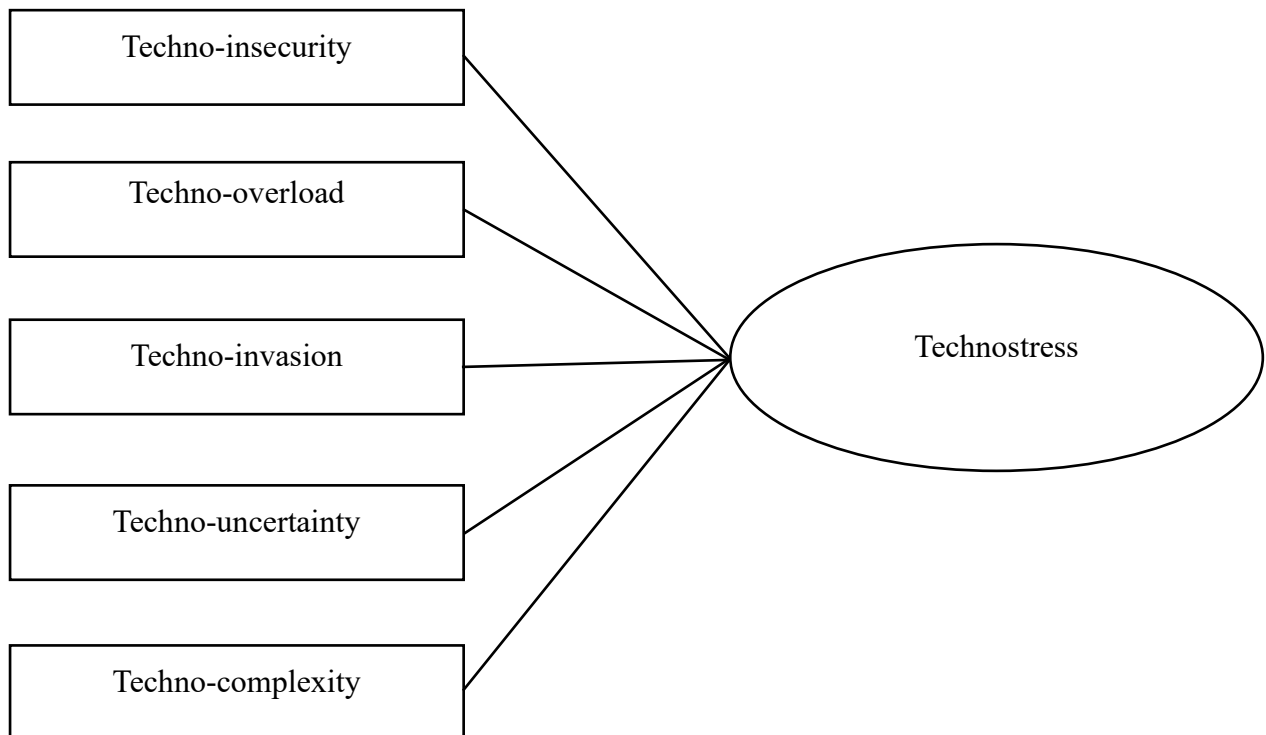
H03: There is no significant effect of Techno-invasion on Technostress.

H04: There is no significant effect of Techno-uncertainty on Technostress.

H05: There is no significant effect of Techno-complexity on Technostress.

**Figure: 1.1**

### HYPOTHESIZED MODEL



Source: Compiled by the researcher based on extensive review.

## **1.6 RESEARCH METHODOLOGY**

The present study “A Study on Technostress among Bank Employees in Ernakulam District” has been designed as descriptive one. Information is collected by providing questionnaire to the respondents.

### **DATA**

#### **Primary data**

Primary data was collected from 100 bank employees through systematically prepared questionnaire in google form and then electronically summarized through SPSS.

#### **Secondary data**

Secondary data were collected from books, websites and journals.

### **SAMPLE DESIGN**

It was very difficult to conduct a study from the entire population from Ernakulam district., so representative samples are drawn from the purpose of the study.

### **SAMPLE FRAME**

The data on this subject of study were mobilized from bank employees in Ernakulam district.

### **SAMPLE SIZE**

For this study, 125 samples were collected from the bank employees in Ernakulam district. Out of these 125 samples, after deleting incomplete and mismatched questionnaires, 100 valid questionnaires were retained and ultimately constituted the research sample.

### **SAMPLING METHOD**

Samples were selected using convenience sampling method from Ernakulam district.

## **1.7 TOOLS UESD FOR ANALYSIS**

The primary data were statistically coded, processed, classified, tabulated and analysed by using statistical and mathematical tools and techniques like Percentages, Mean, Median, Mode and Standard Deviation. Reliability testing and Hypothesis testing like One Sample T

test, ANOVA, Correlation and Multiple Regressions were used in the study. In this study, table and statistical results were derived with help of the software called Statistical Package for Social Science (SPSS).

## **1.8 LIMITATIONS OF THE STUDY**

- The sample size was limited to 100 respondents only.
- Time and resource factors are the main constraints of the study.
- The study confines only to the selected samples from Ernakulam district only. Hence generalisation cannot be possible.
- Some of the respondents of the survey were unwilling to share information and they were very busy.
- The accuracy of the data may not be high.

## **1.9 CHAPTERIZATION**

For the convenience, this study has been divided into four chapters:

### **Chapter 1: Introduction.**

This section gives a brief introduction to the study. It covers significance of the study, statement of the problem, objectives, hypothesis, research methodology, tools for analysis and limitations of the study.

### **Chapter 2: Theoretical Framework and Review of Literature.**

It includes the various theoretical aspects related to the topic and also include the review of previous studies related to this topic.

### **Chapter 3: Data collection and Analysis.**

This section covers the analysis of the data collected in order to obtain the objectives of the study. The analysis is done with the help of SPSS.

### **Chapter 4: Findings, Suggestions and conclusion.**

The section covers the findings, suggestions and conclusions derived from this study.

## **Bibliography**

## **Appendix**

## **CHAPTER II**

### **THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE**

# THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

## 2.1 INTRODUCTION TO BANKING SECTOR

Banking is a financial services industry that deals with cash storage, investments, credit facilities, currency exchange, forex trading, and other financial operations. Because it allocates cash to borrowers with productive projects, the banking sector is one of the major drivers of most economies.

### 2.1.1 FUNCTIONS OF BANKS

- Accepting deposits: Bank customers can deposit money and withdraw it at any moment from any type of bank account.
- Lending loans and advances: Banks offer money to persons in need at a fixed interest rate.
- Issue of notes or drafts: Banks are also in charge of issuing notes and generating other affordable mechanisms of exchange, such as drafts or checks. The Reserve Bank of India is in charge of issuing notes and coins in India.
- Deposit on credit: By granting loans to its customers, a bank is able to generate deposits.
- Collection of cheques drawn on other banks.
- Accepting and gathering bills of exchange.
- Dealing in foreign exchange to help the settlement of overseas debts.
- Safe deposits facilities.
- Stock exchange trustee.
- Innovative functions: EFTS, ATM, Debit card, Credit card, Tele-banking, Internet banking and PC banking are the major innovative functions of banks.

### 2.1.2 TYPES OF BANKS AND BANKING

TYPES OF BANKS	TYPES OF BANKING
<ul style="list-style-type: none"><li>• Scheduled banks</li><li>• Non-scheduled banks</li><li>• Commercial banks</li><li>• Public sector banks</li><li>• Private sector banks</li></ul>	<ul style="list-style-type: none"><li>• Branch banking</li><li>• Unit banking</li><li>• Mixed banking</li><li>• Chain banking</li><li>• Wholesale banking</li></ul>



<ul style="list-style-type: none"> <li>• Foreign banks</li> <li>• Regional rural banks</li> <li>• Co-operative banks</li> </ul>	<ul style="list-style-type: none"> <li>• Relationship banking</li> <li>• Corresponding banking</li> <li>• Rural banking</li> <li>• Universal banking</li> <li>• Social banking</li> <li>• Digital or Virtual banking</li> </ul>
---------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### 2.1.3 NEED OF TECHNOLOGY IN BANKING

Technology plays a crucial role in the banking industry for several reasons:

- ❖ **Efficiency:** Technology automates routine tasks, such as transaction processing and account management, allowing banks to operate more efficiently and reduce human error.
- ❖ **Convenience:** Online banking, mobile apps, and ATMs provide customers with 24/7 access to their accounts and services, making banking more convenient and accessible.
- ❖ **Speed:** Electronic funds transfers, instant payments, and online transactions enable faster and real-time financial transactions, enhancing the customer experience.
- ❖ **Cost Savings:** Implementing technology reduces the need for extensive physical infrastructure and manual labour, leading to cost savings for banks and potentially lower fees for customers.
- ❖ **Security:** Advanced security measures, like biometric authentication and encryption, help protect customer data and transactions from fraud and cyberattacks.
- ❖ **Data Analytics:** Technology allows banks to analyse customer behaviour, spending patterns, and financial trends, enabling personalized services and targeted marketing strategies.
- ❖ **Innovation:** Fintech collaborations and technological advancements enable banks to offer innovative products and services, such as digital wallets, robo-advisors, and peer-to-peer lending.
- ❖ **Regulatory Compliance:** Technology aids banks in adhering to complex regulations by automating reporting, tracking transactions, and ensuring transparency.
- ❖ **Global Reach:** Online banking and digital services enable customers to access their accounts and perform transactions regardless of their geographical location.

- ❖ **Customer Experience:** Technological solutions enhance the overall customer experience by providing self-service options, quick issue resolution, and personalized interactions.

In summary, technology is essential in modern banking to improve efficiency, offer convenience, ensure security, drive innovation, and enhance the overall banking experience for both customers and financial institutions.

#### **2.1.4 EFFECTS OF TECHNOLOGY AMONG BANK EMPLOYEEES**

- ❖ **Increased Efficiency:** Technology automates routine tasks, such as data entry and transaction processing, allowing bank employees to handle larger volumes of work efficiently.
- ❖ **Enhanced Customer Service:** Technology tools like customer relationship management (CRM) systems and digital communication channels enable bank employees to provide better, more personalized service to customers, leading to improved customer satisfaction.
- ❖ **Skill Upgradation:** Employees need to continually update their skills to adapt to evolving technology. This can lead to professional growth and the acquisition of valuable tech-related skills.
- ❖ **Technostress:** Rapid technological changes and the pressure to adapt can lead to technostress among employees, causing anxiety, frustration, and job dissatisfaction.
- ❖ **Data-Driven Decision-Making:** Technology provides access to vast amounts of data, enabling employees to make informed decisions based on customer behaviour and market trends, leading to more strategic and effective business strategies.

These effects highlight both the positive and challenging aspects of technology adoption among bank employees. Proper training and support are crucial to help employees navigate these changes successfully.

#### **2.1.5 TECHNOLOGY RELATED BANKING**

"Technology-related banking" refers to the integration of technological advancements and digital solutions within the banking industry to improve processes, services, and customer experiences. This involves the use of various technologies such as digital platforms, mobile apps, online banking systems, data analytics, artificial intelligence, and blockchain, among

others. Technology-related banking encompasses a wide range of activities and services, including:

- ❖ **Online Banking:** Providing customers with the ability to access their accounts, make transactions, pay bills, and manage finances through internet-based platforms.
- ❖ **Mobile Banking:** Offering banking services and features through mobile applications, allowing customers to bank on the go.
- ❖ **Digital Payments:** Enabling electronic transactions, digital wallets, and contactless payment options for a seamless payment experience.
- ❖ **Data Analytics:** Analysing customer data to gain insights into behaviour, preferences, and trends, which can guide personalized services and marketing strategies.
- ❖ **Chatbots and AI:** Using artificial intelligence-powered chatbots to provide customer support, answer queries, and assist with basic tasks.
- ❖ **Blockchain and Cryptocurrency:** Exploring the use of blockchain technology for secure transactions and even integrating cryptocurrencies into banking services.
- ❖ **Robo-Advisors:** Providing automated investment advice and portfolio management based on algorithms and customer preferences.
- ❖ **Cybersecurity:** Implementing measures to protect customer data, transactions, and systems from cyber threats and attacks.
- ❖ **Biometric Authentication:** Utilizing fingerprint, facial recognition, or other biometric methods for secure and convenient customer authentication.
- ❖ **Open Banking:** Allowing third-party financial services providers to access customer data (with permission) to offer tailored services and products.
- ❖ **Digital Lending:** Streamlining the loan application process and underwriting through digital platforms and automated assessments.
- ❖ **API Integration:** Enabling seamless integration between banking systems and third-party applications to enhance functionality and expand services.
- ❖ **Remote Account Opening:** Allowing customers to open new accounts without visiting a physical branch, using online verification methods.
- ❖ **Virtual Reality (VR) and Augmented Reality (AR):** Exploring these technologies for immersive banking experiences and virtual property tours for mortgage applications.

Technology-related banking is continuously evolving, driven by the need to meet customer expectations, improve efficiency, and stay competitive in the rapidly changing financial landscape.

## 2.1.6 FEATURES OF TECHNOLOGY RELATED BANKING

Certainly, here are some features of technology-related banking:

- ❖ **Mobile Banking Apps:** Access to banking services through dedicated mobile applications, allowing customers to manage their accounts, make transactions, and monitor finances on their smartphones or tablets.
- ❖ **Online Account Management:** Customers can view account balances, transaction history, and statements online, providing real-time access to their financial information.
- ❖ **Electronic Funds Transfer:** Facilitates quick and secure transfers of funds between accounts, to other banks, or to individuals using online or mobile platforms.
- ❖ **Mobile Check Deposit:** Allows customers to deposit checks by simply taking a photo of the check with their smartphone, eliminating the need to visit a physical bank branch.
- ❖ **Bill Pay Services:** Enables customers to pay bills electronically, schedule recurring payments, and set up reminders, reducing the need for writing checks or visiting biller websites.

These features collectively enhance convenience, accessibility, and efficiency in banking, making it easier for customers to manage their finances in an increasingly digital world.

## 2.1.7 INTRODUCTION TO STRESS

Stress is natural, physical and mental response of body to challenges or changes. It may help people to overcome obstacles and push to new levels of personal growth. The word “stress” is derived from the Latin word, ‘stringi’, which means “to be drawn tight”. Stress is any strain or exertion or interference that disturbs the functioning of the organism. Stress can lead to;

- Physiological discomfort.
- Some kind of emotional unhappiness.
- Strained relationship with other people.

According to Richard. S. Lazarus, “Stress arises when individuals perceive that cannot adequately cope with the demands being made on them or with threats to their well-being.”

Therefore, stress is a natural, physiological and psychological reaction to challenging or threatening situations. It's the body's way of preparing to deal with a perceived threat or pressure. Stress can be triggered by work, relationships, financial problems or health problems.

## 2.1.8 CONSEQUENCES OF STRESS

### CONSEQUENCES FOR THE INDIVIDUAL

Health effects	Emotional effects	Behavioural effects
<ul style="list-style-type: none"> <li>❖ Chronic pain</li> <li>❖ Migraines</li> <li>❖ Ulcers</li> <li>❖ Heartburn</li> <li>❖ High blood pressure</li> <li>❖ Diabetes</li> <li>❖ Asthma</li> <li>❖ Infertility</li> <li>❖ Autoimmune diseases</li> <li>❖ Skin problems</li> <li>❖ Obesity</li> </ul>	<ul style="list-style-type: none"> <li>❖ Tension</li> <li>❖ Anxiety</li> <li>❖ Depression</li> <li>❖ Loss of mental concentration</li> <li>❖ Insomnia</li> </ul>	<ul style="list-style-type: none"> <li>❖ Increased anger</li> <li>❖ Tendency to drink alcohol and smoke</li> <li>❖ Drug abuse</li> <li>❖ Rough behaviour</li> <li>❖ Poor relationships with clients</li> <li>❖ Poor time-keeping</li> <li>❖ Absenteeism</li> <li>❖ Inability to deal calmly with everyday tasks and situations</li> </ul>

CONSEQUENCES FOR THE FAMILY	CONSEQUENCES TO ORGANISATIONS
<ul style="list-style-type: none"> <li>❖ Divorce</li> <li>❖ Suicide</li> <li>❖ Disintegration of the family</li> </ul>	<ul style="list-style-type: none"> <li>❖ Absenteeism</li> <li>❖ Poor industrial relations</li> <li>❖ Poor productivity</li> <li>❖ Poor organisational climate</li> <li>❖ Increasing staff turnover</li> <li>❖ Decreased productivity</li> <li>❖ Poor performance</li> <li>❖ Low quality</li> <li>❖ Increasing complaints from customers</li> <li>❖ Increased rate of accidents</li> </ul>

## 2.1.9 INTRODUCTION TO TECHNOSTRESS

Technology has become a vital component of our lives in today's fast-paced society. We depend on digital tools for communication, business, and socializing, from smartphones to laptops. Technostress is a term for the condition that results from constant exposure to technology, which can potentially have negative effects. Described as a "modern disease of adaptation caused by an inability to cope with the new computer technologies in a healthy manner" in 1984, Brod coined the term "technostress." Technostress, which includes increased physiological and emotional reactivity, is now thought to be the term for mental stress associated with technology use.

Technostress defined as stress that individuals experience due to their use of Information Systems (IS) represents an emerging area of scholarly investigation in IS (e.g., Ragu-Nathan et al. 2008; Ayyagari et al. 2011).

People who use technology at work in the twenty-first century are particularly susceptible to technostress. Physical strain develops as a result of people spending more time sitting and staring at computer screens. People spend hours each day at work in the workplace of the twenty-first century because their security and job satisfaction depend on it. However, the risks to their health from these demands are growing. In today's technological age, it is crucial to give people a suitable and secure physical environment. People are emotionally impacted by technostress at work because excessive computer monitor exposure is linked to emotional stress.

In the banking sector, technology use is pervasive and permeates every aspect of bank operations. The use of technology in financial operations has become essential. However, the current use of technology also causes stress, worry, and an unbalanced work-life for bank personnel. The stress levels among bank personnel have increased as a result of technological improvements. Technostress has negative effects on productivity, organizational commitment, and job happiness. To monitor the level of technological stress impacting professionals, particularly the physical and emotional effects, a periodic examination is required. To get workers comfortable with technology and aware of its negative impacts, managers should plan technology-based trainings. Technology skills are essential for employees to stay current with technological changes. To maximize system accessibility and offer a level of comfort to the employees, banking institutions must engage IT specialists and troubleshooters.

Technostress is a growing concern in the contemporary, technologically advanced banking sector. The constant developments in technology and the need to adapt to them cause the bank employees enormous levels of stress. As multitaskers, bank employees were under pressure to perform above what was expected of them, which led to a variety of physical and mental health issues. Bank personnel can lessen the detrimental impacts of technostress on their mental and physical well-being by recognizing its signs, comprehending its consequences, and implementing efficient management and prevention techniques.

### 2.1.10 SIGNS AND SYMPTOMS OF TECHNOSTRESS

SIGNS OF TECHNOSTRESS	SYMPTOMS OF TECHNOSTRESS
<ul style="list-style-type: none"> <li>• Spending more time doing sedentary work.</li> <li>• An increase in multi-tasking.</li> <li>• Feeling anxiety when an e-mail or voice mail has not been checked in 12 hours.</li> <li>• Having a hard time knowing when internet research is sufficient and complete.</li> <li>• Feeling you have more tasks to complete despite how much work you have done.</li> <li>• Feeling information overload or fatigue.</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Tension</li> <li>• Loss of temper</li> <li>• Irritability</li> <li>• Frustration</li> <li>• Feeling excessive tired</li> <li>• Poor job performance</li> <li>• Trouble sleeping</li> </ul>

### 2.1.11 FOUR KEY CATEGORIES OF SYMPTOMS OF TECHNOSTRESS

PHYSICAL SYMPTOMS	EMOTIONAL SYMPTOMS	BEHAVIORAL SYMPTOMS	PSYCHOLOGICAL SYMPTOMS
Eye strain Dry mouth Back-aches	Irritability Feelings of indifference	Insomnia Uncooperativeness	Overload of information Job role insecurity

Headaches	Depression	Overspending on computers	Professional envy
Neck pain	Guilt		
Chest pain	Paranoia	Alcohol consumption	
Difficulty breathing	Negative attitudes		
Pounding heart			
Stomach upset			
Frequent urination			
Sweating palms			

If ignored, technostress can result in memory loss, decreased concentration, decreased productivity, discomfort in the abdomen, and decreased fulfilment with job. Technostress has an impact on the family lives as well. People are no longer forming interpersonal ties with one another because they are too preoccupied with turning on the screens.

## 2.1.12 FACTORS AFFECTING TECHNOSTRESS

### (TECHNOSTRESS CREATORS)

- **Techno-insecurity**

Techno-insecurity refers to employees' worries that they may lose their status or jobs as a result of new technologies that will displace or alter their jobs. Technology upgrades are constantly felt to be necessary by employees. Otherwise, it is connected to circumstances where people fear losing their jobs to others who are more knowledgeable about cutting-edge technology.

- **Techno-overload**

It describes instances in which the use of computers compels individuals to work more and quicker. Employees experience technostress when they are asked to perform more in a shorter period of time. They are overwhelmed by the rapid flow of information. It happens as a result of constant messages and notifications pouring in from many sources.



- **Techno-invasion**

When employees are expected to be "connected" all the time, the distinctions between personal and professional life blur. It is caused by getting work-related alerts after work hours and feeling the need to respond immediately. Employees' main concern is the inability to switch off or unplug. It depicts being "always exposed," where people might potentially be contacted anywhere and at any time and feel the need to be always linked. The standard workday is stretched, office work is done at all hours, and "cutting away" is nearly impossible.

- **Techno-uncertainty**

Employees experience techno-uncertainty as a result of the fast-paced digital change. When a company constantly adopts new technology or employs software that frequently upgrades, it might be difficult for some employees to stay up. It is related to computer systems' short life cycles. Continuous revisions and updates do not allow people to get experience with a certain system. People find this disconcerting because their knowledge swiftly deteriorates and they are forced to relearn topics on a regular basis.

- **Techno-complexity**

Techno-complexity refers to situations in which workers are required to spend time and effort learning and comprehending how to use new applications and updating their abilities due to the complex computer systems employed at work. People are stressed as a result of the range of applications, functions, and lingo. It occurs when employees believe they must have technological skills. This promotes confusion, mistrust of technology, and reduces staff productivity.

### **2.1.13 POSITIVE AND NEGATIVE SUB-PROCESS**

A comprehensive technostress including two important sub-processes.

- ❖ Techno-eustress sub-process
- ❖ Techno-distress sub-process

This holistic technostress model frames technostress as a process that is dependent on people rating environmental conditions as "challenge techno-stressors," defined as techno-stressors that people tend to appraise as related to promoting task completion, or "hindrance techno-stressors," defined as techno-stressors that people tend to appraise as a barrier to task completion.

The comprehensive technostress process model is as follows:

- “Environmental conditions” Identify potential drivers of technology-related stress that may interact with any other environmental elements, including job and task demands, interpersonal and behavioural expectations, working environments, and workplace rules among others.
- The “techno-eustress sub-process” entails:
  - ❖ “Challenge techno-stressors” are techno-stressors that People frequently view evaluation as enhancing task completion.
  - ❖ “Positive psychological responses” are psychologically healthy reactions to a techno-stressor, as shown by the existence of psychologically healthy states.
- “Positive outcomes” are favourable individuals and organizational outcomes associated with a person's psychological well-being.
- The “techno-distress sub-process” entails:
  - ❖ “Hindrances techno-stressors” are technological stresses that people frequently perceive as barriers to work completion.
  - ❖ “Negative psychological responses” are adverse psychological reactions to technological stressors, as shown by the existence of adverse psychological states.
  - ❖ “Negative outcomes” are unfavourable people and organizational effects connected to the person's bad psychological condition.

The techno-stressors, psychological responses and outcomes are governed by three evaluation processes:

- An “Appraisal process” is a social process through which people evaluate the environmental conditions related to technology as difficulties or obstacles.
- A “Decision process” is a social process through which people choose whether to react favourably or adversely to the evaluated techno-stressor. This process happens before the psychological reaction, but after the person decides if the surroundings pose a challenge or limits the usage of technology.
- A “Performance process” is a social process by which people choose how to respond to their psychological reaction. This procedure happens after the psychological reaction but before the person chooses their course of action.

### **2.1.14 ADVANTAGE OF TECHNOSTRESS**

It's important to note that technostress itself is generally considered a negative phenomenon. However, in some cases, it can serve as a catalyst for positive changes. For instance, experiencing technostress might prompt individuals to seek out ways to better manage their technology usage and develop healthier digital habits. This could lead to increased self-awareness, improved time management skills, and a greater emphasis on work-life balance. Ultimately, while technostress is not inherently advantageous, it can potentially drive individuals to make positive changes in their relationship with technology.

### **2.1.15 DISADVANTAGE OF TECHNOSTRESS**

The significant disadvantage of technostress is its negative impact on an individual's physical and mental well-being. Prolonged exposure to excessive technology use, information overload, and constant connectivity can lead to increased stress, anxiety, and even burnout. This can result in reduced job satisfaction, decreased productivity, and a decline in overall health. Additionally, technostress may hinder personal relationships, as the constant use of technology can disrupt work-life balance and limit face-to-face interactions.

### **2.1.16 CAUSES OF TECHNOSTRESS**

The realm of technology is now undergoing tremendous advancement. Although we have grown to love and value technology, we have also come to desire it more and more when it is absent. Technostress is the term used to describe the harmful impacts of technology. Otherwise, it is a sensation of worry or mental strain brought on by excessive technology use or exposure. There are numerous causes of technostress in the workplace, some of which are:

- **Information overload:** It significantly contributes to employee technostress. An employee's ability to focus is impaired and their ability to complete their task when they get notifications, emails, and other types of digital contact often. Technology overload's frequent interruptions are particularly terrible for productivity.
- **The quick pace of technological change:** Employees experience techno-uncertainty as a result of a rapid shift in technology. Employees who are attempting to adapt new technologies into the workplace may experience stress and anxiety. Organizations may use digital adoption platforms and develop a methodical approach for implementing new technologies to speed up this process.

- **Constant connectivity:** Employees in organizations without clearly defined technical boundaries feel compelled to be connected at all times and reply to messages right away. Employees experience technological stress as a result of this ongoing connectedness, especially after hours.
- **Poor user experience and interface design:** A user interface that is confused can cause dissatisfaction and anxiety. Employee productivity may suffer from their difficulty moving between tasks. This could make you feel uneasy, lost, or unclear of what to do next.
- **Fear of technology:** When workers are forced to utilize technology that is unresponsive, difficult to operate, or lacking in a feedback system, technophobia develops. Employees experience technological stress due to the strain to complete duties in such an environment.

### 2.1.17 CONSEQUENCES OF TECHNOSTRESS

Technostress has negative effects on productivity, organizational commitment, and work happiness. Technostress may have widespread implications on a person's mental and physical health as well as their ability to function at work and interact with others. The following are a few of the most typical outcomes or consequences of technostress:

- **Digital burnout:** A state of emotional, physical and mental depletion generating from constant exposure to digital gadgets. Burnout is more likely because employees frequently feel the need to be "always on."
- **Reduced job satisfaction and productivity:** Workplace disputes, impatience, and lower job satisfaction and productivity result from employees continually struggling with the technology they must utilize. Technostress is caused when this happens. Technostress can cause a decline in motivation and engagement, which will diminish productivity and work satisfaction.
- **Poor work-life balance:** The desire to be constantly linked to technology can make it difficult to distinguish between personal and professional life, which increases stress and promotes burnout.
- **Interpersonal conflicts:** Technostress may also have an impact on social interactions, as people may become more irritable or reclusive and clash with friends, family, or coworkers as a result.

- **Mental health issues:** Continuous exposure to technostress can cause more severe mental health problems including addiction, depression, or anxiety disorders.
- **Behavioural impacts:** Technostress can cause behavioural changes, such as a lack of motivation and energy.

### 2.1.18 TECHNOSTRESS MANAGEMENT

There are several strategies that individuals can use to manage and cope with technostress.

- **Set boundaries for technological use:** To establish boundaries between work and personal life is one of the most crucial ways for controlling technological stress. This may entail establishing particular periods for checking emails and messages or disabling notifications during non-work hours. That is, in order to manage technostress, workers must set limits on their online time, take frequent breaks, and avoid using technology after work hours.
- **Take breaks:** Regularly stepping away from technology can assist to lessen its detrimental effects of continuous exposure . This can entail soothing activities such as short walks, mindfulness exercises, or meditation.
- **Practice good digital hygiene:** Practicing good digital hygiene involves setting up healthy technology-use routines, this can involve things like having regular breaks, minimising screen time, and eliminating excessive use of social media.
- **Seek support:** Getting help from friends, family, or coworkers can be a helpful coping mechanism. People can gain perspective and support by sharing the experiences with others.
- **Seek professional help:** It can be required to seek professional assistance from a therapist or counsellor in more severe cases of technostress. In order to help people manage their stress and enhance their mental health, they can offer them support and coping mechanisms.
- **Embrace technological change systematically:** Technology improvements that occur suddenly inside an organisation can cause tension, bewilderment, and technophobia among the staff. Organisations must carry out a methodical and progressive technology transformation in order to prevent this scenario. This will greatly reduce technostress and assist the employees adapt to the changing technological environment.

- **Work-life balance initiatives:** It gets harder to strike a balance between work and life. Organizations must be aware of the workload that staff members can bear, their need for time away from the office, and their desire for opportunities for relaxation and renewal in order to maintain an effective work-life balance.
- **Digital Adoption Platform (DAP):** By offering interactive step-by-step assistance through various application features, DAPs reduce technological complexity and ambiguity. Employees may walk through the software on a path thanks to this direction, which prevents them from becoming overwhelmed as they might if they were to just randomly browse around the app while attempting to understand it. And provide training so that the employees may use the new application without feeling overwhelmed.
- **Time consuming distractions:** By stopping unwanted websites and applications while working, technological overload can be controlled. Workers in the information and communication technology (ICT) industry may feel as though they don't have enough time to finish their tasks due to the vast volume of information that is continuously coming in. Employees can find and disable distracting websites and applications by using solutions like "Rescue Time".
- **Improving user experience and interface design:** The frustration that results from utilising technology that is difficult to operate is decreased with an intuitive interface. The mental strain an employee experiences when utilising new technology is reduced by effective interface design. It raises effectiveness and productivity of employees.

### 2.1.19 TECHNOSTRESS PREVENTION TECHNIQUES

Along with coping strategies, it's important to focus on preventing and minimising technostress in the first place because doing so will help people and organisations improve their relationships with technology. Here are some strategies to take into account:

- **Digital detox:** Regularly engaging in digital detoxes can be really useful. This involves putting electronics away completely for a predetermined period of time, which could be a few hours, a day, or even a weekend. Spend this time on offline activities like going outside, reading a book, or engaging in hobbies that don't involve screens. It offers the brain an opportunity to recharge and regenerate.
- **Time management and Prioritization:** Adequate time management is crucial for lowering technological stress. Set up distinct priorities, realistic deadlines, and refrain

from multitasking. Set up certain time frames for each activity and divide tasks into smaller, more manageable portions. By carefully planning and organising, people can lessen the overwhelming feeling that technology can produce.

- **Establish a support system:** Companies should foster a friendly workplace environment where workers feel free to discuss their technical stress. Encourage discussion and offer tools for coping with technology stress, such as workshops or training courses. Technostress can be lessened by fostering a culture that prioritises work-life balance and ethical technological usage.
- **Promote self-care:** Self-care is essential for fighting towards technostress. Encourage employees to exercise frequently, practice mindfulness or meditation, maintain a healthy diet, and get enough sleep. These activities improve overall health and resiliency, empowering people to handle the stress of technology.

## 2.2 REVIEW OF LITERATURE

**Jain, Shweta (2021) “ A Comparative study of Technostress in Public Sector and Private Sector Banks in India with special reference to Agra city”.** The present study explores the concept of technostress in present Indian banking organisation along with their different technostress dimensions like; factors which creates technostress in work place and factors which impact on employees performance in Indian banking industry. It can be concluded that technostress factors have significant impact on employees work and their personal life as well as their professional life. The thesis concluded with suggestive measures for improvement in existing technology service in banks, recommendations for further research, limitations and concluding remark for the study.

**Neerja Nigam, Dr. Sameer Sharma (2020) “A study on role of technology in Indian banking sector”** This study purposes to discuss the role of ICT in banking area of India. Research is theoretical in nature and centred on the ICT and banking area. It can be concluded from the investigation that banks are attractive various initiatives distant from advances technology.

**K. Shobana (2019) “ Technostress among the women employees in IT sector, Chennai: An empirical analysis”.** This study purposes to discuss the Technostress among women IT employees in Chennai city. The women employees feel high stress due to frequent

changes in Technology and adapting the same. Women being a multi-tasking person, they were pressured to over expectations in their performance leading them under many physical and mental health problems. The study concluded that, more technology interference affects the health and wellbeing of women employees.

**Pirkkalainen, H., Salo, M., Makkonen, M., & Tarafdar, M. (2017). “Coping with Technostress : When Emotional Responses Fail”.** The study contributes to information systems literature by uncovering mechanisms individuals can use to mitigate the negative effects of technostress and by delineating the less-understood perspective of interrelated coping mechanisms; how emotional coping responses are moderated by IT control towards more favourable outcomes.

**Asheka Mahboob, Tanzin Khan (2016) “Technostress and its Management Techniques: A Literature Review”.** This paper discusses different work stressors and suggests some procedures such as strain management programs, guidance programs, self-sufficiency and social support, knowledge and communication to deal with work stress associated problems. Qualitative data were collected from 64 teachers. Open-ended questions form used. Findings of the study shows that Workplace operational hours and extreme use of technology has improved strain amongst workers of diverse organizations because high level to decreased efficiency, high return, absenteeism and workplace deviance.

**Arif Akcay, Yusuf Levent Sahin (2016) “Determining the reasons of Technostress Experienced by Teachers: A Qualitative Study”.** The purpose of this study is to determine the reasons leading to technostress experienced by teachers, who are the addressee of an intensive use of technology as a result of an integration process to which they are subjected in this study. For this purpose, qualitative data were collected from 64 teachers, who benefit from technology intensively and themes were prepared using 117 different opinions after the content analysis. According to this, there are five main reasons indicating technostress experienced by teachers: individual problems, technical problems, education-oriented problems, health problems and time problem. It was also seen in the study that the distribution of reasons leading to technostress experienced by teachers also differs in terms of gender.

**Agboola, Ayodeji Akinlolu Omoneye Olufunke Olanmi (2016) “Technological stressors in developing countries”.** This paper highlights the impact of technological stressors can result in ergonomic hazards, which are detrimental to workers and their places of work due to effect productivity level. It could thus be suggested that improved ICT training and stress



management interventions are important processes for enhancing individual and professional well-being in order to prevent technostress and ergonomics hazards.

**Dr. Dhiraj Sharma, Tavleen Kaur Gill (2015) “Is Technology Stressful? (A Study of Indian Public Sector Banks)”** the objective of this study is to understand the technological antecedents which induce stress among employees of public sector banks. The findings of the study that role clarity in technology usage should be maintained, so that it does not add to the stress levels of the bank employees. Likewise, the negative effect of technology characteristics like usefulness, reliability and complexity can be reduced by introducing proper infrastructure and training facilities for the end-users. The work-life conflict can be resolved by adopting flexi-time working and relaxation techniques for reducing technostress.

**Dr. Dhiraj Sharma, Tavleen Kaur Gill (2015) “Technostress and Personality Traits – Are they Associated? – Evidence from Indian Bankers”** The study purpose to evaluate the connection among individuality factors and technology approval among bank staff. Research based on both primary and secondary mode. 600 respondents were interviewed throughout questionnaire from various public, private, SBI and Associates and foreign sector banks in Punjab and Haryana. It is concluded that the individuality qualities influence the levels of tension experienced by the bank staff. The result suggests that the bank employees of diverse sector of banks are affected by unreliable individuality qualities and deviation of tension is also practical on this basis.

**R.K. Jena (2014) “Technostress in ICT enabled collaborative learning environment: An empirical study among Indian academician”.** This study analyses the relationship between Technostress creators, Technostress inhibitors and Technostress effect among Indian academician in collaborative teaching and learning environment using concepts of socio-technical theory and role. This research is conducted on 216 academicians in India through questionnaire-based survey. The study found a strong relationship between Technostress creators, Technostress Inhibitors and Technostress effect.

**Ramakrishna Ayyagari (2012) “Impact of Information overload and Task-technology Fit on Technostress”** The study discovers the connection among task-technology fit, information overload and technostress. The regression analysis is used to find relation between variables, survey used to collect data from third party sources. Outcomes from surveying 664 employed individuals directed that information overwork increases technostress, although task-technology fit actions as a method to decrease technostress.

**Qin Shu, Qiang Tu (2011) “The impact of Computer Self-Efficacy and Technology Dependence on Computer-related technostress”.** This study developed a conceptual model in which computer-related technostress was studied as consequences of computer self-efficacy and technology dependence. Results show that (a) employees with higher level of computer self-efficacy have lower level of computer-related technostress, (b) employees with higher level of technology dependence have higher level of computer-related technostress, (c) employees under different individual situations may perceive different levels of technostress. Contributions of this research and implications for theory and managerial practice are also discussed.

**Ramakrishna Ayyagari (2011) “What and Why of Technostress: Technology Antecedents and Implications”.** The research model proposes that certain technology characteristics exacerbate stressors identified in occupational stress literature leading to the manifestation of stress, referred to as strain. The results suggest that technostress is prevalent (and a significant predictor of overall job strain.) specially, work overload and role ambiguity are found to be the two dominant stressors, whereas intrusive technology characteristics are found to be the dominant predictors of stressors.

**Mak, B., Sockel, H., Bucholz, J.A. and Webb, M.W. (2010) “Technostress and Organization Loyalty of IS and T Workers – A Path Model”** The paper surveys the connection among administrative loyalty and technostress for IS and T staffs. The feedback form technique used to collect data and the mechanism used a seven-point Likert scale. The findings shows that path model framed from the outcomes directed that observed job stress depressed job fulfilment, while enhanced technology administration approach improved job satisfaction and administrative assurance.

**Krishnan T N (2010) “Technological change and Employment Relations in India”** This article provides an overview of the consequences of technology change on employment relationship in India. The result shows that introduction of new technology has mandated by the need to respond to competitive market conditions. Indian industry has in the last couple of decades been able to proactively respond to market demands and introduce significant changes.

**Ragu-Nathan, T.S., Tarafdar, M., Ragu-Nathan, B., Tu, Q. (2008). “The consequences of technostress for end users in organizations: Conceptual development and empirical validation”.** Information Systems Research, 19(4), 417-433. The research reported in this paper studies the phenomenon of technostress, that is, stress experienced by end users

of Information and Communication Technologies (ICTs), and examines its influence on their job satisfaction, commitment to the organization, and intention to stay. Drawing from the Transaction-Based Model of stress and prior research on the effects of ICTs on end users, first conceptually build a nomological net for technostress to understand the influence of technostress on three variables relating to end users of ICTs: job satisfaction, and organizational and continuance commitment.

**Tarafdar, M., Tu, Q., Ragu-Nathan, B.S., Ragu-Nathan, T.S. (2007). “The impact of technostress on role stress and productivity”. *Journal of Management Information Systems*, 24(1), 301-328.** This paper uses concepts from sociotechnical theory and role theory to explore the effects of stress created by information and computer technology (ICT)-that is, "technostress"-on role stress and on individual productivity.

**Wang Kanliang et.al (2005) have measured “Empirical Study of Coping Strategies for Computer-Related techno-stress of Chinese Employees”.** In that the techno stress is defined as any negative impact on attitudes, thoughts, behaviours, or body psychology caused directly or indirectly by technology. It was found that an improved training utility in computer technology, efficient technology-end-user help-desk and technology support center can decrease the insecurity of new technology will help to alleviate computer-related technostress.

**Joseph Ruff (2002) has explained “Information Overload: Causes, Symptoms and Solutions, Learning Innovations Laboratories”** that vast sums of money, time and hard work are being spent to improve organizations, but information overload is neutralizing those efforts. Under the strain of information overload, it becomes difficult or impossible to fashion a learning organization that is maximizing its member’s creativity and decision-making ability. It was suggested that time management training, software and hardware training, chunking and mnemonics training.

## 2.3 REVIEW OF VARIABLES

### 2.3.1 Techno-insecurity

Techno-Insecurity (**K. Shobana, 2019**) refers to situation where technology makes the employees feel insecure in their jobs. Information system (IS) constantly forces the employees to upgrade their technical skills. The new recruit with high technical knowledge threatens the current employees and less sharing of information among co-workers for the fear of being replaced and discomfort with the present job.

**Table No. 2.3.1**  
**Measures of Techno-insecurity**

Sl.No.	Measures/Items	Reference
1	New recruits with high up-dation.	<b>(K. Shobana, 2019)</b>
2	Constant threat in individual ability in completion of work.	
3	Up-dation of co-workers creates a threatening environment.	
4	Irregular up-dation of skills	
5	Less sharing of knowledge among co-workers	

Source: Existing Literature

The above measures/items were used to measure the construct Techno-insecurity.

### 2.3.2 Techno-overload

Techno-Overload (**K. Shobana, 2019**) explains the circumstances where the usage of information system (IS) among employees is forced to work faster and more in a short span of time. Collaborative applications in real time information processing that causing information overload, multi-tasking and interruptions. The employees are overloaded with information sometimes they are not efficient to handle it that leads to information fatigue. The information system forces employees to check e-mail and come alert message as soon as it arrives, that resulting task interruptions leads to tension, disturb workflow, creating anxiety, difficulty in concentrating on particular task. Multi-tasking happens because employees are forced to work on different software and application simultaneously with less time and undergoing tension.

**Table No. 2.3.2**  
**Measures of Techno-overload**

Sl.No.	Measures/Items	Reference
1	Forced to work with very tight time schedules	<b>(K. Shobana, 2019)</b>
2	Forced to adapt new technologies	
3	High workload due to technology complexity	
4	spending enormous time to get through e-mail	
5	Non-routine tasks	
6	Multi-tasking	

Source: Existing Literature

The above measures/items were used to measure the construct Techno-overload.

### **2.3.3 Techno-invasion**

Techno-invasion (**K. Shobana, 2019**) defines the conditions where employee's personal life is being invaded by new technology because the technology always connected anywhere. Sometimes employees sacrifice their leave days and vacation to learn new technology and applications and spend less time with spouse and children. Employees feel that they always stay connected with these technologies often experiencing stress, tension, depression and frustration.

**Table No. 2.3.3**  
**Measures of Techno-invasion**

Sl.No.	Measures/Items	Reference
1	Update new technologies during vacation	<b>(K. Shobana, 2019)</b>
2	Personal life is invaded by innovative technology	
3	Spending less time with family	
4	Completing work in off time	
5	Immediate response to e-mail/text messages	

Source: Existing Literature

The above measures/items were used to measure the construct Techno-invasion.

### **2.3.4 Techno-uncertainty**

Techno-Uncertainty (**K. Shobana, 2019**) denotes the situation where the employees are demanding to update their technical knowledge due to continues changes and upgradation in Information and communication technology (ICT). The employees not given a chance of

experiencing and learn base applications, knowledge of the employees becomes obsolete because constant changes in hardware, software and networks that enable the employees to update their skills and creates stress and anxiety.

**Table No. 2.3.4**

**Measures of Techno-uncertainty**

Sl.No.	Measures/Items	Reference
1	Constant adaptations and change in technology	<b>(K. Shobana, 2019)</b>
2	Constant changes in computer software	
3	Constant changes in hardware	
4	Frequent upgradation in computer networks	

Source: Existing Literature

The above measures/items were used to measure the construct Techno-uncertainty.

**2.3.5 Techno-complexity**

Techno-Complexity (**K. Shobana, 2019**) describes the situation where the information system compels the employees to spend more time in learning the new technology and its applications. In reality, it is very difficult to understand and learn new technology takes long duration and difficulty in understanding the technical words. Employees do not have enough time to learn and upgrade their skills, and experiencing stressful situation.

**Table No. 2.3.5**

**Measures of Techno-complexity**

Sl.No.	Measures/Items	Reference
1	No job satisfaction due to technology unawareness	<b>(K. Shobana, 2019)</b>
2	Difficulty in understand and usage of new technologies	
3	Long time taken to understand and use new technologies	
4	Less time in adapting and upgrading technology skills	

Source: Existing Literature

The above measures/items were used to measure the construct Techno-complexity.

**2.3.6 Technostress**

Techno-stress (**K. Shobana, 2019**) is defined as one's own inability to handle and cope up with new technologies that leads to technology related stress in the workplace because of frequent changes and upgradation in the technologies and related aspects in the domain.

**Table No. 2.3.6  
Measures of technostress**

Sl.No.	Measures/Items	Reference
1	Information overload	<b>(Jain, Shweta, 2021)</b>
2	Network and security problems	
3	Lack of support from IT	
4	Inadequate training	
5	Too many different software	
6	Computers being down	

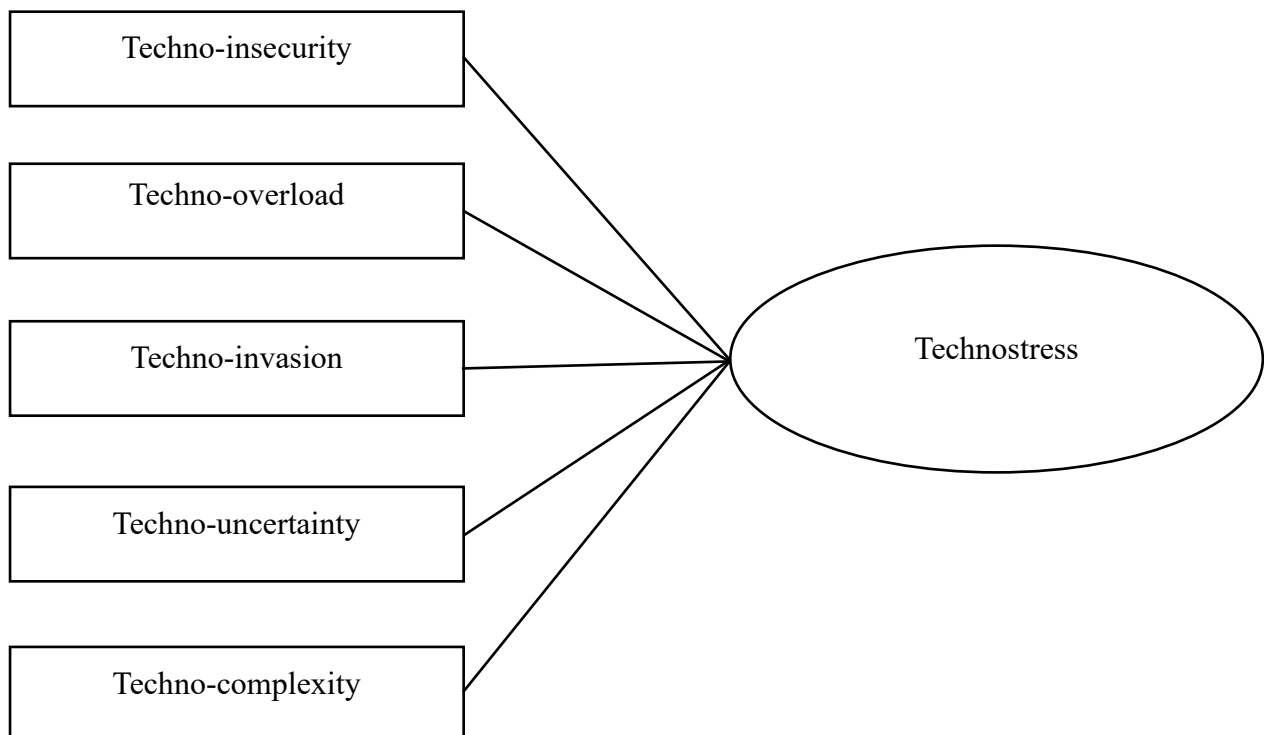
Source: Existing Literature

The above measures/items were used to measure the construct Technostress.

## 2.4 MODEL DEVELOPMENT

Based on the above identified variables and review the following Model was developed for validation.

**Figure 2.1  
Model Development**



Source: Compiled by the researcher based on extensive review.

## **2.5 SUMMARY**

In this chapter the theoretical framework of Technostress among bank employees was reviewed. This chapter was mainly separated into three sections as Theoretical Framework, Literature Review and Model Development. In theoretical framework the theory pertinent to the topic of the study were identified from the secondary data related to the study. A lot of previous studies were reviewed from various sources and measures used for the study were identified. The model development was made according to the review regarding the constructs used in the study. This offers a thorough idea and framework for achieving the objectives of the project. Reviewing the literature aided in framing the questionnaire that was in line with the objectives. The variables or construct mentioned here were measured using items identified in the previous review itself. To conclude, all the available previous studies were reviewed to make a meaningful hypothesized model and to bridge the void in literature.



**CHAPTER III**  
**DATA ANALYSIS AND INTERPRETATION**

## DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis of data collected. The data was analysed in three different stages. The first section is the profile analysis which includes a brief analysis of the demographic profile of the sample respondents. In the second section the descriptive analysis and the reliability test of the measures is done. In the third section the hypothesis formed at the outset were tested and also the set model was validated.

### SECTION 1

#### 3.1 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

##### 3.1.1 GENDER

**Table 3.1.1**  
**Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	31	31
Female	69	69
Other	0	0
<b>Total</b>	<b>100</b>	<b>100</b>

Source : Primary Data

Table 3.1.1 presents the frequency of the gender of respondents. It can be concluded that from the total of 100 respondents, 69 percentage were Female and 31 percentage were Male.

##### 3.1.2 AGE

**Table 3.1.2**  
**Age**

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
20-30	13	13
31-41	42	42
42-52	28	28
Above 53	17	17
<b>Total</b>	<b>100</b>	<b>100</b>

Source: Primary Data

Table 3.1.2 shows the frequency of the age of the respondents. Out of 100 respondents 13 percentage were age between 20-30, 42 percentage of the respondents were age between 31-41, 28 percentage of the respondents were age between 42-52, and finally 17 percentage of the respondents were above 53.

## **SECTION 2**

### **3.2 RELIABILITY ANALYSIS**

A reliability test was carried out using Cronbach's Alpha, which measure the internal consistency of research constructs and the results is exhibited in Table 3.2.1. The Alpha value for all the six factors is above .07, the threshold suggested by Nunnally (1978). Thus, it can be concluded that the scale has internal consistency and reliability. In other words, the item that are used in it measures what are intended to measure.

**Table 3.2.1**

**Cronbach's Co-efficient Alpha – TI, TO, TIN, TUN, TCOM, TS**

<b>Sl.No</b>	<b>Factors</b>	<b>Item Acronym</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>
1	Techno-insecurity	TI	5	0.851
2	Techno-overload	TO	6	0.890
3	Techno-invasion	TIN	5	0.837
4	Techno-uncertainty	TUN	4	0.863
5	Techno-complexity	TCOM	4	0.885
6	Technostress	TS	6	0.842

Source: Author's Calculation

### **3.3 DESCRIPTIVE ANALYSIS**

#### **3.3.1 TECHNO-INSECURITY**

Techno-insecurity refers to employees' worries that they may lose their status or jobs as a result of new technologies that will displace or alter their jobs. Technology upgrades are constantly felt to be necessary by employees. Otherwise, it is connected to circumstances where people fear losing their jobs to others who are more knowledgeable about cutting-edge technology.

**Table 3.3.1**  
**Measures of Techno-insecurity**

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean</b>	<b>Mode</b>	<b>SD</b>
New recruits with high up-dation.	TI1	4.08	5	1.162
Constant threat in individual ability in completion of work.	TI2	3.74	4	1.252
Up-dation of co-workers creates a threatening environment.	TI3	4.06	5	1.228
Irregular up-dation of skills	TI4	3.83	5	1.230
Less sharing of knowledge among co-workers	TI5	3.61	4	1.272

Source: Primary Data

The mean, mode and standard deviation for TI1, TI2, TI3, TI4 and TI5 are given in the table 3.3.1. the mean for TI1 is the highest and for TI5 mean is the lowest. Mode for TI1, TI3 and TI4 is '5' and for TI2 and TI5 is '4'. Standard Deviation is highest for TI5 and lowest for TI1. From this we can conclude that 'New recruits with high up-dation' is more likely to create Technostress.

### **3.3.2 TECHNO-OVERLOAD**

It describes instances in which the use of computers compels individuals to work more and quicker. Employees experience technostress when they are asked to perform more in a shorter period of time. They are overwhelmed by the rapid flow of information. It happens as a result of constant messages and notifications pouring in from many sources.

**Table 3.3.2**  
**Measures of Techno-overload**

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean</b>	<b>Mode</b>	<b>SD</b>
Forced to work with very tight time schedules	TO1	4.11	5	1.205
Forced to adapt new technologies	TO2	4.10	4	0.905
High workload due to technology complexity	TO3	4.05	5	1.226

Spending enormous time to get through e-mail	TO4	3.69	4	1.134
Non-routine tasks	TO5	3.71	5	1.305
Multi-tasking	TO6	3.82	5	1.298

Source: Primary Data

The mean, mode and standard deviation of TO1, TO2, TO3, TO4, TO5 and TO6 are given in table 3.3.2. The mean of TO1, TO2 and TO3 is more than 4 and TO4, TO5 and TO6 have mean near to 4 which indicates Techno-overload causes Technostress. Mode of TO1, TO3, TO5 and TO6 are 4 and TO2 and TO4 are 5. Standard deviation is highest for TO5 and lowest for TO2.

### 3.3.3 TECHNO-INVASION

When employees are expected to be "connected" all the time, the distinctions between personal and professional life blur. It is caused by getting work-related alerts after work hours and feeling the need to respond immediately. Employees' main concern is the inability to switch off or unplug. It depicts being "always exposed," where people might potentially be contacted anywhere and at any time and feel the need to be always linked. The standard workday is stretched, office work is done at all hours, and "cutting away" is nearly impossible.

**Table 3.3.3**  
**Measures of Techno-invasion**

Measures	Item Acronym	Mean	Mode	SD
Update new technologies during vacation	TIN1	3.49	4	0.637
Personal life is invaded by innovative technology	TIN2	3.83	5	1.105
Spending less time with family	TIN3	3.90	4	1.215
Completing work in off time	TIN4	4.41	5	0.882
Immediate response to e-mail/text messages	TIN5	3.51	4	1.049

Source: Primary data

The mean, mode and standard deviation for TIN1, TIN2, TIN3, TIN4 and TIN5 are given in the table 3.3.3. Mean for the TIN4 is the highest that is 4.41. Mode for TIN2 and TIN4

is 5 and for TIN1, TIN3 and TIN5 is 4. Standard deviation is highest for TIN3 and lowest for TIN1. From the above statistics we can conclude that respondents agree the Techno-invasion is a factor which creates Technostress.

### 3.3.4 TECHNO-UNCERTAINTY

Employees experience techno-uncertainty as a result of the fast-paced digital change. When a company constantly adopts new technology or employs software that frequently upgrades, it might be difficult for some employees to stay up. It is related to computer systems' short life cycles. Continuous revisions and updates do not allow people to get experience with a certain system. People find this disconcerting because their knowledge swiftly deteriorates and they are forced to relearn topics on a regular basis.

**Table 3.3.4**  
**Measures of Techno-uncertainty**

Measures	Item Acronym	Mean	Mode	SD
Constant adaptations and change in technology	TUN1	3.94	4	1.254
Constant changes in computer software	TUN2	3.99	5	1.283
Constant changes in hardware	TUN3	4.01	5	1.251
Frequent upgradation in computer networks	TUN4	3.93	5	1.305

Source: Primary data

From Table 3.3.4 it is understood that majority of the respondents agree towards Techno-uncertainty as all measures has a mean near to 4. The highest mean was reported for TUN3 which indicate Techno-uncertainty as one of the reasons for Technostress. The mode is 5 for TUN2,TUN3 and TUN4. And 4 for TUN1. Standard deviation is lowest for the measure TUN3.

### 3.3.5 TECHNO-COMPLEXITY

Techno-complexity refers to situations in which workers are required to spend time and effort learning and comprehending how to use new applications and updating their abilities due to the complex computer systems employed at work. People are stressed as a result of the range of applications, functions, and lingo. It occurs when employees believe they must have

technological skills. This promotes confusion, mistrust of technology, and reduces staff productivity.

**Table 3.3.5**

**Measures of techno-complexity**

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean</b>	<b>Mode</b>	<b>SD</b>
No job satisfaction due to technology unawareness	TCOM1	4.44	5	0.833
Difficulty in understand and usage of new technologies	TCOM2	4.23	5	1.127
Long time taken to understand and use new technologies	TCOM3	4.00	5	1.092
Less time in adapting and upgrading technology skills	TCOM4	3.92	5	0.986

Source: Primary Data

The mean, mode and standard deviation of the measures of the variable are given in table 3.3.5. Measures of Techno-complexity are displayed in the table. Mean stands the highest for TCOM1 with a value of 4.44. Mode value is 5 for all items. Standard deviation is lowest for the measure TCOM1 with a value of 0.833. Since all the mean values are above 4 and near to 4 indicates that respondents have strong positive attitude towards Techno-complexity.

### **3.3.6 TECHNOSTRESS**

The adverse psychological effect of modern technology on people is known as "technostress". Technostress occurs when a person cannot successfully adjust to or deal with information technologies. They feel compelled to stay connected and constantly share updates, feel under pressure to react to work-related information immediately, and multitask nearly automatically. Due to the rapid influx of information, they feel pressured to work more quickly and have little time for sustained thought and original.

**Table 3.3.6**  
**Measures of Techno-stress**

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean</b>	<b>Mode</b>	<b>SD</b>
Information overload	TS1	4.03	5	1.201
Network and security problems	TS2	4.15	5	0.730
Lack of support from IT	TS3	4.08	5	0.861
Inadequate training	TS4	3.74	4	0.981
Too many different software	TS5	3.86	5	1.155
Computers being down	TS6	3.60	4	1.044

Source: Primary Data

The above list of items was used to measure the Technostress. This table shows the mean, mode and standard deviation of the different measures of Technostress. The measure TS2 with a value of 4.15 has the highest mean which is followed by TS3 with a value 4.08. Mode value is 5 for all measures except TS4 and TS6. Standard deviation is lowest for the measure TS2 with a value of 0.730.

### **3.3.7 MEASURES OF VARIABLES**

Table 3.3.7 shows the constructs used to measure the factors affecting Technostress.

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean</b>	<b>Standard Deviation</b>
Techno-insecurity	TI	4.0252	0.68896
Techno-overload	TO	4.2590	0.66771
Techno-invasion	TIN	3.3898	0.59271
Techno-uncertainty	TUN	3.0685	0.74025
Techno-complexity	TCOM	3.8333	0.64640
Technostress	TS	3.7149	0.61935

Source: Author's calculation

The Mean and Standard Deviation of independent and dependent variables are given in Table 3.3.7. Mean is highest for Techno-overload which is 4.2590, followed by Techno-insecurity with Mean 4.0252. The mean of Techno-uncertainty is lowest with 3.0685. Techno-invasion has the lowest Standard Deviation with 0.59271 and Techno-uncertainty has the highest Standard Deviation of 0.74025.



### 3.3.8 ONE SAMPLE T TEST FOR INDEPENDENT AND DEPENDENT VARIABLES

The mean score of 6 main variables is calculated and compared with the second quartile (i.e., Central value or Q2). The opinion of the respondents is treated as poor or very poor when the mean is less than the second quartile. It is treated as average when the mean score is equal to second quartile. The responses of respondents are treated as good or very good when the mean score is above the second quartile (Jojo, 2008). The below table shows the criteria fixed in this regard.

**Table 3.3.8**

**Criteria for comparison – Mean score and Central value**

<b>Mean score</b>	<b>Opinion</b>
Less than Q1(<2)	Very low
Between Q1 and Q2 (2-3)	Low
Equal to Q2 (=3)	Medium
Between Q2 and Q3 (3-4)	High
More than Q3 (>4)	Very high

To check whether the responses of respondents significantly differ from the moderate or neutral state of response, one sample T test were carried out – second quartile.

**Table 3.3.9**

**One Sample T Test**

<b>Measures</b>	<b>Item Acronym</b>	<b>Mean value</b>	<b>Q2</b>	<b>T value</b>	<b>P value</b>	<b>Inference</b>
Techno-insecurity	TI	3.8640	3	11.297	0.000	High
Techno-overload	TO	3.9133	3	14.748	0.000	High
Techno-invasion	TIN	3.8280	3	16.308	0.000	High

Techno-uncertainty	TUN	3.9675	3	11.499	0.000	High
Techno-complexity	TCOM	4.0975	3	16.954	0.000	Very high
Technostress	TS	3.9100	3	16.271	0.000	High

Source: Compiled by the researcher

- Based on the above table the mean score of Techno-insecurity is 3.8640. It is statistically significant from Q2 (3). Based on the developed scale, the value falls between Q2 and Q3 (3-4). The value denoted as High. There exists a High level of Techno-insecurity on Technostress.
- From the above table, the mean score of Techno-overload is 3.9133. It is statistically significant from Q2 (3). Based on the developed scale, the value lies between Q2 and Q3 (3-4). It is denoted as High. It can be concluded that there exists High level of Techno-overload on Technostress.
- From the above table, the mean score of Techno-invasion is 3.8280. It is statistically significant from Q2 (3). Based on the developed scale, the value lies between Q2 and Q3 (3-4). It is denoted as High. There exists High level of Techno-invasion on Technostress.
- Based on the above table the mean score of Techno-uncertainty is 3.9675. It is statistically significant from Q2 (3). Based on the developed scale, the value lies between Q2 and Q3 (3-4). The value denoted as High. This indicates that there exists High level of Techno-uncertainty on Technostress.
- Based on the above table the mean score of Techno-complexity is 4.0975. It is statistically significant from Q2 (3). Based on the developed scale, the value lies more than Q3 (>4). The value denoted as Very high. These states that Techno-complexity has a Very high impact on Technostress.
- From the above table, the mean score of Technostress is 3.9100. It is statistically significant from Q2 (3). Based on the developed scale, the value lies between Q2 and Q3 (3-4). It is denoted as High. It can be concluded that there exists High level of Technostress among bank employees.

## SECTION 3

### 3.4 HYPOTHESIS TESTING AND MODEL VALIDATION

#### 3.4.1 CORRELATION ANALYSIS

Correlation analysis is carried out before conducting regression analysis in order to quantify the strength of relationship between variables. It tests the linear relationship between the variables. Each correlation appears twice: above and below the main diagonal. The correlations on the main diagonal are the correlations between each variable itself.

**Table 3.4.1**

**Correlation between independent variables and dependent variable**

Variables	TI	TO	TIN	TUN	TCOM	TS
<b>Techno-insecurity</b>	1					
<b>Techno-overload</b>	0.896**	1				
<b>Techno-invasion</b>	0.597**	0.326**	1			
<b>Techno-uncertainty</b>	0.197**	0.161**	0.573**	1		
<b>Techno-complexity</b>	0.132**	0.283**	0.176**	0.202**	1	
<b>Technostress</b>	0.124**	0.693**	0.423**	0.678**	0.427**	1

Source: Compiled by the researcher

\*\*Correlations are significant at 0.01 level

The correlation coefficients between the independent variables like Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty, Techno-complexity and dependent variable Technostress are shown in the table 3.5.1. The correlation coefficient should always be in the range of -1 to 1. A correlation is statistically significant if its P value <0.05 and P value

<0.01. From the above table it is understood that there is a correlation which is statistically significant at a P value of <0.01. Hence, it can be concluded that there exists a positive correlation between all variables.

The correlations between various variables are as follows:

- The correlation between Techno-insecurity and Technostress is 12.4 percentage
- The correlation between Techno-overload and Technostress is 69.3 percentage
- The correlation between Techno-invasion and Technostress is 42.3 percentage
- The correlation between Techno-uncertainty and Technostress is 67.8 percentage
- The correlation between Techno-complexity and Technostress is 42.7 percentage
- The correlation between Techno-insecurity and Techno-overload is 89.6 percentage
- The correlation between Techno-insecurity and Techno-invasion is 59.7 percentage
- The correlation between Techno-insecurity and Techno-uncertainty is 19.7 percentage
- The correlation between Techno-insecurity and Techno-complexity is 13.2 percentage
- The correlation between Techno-overload and Techno-invasion is 32.6 percentage
- The correlation between Techno-overload and Techno-uncertainty is 16.1 percentage
- The correlation between Techno-overload and Techno-complexity is 28.3 percentage
- The correlation between Techno-invasion and Techno-uncertainty is 57.3 percentage
- The correlation between Techno-invasion and Techno-complexity is 17.6 percentage
- The correlation between Techno-uncertainty and Techno-complexity is 20.2 percentage

### **3.4.2 REGRESSION ANALYSIS**

Regression analysis is conducted to measure the influence of TI, TO, TIN, TUN and TCOM on TS. The independent variables are TI, TO, TIN, TUN and TCOM and dependent variable is TS. The main objective of regression analysis is to explain the variation in one variable (called dependent variable) based on the variations in one or more other variables (independent variables). If multiple independent variables are used to explain the variations in a dependent variable, it is called as multiple regression model. The output of multiple regression analysis was used to test the hypothesis.

**Table 3.4.2**

**Model summary**

<b>Model</b>	<b>R</b>	<b>R square</b>	<b>Adjusted R square</b>	<b>Standard Error of estimate</b>	<b>Durbin Waston</b>
1	0.764 <sup>a</sup>	0.713	0.706	0.37059	2.301

Source: Author's calculation

- a. Predictors (constant): TI, TO, TIN, TUN and TCOM
- b. Dependent Variable: TS

R square is the percent of the variance in the dependent variable uniquely or jointly by the independent variable. The R square and adjusted R square will be same when used for the case of few independents. The R square and Adjusted R square shown in table 3.4.2 is almost the same. Hence adjusted R square value is used for interpreting the results.

Table 3.4.2 shows that 71.3 percent variation in TS is explained by TI, TO, TIN, TUN and TCOM. The Durbin-Waston statistic tests for auto-correlation. As rule of thumb, the value should be between 1.5 and 2.5 to indicate independence of observation (Garson 2010). The value of test is 2.301, which indicate the independence of observations.

**Table 3.4.3**

**ANOVA of regression model**

<b>Model</b>	<b>Sum of square</b>	<b>DF</b>	<b>Mean square</b>	<b>F</b>	<b>Sig.</b>
Regression	18.058	5	3.612	26.297	0.000*
Residual	12.910	94	0.137		
Total	30.968	99			

Source: Author's calculation

- a: Predictors (constant): TI, TO, TIN, TUN and TCOM
- b: Dependent variable: TS

\*\* denotes significance at 1 percent level.

ANOVA table showing the regression model in Table 3.4.3 shows that the model is statistically significant at 1 percent significance level (F=26.297)

**Table 3.4.4**  
**Coefficient of Regression Analysis**

<b>Factors (constructs)</b>	<b>Item Acronym</b>	<b>Standardised Beta coefficient (<math>\beta</math>)</b>	<b>Sig.(P value)</b>
Techno-insecurity	TI	0.196	0.023**
Techno-overload	TO	0.566	0.000**
Techno-invasion	TIN	0.206	0.005**
Techno-uncertainty	TUN	0.152	0.017**
Techno-complexity	TCOM	0.216	0.034**

Source: Compiled by researcher

\*\* denotes significance at 1 percent level.

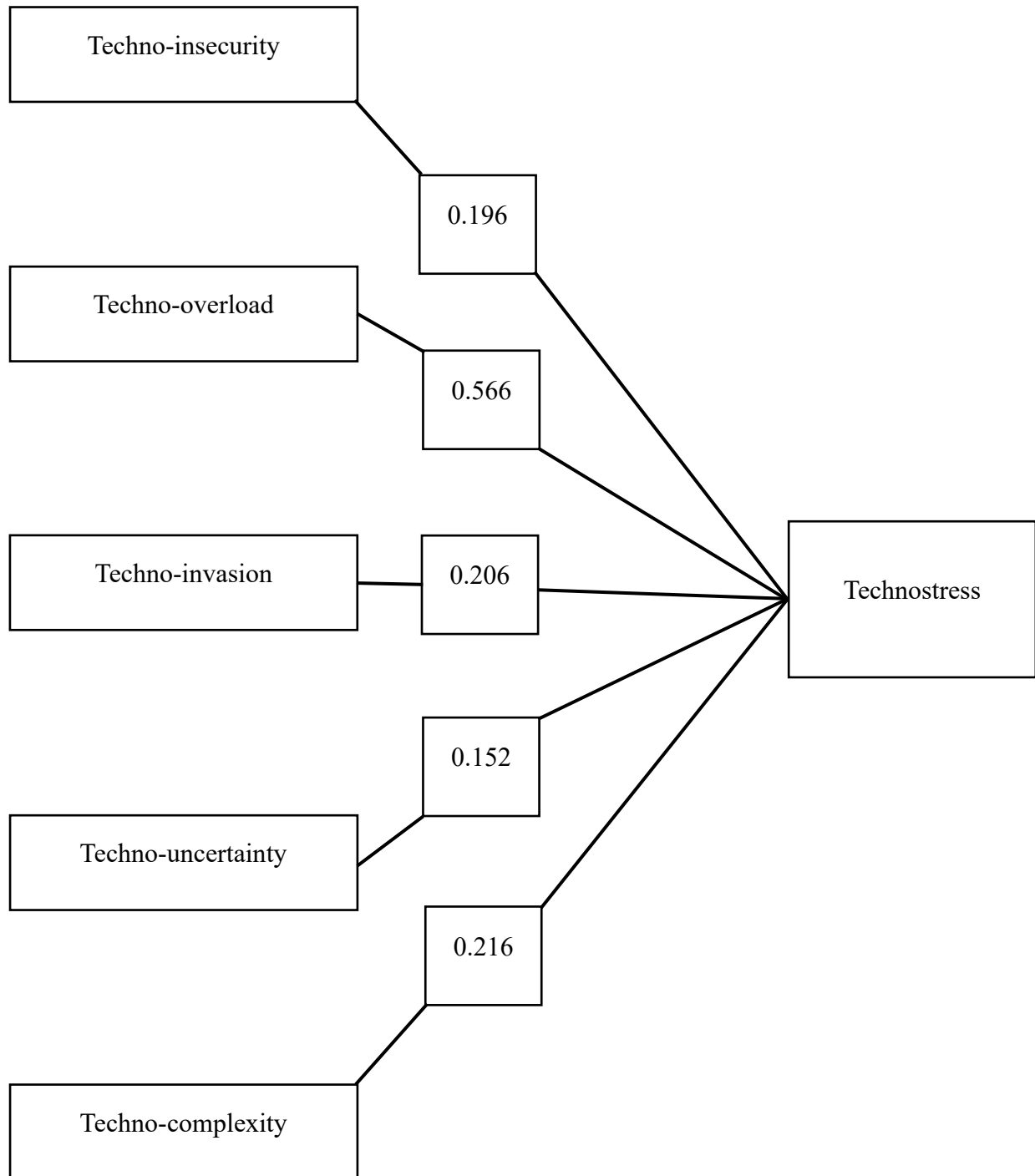
Table 3.4.4 present the Standardized Beta coefficient values and the significant values of independent variables Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity. The independent variables Techno-insecurity (TI), Techno-overload (TO), Techno-invasion (TIN), Techno-uncertainty(TUN) and Techno-complexity(TCOM) are significant at 1 percent significance level. Therefore, it is clear that these five independent variables have significant effect on Technostress (TS) among bank employees.

**Hence H01, H02, H03, H04, H05 are rejected.**

The beta coefficient gives a measure of contribution of each variable to the model, higher the beta value, greater the effect of independent variable on the dependent variable. Among these independent variables, Techno-overload has the greatest effect.

## VALIDATED MODEL

Figure 3.1  
Validated Model



Source: Compiled by the Researcher based on Hypothesis test.

Empirically validated model is portrayed in Figure 3.1. Techno-overload(beta = 0.566)has the highest beta coefficient followed by Techno-complexity(beta=0.216), Techno-invasion(beta=0.216), Techno-insecurity(beta=0.196) and Techno-uncertainty(beta=0.152). The beta coefficient of Techni-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity are statistically significant at 1 percent significance level( $p < 0.01$ ). Based on the above model it is understood that five null hypotheses are rejected and all independent variables have a significant effect on dependent variable.

- H01: Techno-insecurity–Technostress: Since the P value is 0.023, the beta coefficient of the variable is significant and the coefficient (0.196) being positive proves there is a significant effect of Techno-insecurity on Technostress. In short Techno-insecurity has significant effect of 19.6 percent on Technostress.
- H02: Techno-overload–Technostress: Since the P value is 0.000, the beta coefficient of the variable is significant and the coefficient (0.566) being positive proves there is a significant effect of Techno-overload on Technostress. In short Techno-overload has significant effect of 56 percent on Technostress.
- H03: Techno-invasion–Technostress: Since the P value is 0.005, the beta coefficient of the variable is significant and the coefficient (0.206) being positive proves there is a significant effect of Techno-invasion on Technostress. In short Techno-invasion has significant effect of 20.6 percent on Technostress.
- H04: Techno-uncertainty–Technostress: Since the P value is 0.017, the beta coefficient of the variable is significant and the coefficient (0.152) being positive proves there is a significant effect of Techno-uncertainty on Technostress. In short Techno-uncertainty has significant effect of 15.2 percent on Technostress.
- H05: Techno-complexity–Technostress: Since the P value is 0.034, the beta coefficient of the variable is significant and the coefficient (0.216) being positive proves there is a significant effect of Techno-complexity on Technostress. In short Techno-complexity has significant effect of 21.6 percent on Technostress.



### **3.5 SUMMARY**

This chapter deals with the analysis of the data collected. The data was analysed in three different stages. The first section displays the profile analysis which includes a brief analysis of the demographic profile of the respondents. In the second section the reliability of the measures was tested and found satisfactory. The multiple regression analysis of the measures was done in the third section and hypothesis formed at the outset were tested.

It was found that Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity creates Technostress among bank employees. Techno-overload has the highest influence on Technostress among bank employees in Ernakulam district.

**CHAPTER IV**  
**FINDINGS, SUGGESTIONS AND CONCLUSION**

## 4.1 INTRODUCTION

"Technostress" (1980) refers to the difficulties and pressures people face as a result of the quick development and extensive integration of technology in their life. People may struggle with overwhelming, anxious, and disconnected sentiments as technology becomes more and more necessary for work, communication, and daily activities. Information overload, continual connectedness, and the need to adjust to rapidly evolving digital technologies are some of the causes of this syndrome. Understanding the causes, impacts, and coping mechanisms for technostress becomes crucial in this situation for preserving a positive and balanced connection with technology. The study focuses the idea of technostress in contemporary Indian banking organizations as well as its various manifestations, such as the factors which creates technostress in the Indian banking sector. Technology adoption is widespread in banking industry and it is prevalent in each and every function of the banks. Technology has become an integral part of banking transactions. However, the present usage of technology also leads to anxiety, stress and work life imbalance among bank employees. Technology advancements have increased the stress levels among bank employees. Consequences of technostress include decreased job satisfaction, organisational commitment, and productivity. A periodic assessment is necessary to check the level of technostress affecting professionals especially the physical and emotional aspects. Managers should organize technology-based trainings for employees to make them comfortable with technologies and awareness of their harmful effects. For employees to keep up with technological advancements, technology skills are crucial. Banking institutions are needed to employ IT specialists and trouble-shooters to maximize system accessibility and provide a level of comfort to the employees.

This chapter is an effort to discuss the findings of the study. Then, on the basis of findings, the suggestions have been integrated which has followed by limitations of the research, recommendations for upcoming research. At the end this chapter last with the conclusion of the overall research.

## **4.2 OBJECTIVES OF THE STUDY**

The present study “A Study on Technostress among Bank Employees in Ernakulam District” is carried out with the following objectives:

- To explore the antecedence of technostress among Bank Employees.
- To measure the level of technostress among Bank Employees.
- To study the effect of antecedence on technostress among Bank Employees.

## **4.3 FINDINGS OF THE STUDY**

The following are the major findings of the study:

### **4.3.1 Demographic Profile**

- Majority of the respondents were Female as compared to Male respondents.
- Majority of the respondents belongs to the age category of 31-41.

### **4.3.2 Descriptive Findings**

Reliability test was carried out and it shows that Alpha values for all the 6 factors are above 0.7 and it can be concluded that the scale has internal consistency and reliability. This section deals with the findings regarding Descriptive statistics.

#### **1. Techno-insecurity (TI)**

- Majority of the respondents are of the view that ‘New recruits with high-updation’ increases Technostress.
- They also opinioned that the ‘Up-dation of co-workers creates a threatening environment’.
- Based on the mean score of every item, the respondents agree that they feel a sense of Techno-insecurity as a factor which influences Technostress.

#### **2. Techno-overload (TO)**

- Most of the respondents are ‘Forced to work with very tight time schedules’ and are ‘Forced to adapt new technologies’.
- Majority of the respondents faces problem of ‘High workload due to technology complexity’.

- Mean scores of majority of the items are above four and rest of the items are near to four which shows the high perceptions of respondents regarding Techno-overload.

### **3. Techno-invasion (TIN)**

- The highest mean was reported for TIN4 which indicate ‘Completing work in off time’ causes Technostress among employees.
- They are also of the opinion that they are ‘Spending less time with family’ due to Techno-invasion and ‘Personal life is invaded by innovative technology’.
- While considering the mean score of every item the respondents are of the opinion that Techno-invasion is a factor which creates Technostress.

### **4. Techno-uncertainty (TUN)**

- ‘Constant changes in computer hardware’, ‘Constant changes in computer software’ and ‘Constant adaptation and changes in technology’ leads to Technostress.
- The mean value of majority of the items is near to four indicates that Techno-uncertainty influences Technostress.

### **5. Techno-complexity (TCOM)**

- The respondents have ‘No job satisfaction due to technology unawareness’ creates Technostress.
- They are also of the opinion that there is a ‘Difficulty in understand and usage of new technologies’ and ‘Long time taken to understand and use new technologies.’
- The mode of every measure is five which shows the dependence of Techno-complexity on Technostress.

### **6. Technostress (TS)**

- ‘Network and security problems’, ‘Lack of support from IT’, ‘Information overload’ are some of the measures which leads to Technostress.
- Other factors which cause Technostress includes the use of ‘Too many different software’, ‘Inadequate training’ and ‘Computers being down’.

#### **4.3.3 Regression Analysis**

Regression analysis was conducted to measure the influence of TI, TO, TIN, TUN and TCOM on TS. The independent variables are TI, TO, TIN, TUN and TCOM and the dependent variable is TS. Following are the results:

- The correlation coefficients between independent variables Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity and dependent variable Technostress shows a positive correlation.
- The R square and Adjusted R square were almost the same. The Adjusted R square shows that 37.059 percent variation in TS is explained by TI, TO, TIN, TUN and TCOM.
- The Durbin-Waston statistic is 2.301
- The model is statistically significant at 0.001 percent level with F value 26.297
- The beta coefficients of Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity are statistically significant at 1 percent significance level ( $P < 0.01$ )
- Techno-overload is found to have major positive influence on Technostress among bank employees. It is evident from the beta coefficient of 56.6 percent, followed by Techno-complexity, Techno-invasion, Techno-uncertainty and Techno-insecurity respectively.

#### **4.4 THEORETICAL CONTRIBUTION OF THE STUDY**

In this study an attempt was made to identify the Technostress among bank employees. This study contributes to the validation of a theoretical model for the factors influencing Technostress. Findings of the study is expected to help the banks to identify the level of technostress and also to make suitable preventive measures to minimise the consequences of technostress among employees. The findings of the study might be useful for students and academicians as an input for doing similar nature of research in nature.

#### **4.5 SCOPE FOR FURTHER STUDY**

The study is emphasized on the technological stress of bank employees in Ernakulam district. Therefore, the scope is limited to bank employees in Ernakulam district. The following are few areas for further study.

- **Comparative Analysis:** Extend the scope to include bank employees from other districts, regions, or even different states. This broader sample could help identify variations in technological stress based on geographical factors or differences in work culture.

- **Longitudinal Study:** Instead of a cross-sectional study, consider conducting a longitudinal study over a period of time. This would allow you to observe changes in technological stress levels among bank employees and investigate the factors contributing to these changes.
- **In-Depth Variable Exploration:** While you've selected a few variables for your study, you could consider expanding the list to include other relevant variables that could contribute to technological stress, such as the level of IT training, the frequency of technological updates, or the availability of technical support.
- **Employee Demographics:** Investigate how employee demographics (age, gender, education level, years of service) interact with technological stress. This could provide insights into whether certain groups are more susceptible to this type of stress and why.
- **Impact on Performance:** Study the correlation between technological stress and employee performance metrics, such as productivity, accuracy, and customer satisfaction. This could shed light on whether technological stress affects overall job effectiveness.
- **Intervention Strategies:** Research and propose potential strategies or interventions that banks can implement to mitigate technological stress among their employees. This could include training programs, support systems, or ergonomic improvements.
- **Comparative Sector Study:** Compare the levels of technological stress experienced by bank employees with employees from other sectors that heavily rely on technology, such as IT companies, e-commerce firms, or customer service centers. This comparison could highlight unique stressors in the banking industry.
- **Qualitative Approach:** While your study may be quantitative, consider incorporating qualitative research methods such as interviews or focus groups to gather rich insights into the experiences and perceptions of bank employees regarding technological stress.
- **Global Comparison:** Extend your research beyond Ernakulam district and compare the technological stress levels of bank employees in different countries. This cross-cultural perspective could uncover cultural and societal factors influencing stress levels.
- **Technological Trends:** Keep an eye on emerging technological trends in the banking sector, such as the adoption of AI, blockchain, or remote work technologies. Investigate how these trends impact employee stress levels.

## 4.6 SUGGESTIONS

Technostress among bank employees can be addressed through various suggestions:

- **Training and Education:** Provide regular training sessions to enhance employees' digital skills and comfort with technology, reducing the anxiety associated with using new tools.
- **Clear Communication:** Ensure clear communication about technology changes, updates, and expectations to minimize confusion and uncertainty.
- **User-Friendly Interfaces:** Implement user-friendly software and tools that are intuitive to use, reducing the learning curve and frustration.
- **Workload Management:** Avoid overloading employees with excessive digital tasks; ensure a balanced workload to prevent burnout.
- **Support Systems:** Establish a support system, such as a dedicated IT helpdesk, to assist employees in resolving technical issues promptly.
- **Flexible Work Arrangements:** Allow flexible work arrangements, such as remote work, to reduce the pressure of constant on-site technology usage.
- **Digital Detox:** Encourage employees to disconnect from digital devices during breaks and after work hours to maintain a healthy work-life balance.
- **Feedback Channels:** Create channels for employees to provide feedback on technology tools, allowing for improvements and addressing pain points.
- **Wellness Programs:** Introduce wellness programs that focus on stress management and relaxation techniques to help employees cope with technostress.
- **Peer Support:** Foster a culture of peer support where employees can share their experiences and tips for managing technostress.
- **Regular Assessments:** Conduct periodic assessments of employees' technostress levels and use the data to implement targeted interventions.
- **Mindfulness Practices:** Introduce mindfulness practices or meditation sessions to help employees manage stress and improve focus.
- **Encourage Breaks:** Remind employees to take regular breaks from screen time to prevent eye strain and mental fatigue.
- **Clear Expectations:** Set realistic expectations for response times to emails and messages to avoid a sense of constant digital availability.
- **Leadership Role:** Senior management should set a positive example by adopting healthy technology habits and promoting work-life balance.



## 4.7 CONCLUSION

In conclusion, technostress among bank employees is a significant concern that can impact their well-being and job performance. To address this issue, banks should implement comprehensive strategies such as providing proper training, fostering a supportive work environment, and promoting a healthy work-life balance. By recognizing and managing technostress, banks can ensure the mental and emotional health of their employees while maintaining efficient and effective operations in the digital age.

“A Study on Technostress among Bank Employees in Ernakulam District” tries to analyse the factors affecting technostress among bank employees. Introduction, theoretical framework and literature review, analysis and interpretation, findings, suggestions and conclusion make up the four main chapters of this study. In the first chapter an introduction to the study is shown which includes the objectives of the study, problem statement, scope of investigation, methodology, working hypothesis and chapter summary.

The second chapter comprises the theoretical framework, literature review, and model development. The most important element of the theoretical framework is the pertinent theory of the problem under investigation. Theories were developed and compiled using a range of secondary sources. The theoretical part of the chapter provides clear explanations of the topic. The second half of the chapter contains extensive reviews of older publications that are pertinent to the subject. These literature evaluations were all produced by reading and investigating numerous journal articles. The final section of the chapter deals with the research's model development. A thorough review of the literature serves as the foundation for model building.

The Analysis of Demographic Profile, Descriptive and Regression Analysis, Model Validation, and Hypothesis Testing parts make up the third chapter. The demographic profile was investigated using a variety of demographic metrics that were used in the study. The internal consistency of the research constructs was demonstrated using a Cronbach's Alpha reliability analysis. the computation of the mean, mode, and standard deviation are also included. In the previous part, conducted a correlation study to ascertain the extent of the relationship between the variables.

The investigation also revealed that there is a significant positive association with the variables. Regression analysis is then used to assess how independent variables affect

dependent variables. According to the regression analysis, there is a significant effect of five independent variables on Technostress. The study leads to the rejection of whole hypotheses.

In the fourth chapter of the study, findings, suggestions and conclusion are discussed. Along with the descriptive and demographic statistics, it includes the regression analysis' findings. The study makes a substantial contribution to the corpus of literature by assessing the indicators of Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity.

At last, it was discovered that Technostress among bank employees depends on Techno-insecurity, Techno-overload, Techno-invasion, Techno-uncertainty and Techno-complexity. However, it can ensure that technology remains a tool for the empowerment rather than a source of stress and burnout by fostering a healthy relationship with technology and promoting digital wellness.

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- ❖ Modern Banking (Dr. K. VenuGopalan, Dr. Abdul Assis Koroth)

## **APPENDIX**

# A STUDY ON TECHNOSTRESS AMONG BANK EMPLOYEES IN ERNAKULAM DISRICT

I am Athira Ashokan, final year M.Com student of Bharata Mata College, Thrikkakara. As part of my research project on the topic "**A Study on Technostress among Bank Employees in Ernakulam District**" under the guidance of Dr. Ajay Joseph. I humbly request you to spare your time for filling up this questionnaire. I assure you that the information provided shall be kept confidential.

## QUESTIONNAIRE

1. Age:

a)20-30

b)31-41

c)42-52

d)Above 53

2. Gender:

a) Male

b) Female

c) Other

Sl.No.	Factors	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
<b>Techno-insecurity</b>						
1	New recruits with high up-dation.					
2	Constant threat in individual ability in completion of work.					
3	Up-dation of co-workers creates a threatening environment.					



4	Irregular up-dation of skills					
5	Less sharing of knowledge among co-workers					
<b>Techno-overload</b>						
1	Forced to work with very tight time schedules					
2	Forced to adapt new technologies					
3	High workload due to technology complexity					
4	spending enormous time to get through e-mail					
5	Non-routine tasks					
6	Multi-tasking					
<b>Techno-invasion</b>						
1	Update new technologies during vacation					
2	Personal life is invaded by innovative technology					
3	Spending less time with family					
4	Completing work in off time					
5	Immediate response to e-mail/text messages					
<b>Techno-uncertainty</b>						
1	Constant adaptations and change in technology					
2	Constant changes in computer software					
3	Constant changes in hardware					
4	Frequent upgradation in computer networks					
<b>Techno-complexity</b>						
1	No job satisfaction due to technology unawareness					
2	Difficulty in understand and usage of new technologies					
3	Long time taken to understand and use new technologies					
4	Less time in adapting and upgrading technology skills					
<b>Technostress</b>						
1	Information overload					
2	Network and security problems					

3	Lack of support from IT					
4	Inadequate training					
5	Too many different software					
6	Computers being down					

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