



*Major: FIN*  
*S.No. 05*

*“The impact of Income on Adoption of e-payment with mediating role of  
Financial Well-being in the twin cities of Pakistan”*



**By:**

*(Anum Gondal)*

*(01-222222-002)*

**Supervisor:**

**(Dr. Hina Samdani)**

**Department of Business Studies  
Bahria University Islamabad  
Spring 2024**

**FINAL PROJECT/THESIS APPROVAL SHEET**  
**Viva-Voce Examination**

Viva Date 4 / July / 2024

**Topic of Research:** (The impact of income on Adoption of e-payment with mediating role of financial well-being in the twin cities of Pakistan)

**Names of Student(s):**

- Anum Gondal 01-222222-002

**Class:** (MBA 2-Years)

**Approved by:**

---

**(Dr. Hina Samdani)**  
Supervisor

---

**(Dr. Khalid Hussain)**  
Internal Examiner

---

**(Mam Shamsa Khalid)**  
External Examiner

---

**Dr. Syed Haider Ali Shah**  
Research Coordinator

---

**Dr. Khalil Ullah Mohammad**  
  
Head of Department  
Business Studies

## **ABSTRACT**

The central focus of the thesis under discussion is to examine the impact of new e-payment technologies on income and adoption of e-payment, with a particular emphasis on the mediating role of financial well-being. The existing literature reviewed in this study suggests that the relationship between income and the adoption of e-payment, as well as the relationship between income and financial well-being, has been explored in various studies across different industries. However, the current research aims to delve deeper into these relationships within the specific context of small and medium enterprises (SMEs) located in the twin cities of Pakistan.

The positivist philosophical approach and a survey-based data collection method has been employed for this study. The primary data was gathered using a Likert-scale questionnaire from the target respondents. The data analysis was conducted using two prominent statistical software: Smart PLS4 and SPSS. To assess the measurement model, the internal consistency, discriminant validity, and convergent validity of the constructs. For the structural model, path coefficients utilized to examine the relationships between the variables. Furthermore, bootstrapping techniques was employed to test the mediating effect of financial well-being on the relationship between income and adoption of e-payment systems.

The results of the study provide valuable insights into the dynamics of e-payment technology adoption and its interplay with income and financial well-being. The findings indicate that income has a significant positive impact on both the Adoption of e-payment systems and the financial well-being of individuals. Additionally, the study reveals that financial well-being positively influences the adoption of e-payment technologies. Notably, the study also found that financial well-being fully mediates the relationship between income and adoption of e-payment systems. This suggests that the impact of income on the adoption of e-payment technologies is largely channeled through its effect on the financial well-being of individuals.

The findings of this study hold important implications for both academic research and practical applications. From a theoretical perspective, the study contributes to the existing body of knowledge by exploring the intricate relationships between Adoption of e-payment technologies, income, and financial well-being in the context of SMEs. This adds to the understanding of the complex dynamics that shape consumer behavior and technology adoption in emerging markets. For practitioners, the insights gained from this research can inform the strategic decisions of policymakers, financial institutions, and e-payment service providers. By understanding the pivotal role of financial well-being in mediating the relationship between income and consumer acceptance of e-payment, these stakeholders can develop targeted interventions and initiatives to promote financial inclusion and the widespread adoption of digital payment solutions, particularly among SMEs.

## **ACKNOWLEDGEMENT**

In the name of Allah, the most Gracious and the most Merciful.

Alhamdulillah, I extend my gratitude to Allah Almighty who has led me through every intense time and made me realize that He is continuously listening to my prayers. I would like to express my sincere gratitude to my supervisor Mam Hina Samdani for the supervision, constant support, patience, motivation, and knowledge regarding this topic. Her guidance helps me through-out the process of research and writing this thesis.

Besides my supervisor, my greatest gratitude goes to my parents and siblings, for their endless love, prayer and encouragement.

Lastly, I would also like to express my gratitude to all those who indirectly contributed in this research, your kindness means a lot.

Big Thanks to all!

## **DEDICATION**

I would like to dedicate my thesis to my beloved parents, strong and gentle souls. All I am I owe to my parents. I attribute all my success in life to the moral, intellectual and physical education I received from them.

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# THE IMPACT OF INCOME ON ADOPTION OF E-PAYMENT WITH MEDIATING ROLE OF FINANCIAL WELL-BEING IN TWIN CITIES OF PAKISTAN

## CHAPTER 1

### Introduction

#### 1.1 Background

In March 2020, the World Health Organization (WHO) declared COVID-19 as a pandemic. Therefore, it is important to take measures to stop the further spread of this virus which causes severe acute respiratory syndrome called coronavirus 2 (SARS-COV-2). Social distancing, staying home, and avoiding social gatherings are the main measures or guidelines that many countries enforce as well as some countries also take serious and strict action to control this pandemic outbreak like lockdowns and mass testing. Furthermore, WHO also forewarned that banknotes may also become the cause of the spread of the virus and promote contact-less cash (Al-Dmour et al., 2021). At that time the retailers are forced to shut down their shops and make sales through online platforms. Then the Internet and e-commerce play their roles not in one country but around the globe.

In the era of chaos, the internet plays a crucial role in connecting people through social media platforms. It enables people to collaborate, communicate their thoughts, and trade their goods and services more effectively and efficiently. In 1993, Pakistan also accepted warmly Internet for information purposes as well as for social interaction like other emerging nations in the form of an international USENET newsgroup (Shahani, n.d.).

Latterly, this development paved the path for the emergence of e-commerce. E-commerce facilitates consumers to buy and sell goods and services over the Internet. E-commerce refers to all types of transactions where buyers and sellers exchange goods and services electronically without any physical meetup. E-commerce wipes out all trade barriers globally as well and it helps the developing economy to stabilize. According to **Prospects and Problems for E-commerce in Pakistan**, rapid growth in the e-commerce industry has been observed in Pakistan over the last few years. However, the nonavailability of proper infrastructure of e-payment systems and lack of awareness are some of the highlighted issues regarding e-commerce development (Javed, 2020).

Eventually, with the pioneering concept of e-payment. The infrastructure of the payment world has been aligned with the world current trend of paperless transactions among consumers and business as well as government. Traditional payment method is almost brought to an end in developed economies. Some favorable characteristics like security, reliability, scalability, acceptability, privacy and convenience assist it over traditional payment method(Yu et al., 2002). The need for e-payment services started with the introduction of the e-commerce concept. Traditional cash-based and account-based systems were replaced with new payment system like online banking, mobile wallets, and QR code payments to fulfill this new need.

The concept of e-payment was introduced in 1918 in united state by the federal reserve bank with the help of telegraph. Till 1972, the invention of automated clearing house (ACH), this technology has not been widely used even in the united state. Regarding the types of e-payments different views are considered but mainly e-payment includes e-cheque, credit card, debit cards and e-cash and electronic funds transfer. Although each type has its own pros and cons(Kabir et al., 2015).

With the shift to digital payments, it is important to note that personal information and monetary transactions are being shared electronically. This has led some scholars to argue that there is a greater need than ever to focus on consumer protection, privacy, security, and trust in e-payment transactions. Because in this mode of transaction, trust plays a very crucial role, due to the absence of a face-to-face interface. Another concern about e-payment is security, as money and information are communicated over internet without any direct physical interaction with recipients and sender. So, this concern can be minimized by web assurance seals but consumer often misunderstood it and consider a tool to reduce products quality(Jain et al., 2023).

E-payment system is also recognized by the World Bank as pivotal for economic development, e-payment systems enable efficient resource utilization by automating payment processes, thereby reducing costs associated with manual or semi-automated payment handling and mitigating the expenses related to cash and check processing. The shift from paper-based to e-payment systems, as advocated by the World Bank and exemplified by initiatives in Malaysia, promises heightened economic growth and competitiveness. This transition presents opportunities to enhance productivity levels and decrease business operating costs, thereby helping to strengthen economic prosperity and foster a more efficient business environment(Mohd Yusof et al., 2018).

Consumers around the world have moved away from using physical cash and adopted digital payment methods for buying products and services. This shift in behavior has been driven by a

variety of factors, including the COVID-19 pandemic, the convenience and security of digital payments, and the growing availability of digital payment options. The e-payment system offers numerous benefits to various stakeholders, including payers, payees, e-commerce traders, banks, organizations, and governments, thereby fostering its widespread adoption globally. These advantages encompass cost-effectiveness, convenience, time efficiency, and serving as a viable alternative to cash transactions(S, 2022).

In Pakistan, e-payments are increasingly crucial for competing in the fintech arena, particularly when compared to neighboring countries like India and China, according to Statista projection report 2022-2024. While India demonstrates significant growth potential with a projected total transaction value of US\$254.60 billion in 2024 and an annual growth rate of 11.56%, Pakistan's transaction value is smaller at US\$17.68 billion, albeit showing a steady increase. China outpaces both countries with a projected value of US\$3,744.00 billion in 2024, indicating substantial dominance in the global e-payment market. In Pakistan, Digital Commerce emerges as the largest market segment, emphasizing the pivotal role of e-commerce in driving digital payments. This trend is echoed in China and India, where e-commerce platforms significantly influence the digital payment landscape, with projected total transaction values of US\$2,013.00 billion and US\$211.30 billion respectively in 2024. Overall, e-commerce's prominence underscores its significant impact on digital payments across these nations.

Pakistan faces the pressing need to bolster its e-payment infrastructure to bridge the gap with regional counterparts like India and global leaders like China. Enhancing e-payment systems would not only facilitate economic transactions but also promote financial inclusion, boost productivity, and drive overall economic growth(Aldaas, 2021). Therefore, concerted efforts and investments in developing robust e-payment infrastructure are imperative for Pakistan to harness the benefits of digitalization and remain competitive in the evolving global economy.

## 1.2 Problem statement

New e-payment technologies are rapidly changing the way consumers pay for goods and services. These technologies offer a variety of benefits, such as convenience, speed, and security. However, they also have the potential to impact consumer behavior and financial well-being in both positive and negative ways(Al-Sabaawi et al., 2023). Various studies have been undertaken and passed to evaluate the factors that influence the adoption of e-payment technology (Negm, 2023). Many research demonstrated the relationship between financial well-being with psychological factors

(May et al., 2023). Observing the composition reveals that little experimentation has been done on the relationship between income and adoption of e-payment. This research aims to examine the relationship between income, adoption of e-payment and financial well-being. The research findings could be divided into two categories. The first part explains the direct relationship between independent variable income on dependent variable adoption of e-payment will be examined. Lastly, the mediator financial wellbeing checks the relationship of independent variable income and dependent variable adoption of e-payment. The purpose of this study is to explore the level of adoption of e-payment in entrepreneurship industry in twin cities of Pakistan and to what extent the income impact an adoption of e-payment and financial satisfaction of an individual.

### 1.3 Research Gap

The proposed research analyses the impact of income on adoption of e-payment technology and consumer's financial well-being in twin cities of Pakistan as it is an unexplored area in the context of Pakistan. There has been a great deal of research done specifically on factors influencing the adoption of e-payment around the globe as well as in Pakistan(Hussain et al., 2023), but very little research has been done to check the relationship of income on adoption of e-payment technology. Therefore, this proposed research aims to fill the gap by employing three variables: Income as an independent variable, Adoption of e-payment as a dependent variable and financial well-being as a mediator as well as fulfilling the future direction of two study by introducing income as a new variable in the study and also replicating the study of "user trends of mobile payment in developing country: an empirical analysis" that was conducted in Saudia Arabia in the twin cities of Pakistan. Therefore this study helps to contribute to a deeper understanding of this unexplored area in the Pakistani context.

### 1.4 Research Objectives

The following research objectives are aimed to be addressed in this proposed research.

- i. To investigate the impact of income on adoption of e-payment within the entrepreneurship industry.
- ii. To investigate the impact of income on consumer's financial well-being within the entrepreneurship industry.
- iii. To investigate the impact of financial well-being on adoption of e-payment within the entrepreneurship industry.

- iv. To analyze the mediating role of financial well-being on relationship between adoption of e-payment and income within the entrepreneurship industry.

### 1.5 Research Questions:

This proposed study has the following main concerns:

- i. What is the impact of income on adoption of e-payment technology within the entrepreneurship industry?
- ii. What is the impact of income on a consumer's financial well-being within the entrepreneurship industry?
- iii. What is the impact of financial well-being on consumer's adoption of e-payment within the entrepreneurship industry?
- iv. Does financial well-being mediate the relationship between consumers' adoption of e-payment and consumer's income within the entrepreneurship industry?

### 1.6 Research Contribution

This paper makes a valuable contribution to the UTAUT 2 framework. It consists of seven constructs. Therefore, the study utilizes the UTAUT 2 framework to comprehend the acceptance and usage of digital payment methods (Hewavitharana et al., 2021). Furthermore, the subjective definition of the financial well-being concept is employed to capture a comprehensive knowledge of financial well-being. This study demonstrates the influence of income on consumers' attitudes towards adopting e-payment technologies and their financial welfare. Furthermore, this study will yield a multitude of recommendations and proposals for financial institutions that are involved in the implementation of e-payment systems. These entities are encouraged to incentivize and streamline customer engagement with e-payments method through initiatives such as providing varied discounts on cards transaction and lowering application fee for card. Additionally, the government of Pakistan, is urged to promote digital payment modalities by minimizing tax deduction.

### 1.7 Scope of the study

This study aims to explore the impact of income on adoption of e-payment within the industry of entrepreneurship endorsing individual unit of analysis. The study analyzed how income effect an individual to adopt this new kind of transaction system, e-payment and how income feels an

individual financially satisfied. This impact will be tested by adopting individual unit of analysis approach, specifically within the entrepreneurship industry without distinguishing their services in twin cities of Pakistan. They are the backbone of many economies, contributing significantly to GDP, employment and help to mitigate the poverty as well. SMEs foster innovation, provide diverse skill sets, and create competition, leading to a more dynamic marketplace. Their ability to adapt quickly to changing economic conditions makes them resilient contributors to economic growth. As highlighted by Bayraktar & Algan (2019), SMEs are crucial for inclusive globalization and are key players in ensuring the sustainable development of national economies.

## Chapter: 02

### Literature Review

#### 2.1 Income:

The significance of income has escalated as a result of the extensive adoption of income taxation on a global scale. When defining income, economists typically divide it into two groups: those who perceive it as a stream of services derived from wealth and individuals, and those who regard it as a stream of goods and services, namely the wealth itself. Income, as used in this article, refers to the monetary compensation or earnings that an individual or household acquires from diverse origins, notably salaries, wages, investments, and government aid. It includes both income that is earned, such as earnings from employment, and income that is unearned, such as dividends from securities. Analyzing income is crucial since it serves as a significant measure of an individual's or household's financial prosperity and economic standing. Examining income levels can yield valuable information into an individual's capacity to meet fundamental needs, and obtain healthcare, education, and other vital services. Additionally, it aids in comprehending discrepancies in wealth and income inequality within a country. Moreover, income data plays a vital role in enabling politicians, economists, and researchers to evaluate economic patterns, formulate social policies, and gauge the general well-being of an economy. The aforementioned rationale persuaded the usage of income as the independent variable (Brooks & Brooks, 2018).

In nations that are still in the process of growing, taxes play a critically important part in assisting a state in the construction of infrastructure that may be exploited for the benefit of its citizens. Furthermore, governments of developing and undeveloped economies make every effort to increase the amount of tax revenue collected from the general public wherever possible. The majority of developed nations have modernized their tax-payer methods, such as electronic filing, with the use of technology. (Tahar et al., 2020) employed income as a mediator in the study that was conducted on the perception of the utility of electronic filing on taxpayers who were civil servants. The result indicates that the level of income does not have the ability to regulate the relationship between the perception of the utility of e-payment on taxpayers who are civil servants. People who have modest incomes are more likely to avoid paying taxes, particularly if they are experiencing financial stability at the time of the tax payment. Therefore, the government ought to establish a plan for the payment of taxes at the appropriate moment, when taxpayers are able to assist with their tax obligations. To summarize everything, the level of an individual's income can demonstrate that they are able to pay taxes.

The well-being of Australians was evaluated by using a totally different lens, the geographic reference income, Geographic Reference Income and the Subjective Wellbeing of Australians. A National Wellbeing Framework has been made available by the Federal Government of Australia. This framework has indicators that are arranged into five different categories. However, the



paradigm does not take into account the influence that neighborhoods have on the subjective well-being (SWB) of individuals. This study intends to investigate the relationship between social welfare benefits and neighborhood income in Australia, with the goal of determining the extent to which it is relevant to policies that address income redistribution and social mixing. Moreover, they came to the conclusion that there is a positive connection between the subject's well-being and the well-being of the geographic income reference.(Phelps et al., 2023)

The income of a family is employed in one of the United States study to establish a connection between leading a healthy lifestyle and all causes of death. The research investigated whether or not there is a correlation between better lifestyle ratings and greater incomes as well as reduced mortality rates from all causes. On top of that, there was no correlation identified between the income of a family and a healthier lifestyle among adults in the United States. In order to encourage people to lead healthier lifestyles, the government of the United States ought to put an effort to reduce the factors that contribute to income inequality, which in turn causes stress and has an impact on health outcomes(Fang et al., 2023).

## 2.2 Adoption of e-payment:

Electronic payment systems have become crucial enablers in the ever-changing realm of financial transactions, revolutionizing the manner in which individuals and corporations participate in commercial activities. E-payment, or electronic payment, refers to a wide range of digital transactions carried out online, allowing for the smooth transfer of payments without the use of real money or conventional banking methods. The transition to digital financial solutions has been propelled by technological progress, convenience, and the worldwide connectedness of the internet. This article will examine the several forms of e-payment, the technological foundations behind it, and its influence on building the contemporary financial ecosystem. The concept of e-payment by Adeoti and Osotimehin: an electronic payment system is a method of making payments using electronic technology. Online and offline purchases of products and services. Another interpretation posits that e-payment systems are transactions conducted in the electronic commerce setting, involving the exchange of money using electronic methods by Kaur & Pathak, is considered in this research. (Kabir et al., 2015)

Testing the acceptance and utilization of digital technology for the purpose of combating COVID-19 is carried out with the help of the modified UTAUT model. This investigation was carried out in the geopolitical zone that is located in the south-west of Nigeria. Through this research, the researchers aimed to address and discover the issues that people are confronted with, as well as the causes and moderating variables that influence the behavior of consumers, and to determine which framework is appropriate for the acceptance and adoption of digital technology. The severe effects of the epidemic have been mitigated with the use of multiple digital interventions, which have also been implemented to impose preventative measures. Nevertheless, the application of these technologies and the acceptance of them by the population that has been affected has been a difficult undertaking. According to the findings of the study Performance expectancy (PE), Facilitating conditions (FC), and social influence (SI) were shown to be the most accurate markers of individuals' behavioral intention (BI) to use computer-based decision support tools Taking into account influential characteristics such as perceived effectiveness (PE), functional convenience (FC), and social influence (SI), which have a positive association with behavior intention in terms of acceptance of digital technology, is something that decision-makers and regulators should take into consideration, as per the findings.(Akinnuwesi et al., 2022).

The modified Unified Theory of Acceptance and Use of Technology is utilized in conjunction with the Innovation Resistance Theory in order to gather information regarding the factors that led to the acceptance of mobile payment systems in China and Italy. Based on the findings of this study (Migliore et al., 2022), it was determined that the Innovation Resistance Theory has a limited or insufficient capacity to describe customer behavior in relation to the acceptance of mobile payments. The modified unified theory of acceptance and use of technology was utilized for the very first time in order to investigate the usage of mobile payment systems in a comparative study between different countries. According to the findings of the study, the primary factors that contribute to the adoption of mobile payment are called perceived performance expectancy (PE),

social influence (SI), facilitating condition (FC), hedonic motivation (HM), and effort expectancy (EE).

The companies that provide financial technology services in Saudi Arabia are subject to criticism and are unable to persuade their clients to take part in their day-to-day transactions. This study was conducted in Saudi Arabia with the assistance of the extension of the unified theory of acceptance and the utilization of technology to assess behavior intention to adopt fin-tech services. Additionally, two additional constructs of privacy enablers and inhibitors were included in the study. As a result of earlier research, individuals in Saudi Arabia have voiced the opinion that transactions conducted using electronic payment methods are still considered to be haram and unprotected. According to the findings of this survey, residents of Jeddah are more likely to use fin-tech services with confidence. According to the findings of the research, services providers in the financial technology industry are required to give transparency, information regarding packages, and all the necessary steps to ensure that customers have a solid trust in financial technology applications. Unexpectedly, the majority of the proposed constructions have been discovered to have a positive association with one another. The findings suggested that UTAUT 2 constructs, performance expectancy, effort expectancy, social influence and facilitating condition have a positive relationship on consumers' behavioral intention towards Fin-tech services in Jeddah, Saudi Arabia (Bajunaied et al., 2023).

### 2.3 Financial well-being

“Financial well-being as the perception of being able to sustain current and anticipated desired living standards and financial freedom”(Brüggen et al., 2017). This definition of financial well-being is employed in this research. The definition has a total of four components. The nature of this definition is subjective, it totally depends on how an individual comprehend it rather than how it objectively defined. Second, it considers time dimension present and future situation as well. Third, the combination of wealth, service, comfort and material goods available to an individual refers to living standards. And the word desired suggests how an individual would like to prefer his or her life. Last, financial freedom refers to someone who would not feel compelled and stressed while making decision regarding its necessities and fulfilling its baseline expenses.

The research paper " The Influence of Financial Knowledge, Financial Socialization, Financial Behavior, and Financial Strain on Young Adults' by Fazli explores the relationship between financial strain, financial well-being, and psychological well-being. The study employs a quantitative approach, collecting data through surveys from a sample of participants. The findings indicate a significant negative association between financial strain and psychological well-being, with financial well-being acting as a mediator in this relationship. Specifically, higher levels of financial strain are linked to lower financial well-being, which, in turn, is associated with decreased psychological well-being. This suggests that improving financial well-being could potentially mitigate the negative impact of financial strain on psychological well-being. The study underscores the importance of addressing financial strain and enhancing financial well-being to promote overall psychological well-being among individuals. (Sabri et al., 2021).

To explore the determinants of financial well-being among Malaysian workers. Financial stress is used as mediator to check the effect on predictor and financial well-being. The findings of the study concluded that financial capability, financial literacy and financial behavior have a direct relationship with financial well-being and help to predict financial well-being. On the other side financial problem and financial stress has a negative relationship with financial well-being. The research underscores the importance of employers addressing the intertwined relationship between financial stress and mental health in the workplace. By providing integrated education and support, organizations can positively impact employee productivity, engagement, and overall well-being. The study suggests that fostering a supportive environment that considers both financial and mental health needs is crucial for enhancing employee wellness and performance(Fazli & Falahati, n.d.).

## 2.4 Relationship among all variables.

The study in Nigeria investigates the determinants of electronic payment adoption and its impact on consumers' purchase decisions in Nigeria. It reveals a positive significant relationship between electronic payment system determinants (security, trust, social influence) and e-payment adoption. Factors like educational attainment, financial inclusion, income level, internet service availability, and financial infrastructures influence the adoption of e-payment methods. Additionally, electronic payment systems influence consumers' purchase decisions, contributing to increased consumer spending. This study also recommends that by promoting the adoption of e-payment methods through enhancing security measures, building trust among users, and improving social influence factors, policymakers can facilitate a shift towards cashless transactions. This transition can lead to increased consumer spending and contribute to economic development(Oyelami et al., 2020).

**H1: Income has a significant impact on adoption of e-payment.**

This study looks into the complex connection between subjective well-being (SWB) and the financial aspects of the 'human condition,' going beyond the traditional single measure of 'income,' which has shown a weak correlation with overall happiness. The research seeks to enhance the psychological theory of subjective well-being (SWB) by offering a deeper comprehension of the determinants that impact financial well-being (FWB). Although personal financial situations might have obvious and concrete outcomes, such as owning a less expensive automobile or living in a smaller home, the research highlights the significance of evaluating the intangible impacts of money on overall well-being in all aspects of life. Without a doubt, income is a significant factor in determining financial pleasure. Among the respondents, 37% who did not rank their financial well-being as great attributed their judgment to a perceived insufficiency of income. Yet, upon careful analysis of the complex correlation between financial contentment and income, it becomes clear that a rise in money does not always lead to a commensurate enhancement in financial satisfaction.(Mahendru et al., 2022)

**H2: Income has a significant effect on financial well-being.**

This study demonstrates the importance of using EPS Electronic payment system. The study's findings suggest that those who utilize EPS more frequently may have higher levels of financial satisfaction leads to an individual financial well-being; therefore, it is imperative that EPS usage, knowledge, and training be improved, particularly in developing nations. (Khan & Khan,2024).Innovation in digital technology has a lot of advantages for financial access. It can encourage greater financial inclusion and aid in the reduction of economic and financial inequalities. Low-income areas can have better access to financial resources that support economic growth and enhance well-being by giving them access to banking services, digital payments, and other funding choices(Wanof, 2023).

**H3: Financial well-being has a significant impact on the adoption of e-payment.**

In order to comprehend financial well-being, Danes and Yang (2014) used systems theory. They emphasized the significance of financial behavior as a mediator between financial literacy, financial socialization, and financial well-being. By enabling the use of financial knowledge in routine financial operations, financial behavior mediates the link between financial well-being and financial literacy. An individual capability, to manage their expenses successfully refers to the term Financial behavior. This study investigated the influence of digital financial inclusion on the financial welfare of households in Pakistan. The results indicated that service convenience, user-friendliness, and security significantly promote financial well-being, hence increasing trust in digital payment systems. The study examined the variables that influence financial satisfaction, such as financial behavior, financial knowledge, and demography. The study discovered that financial behavior acts as a crucial intermediary in the connection between financial literacy and financial satisfaction, which is strongly linked to overall financial well-being. Therefore the mediating hypothesis can be developed as follow

**H4: Does financial well-being mediate the relationship of income and adoption of e-payment.**

## 2.5 Theoretical Support

### 2.5.1 : Adoption of e-payment:

One of the main psychology models, the theory of Reasoned action introduced by Martin Fishbein and Icek Ajzen in 1967 to predict behavior on the basis of their subjective norms and attitudes. According to, a specific behavior executed by an individual is actually shaped by its attitude towards the behavior which is influence by its beliefs regarding the consequences of that specific behavior while subjective norm I s shaped according to the perceived social pressure to indulge or not in a particular behavior. TRA has been widely applied in various fields, including health psychology, consumer behavior, and communication studies (James Price Dillard, 23-Jul-2002). The Technology Acceptance Model (TAM) is a widely recognized and influential psychological theory developed to understand and predict users' acceptance of information technology. Proposed by Fred Davis in 1989, TAM posits that users' behavioral intention to adopt a technology is influenced by two main factors: perceived ease of use and perceived usefulness. Perceived ease of use refers to the user's belief about how effortless it is to use the technology, while perceived usefulness relates to the user's belief that the technology will enhance their performance. According to TAM, these two perceptions directly impact the user's attitude toward using the technology, which, in turn, influences their actual adoption behavior. The model has been extensively used in various contexts, such as e-commerce, mobile applications, and workplace technologies, providing valuable insights into user acceptance and shaping subsequent research on technology adoption(Marangunić & Granić, 2015).

The research article "Predicting the intention to adopt mobile payment during the COVID-19 pandemic: Applying the Theory of Planned Behavior" delves into how the Theory of Planned Behavior (TPB) is utilized to understand and predict the adoption of e-payment systems, particularly during the challenging circumstances of the COVID-19 pandemic. TPB, developed by Icek Ajzen, posits that individuals' behavioral intentions are influenced by their attitudes, subjective norms, and perceived behavioral control. In the context of e-payment adoption, TPB allows researchers to analyze factors such as perceived usefulness, ease of use, and subjective norms to predict individuals' intentions to adopt e-payment technologies. By applying TPB in this study, researchers can gain insights into how these psychological factors shape individuals' decisions regarding the adoption of mobile payment methods, especially in the unique context of a global health crisis like the COVID-19 pandemic.

The (UTAUT) is a comprehensive model that integrates various constructs from existing technology acceptance theories to explain user intentions and behaviors towards technology adoption. Initially proposed by Venkatesh et al. in 2003, the UTAUT model synthesizes elements from theories like TRA, TAM, TPB, and others to enhance its predictive power. The model incorporates key constructs such as performance expectancy, effort expectancy, social influence, and facilitating conditions, providing a robust framework for understanding technology acceptance. This model has been extensively utilized in research to analyze technology adoption by individuals, demonstrating its relevance and

applicability in various contexts(Ayaz & Yanartaş, 2020). In 2012, Venkatesh, Thong, and Xu presented the revised model of UTAUT. The Revised Unified Theory of Acceptance and Use of Technology (UTAUT) builds upon the original UTAUT model by refining and extending its constructs to enhance its explanatory power in understanding technology acceptance and use. This revision incorporates additional constructs such as Price Value, Habit and Hedonistic Motivation(Momani, 2020).

The research paper critically reviews and refines the original Unified Theory of Acceptance and Use of Technology (UTAUT) model to enhance its explanatory power in understanding the acceptance and use of information systems. The study introduces an alternative theoretical model that incorporates individual characteristics like attitude, includes the path from facilitating conditions to behavioral intention, and reconsiders the applicability of moderators specified in the original UTAUT model. The findings indicate that attitude is a key factor influencing both behavioral intentions and usage behaviors in the context of information system acceptance and use. The revised UTAUT model enhances the understanding of how individual characteristics, facilitating conditions, and exogenous constructs impact behavioral intentions and usage behaviors. The study provides insights into the importance of attitude in mediating the effects of external factors on behavioral intentions and directly influencing usage behaviors. The revised model offers a more comprehensive framework for explaining the acceptance and use of information systems, highlighting the significance of individual characteristics and attitudes in shaping user intentions and behaviors(Dwivedi et al., 2019).



### 2.5.2: Financial Well-being

The Financial Wellness Model is a holistic framework that evaluates individuals' financial well-being by considering various dimensions of financial health, including financial behaviors, attitudes, knowledge, and overall satisfaction with their financial situation. This model emphasizes the importance of not only financial stability but also financial security, resilience, and the ability to meet financial goals. By incorporating elements such as budgeting skills, debt management, savings habits, and long-term financial planning, the Financial Wellness Model provides a comprehensive assessment of individuals' financial wellness and identifies areas for improvement to enhance overall financial health (Garman et al., 1999).

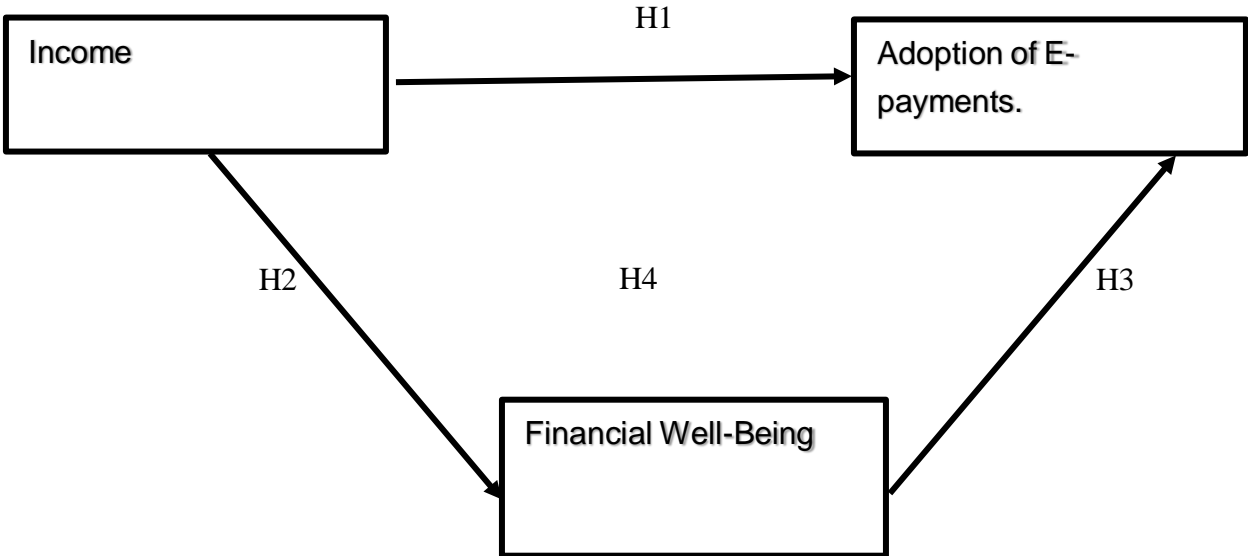
The Financial Capability Model is a comprehensive framework that examines individuals' ability to apply financial knowledge, engage in desirable financial behaviors, and seize available financial opportunities to achieve financial well-being. This model, rooted in a systematic conceptual review and extension, offers insights into the antecedents and outcomes of financial capability, emphasizing the importance of appropriate financial decision-making for overall financial health. By synthesizing literature and proposing future research directions, this model contributes significantly to understanding the multifaceted nature of financial capability and its implications for individuals' financial outcomes (Xiao et al., 2022).

Kempson's Financial Well-Being Model is a comprehensive conceptual framework that delves into the multidimensional aspects of financial well-being. Grounded in extensive literature reviews and empirical data analysis, this model identifies key drivers of financial well-being, emphasizing behaviors like active saving, spending restraints, and not borrowing for daily expenses as crucial factors. By offering a nuanced understanding of financial well-being through three sub-domains: financial commitment, Financial Comfortable, and resilience for the future. Kempson's model provides valuable insights into the mechanisms that underlie disparities in financial well-being across populations. This model contributes significantly to the field of financial well-being research by shedding light on the behaviors and attitudes that shape individuals' financial health and resilience (Kempson et al., 2017).

The Kempson Financial Well-Being Model stands out as a comprehensive framework that offers a nuanced understanding of financial well-being by incorporating key drivers such as behaviors, social and economic environmental factors, psychological traits, and attitudes towards spending, saving, and borrowing. Unlike other models that may focus solely on financial literacy or specific financial behaviors, Kempson's model provides a holistic view that considers the multidimensional nature of financial well-being. By emphasizing the interplay between psychological factors, behaviors, and external influences, this model offers a more comprehensive assessment of individuals' financial health and resilience. The conceptual clarity and depth of Kempson's model make it a valuable tool for researchers and practitioners seeking to understand and enhance financial well-being.

2.6 Conceptual Framework

**Figure 1: Conceptual Framework**



## Chapter: 03

### Methodology

Followed by the extensive literature review, this chapter describes the methodology used in the study and it is divided into four sections. First, the research design, specifically philosophy and followed by the research population and sample employed. The third section presents the research sample techniques employed to achieve the aim and the objectives of this study. This includes data collection procedures. Finally, the measurement instrument is described, including the theories behind the instrument development.

#### 3.1 Research Design

According to Guba and Lincoln, defined research paradigm as “the basic belief systems or worldview that guides the investigator”. It is helpful for researchers in terms of deciding a suitable methodology for their research. It encourages researchers to examine their fundamental assumptions of the world and foundation of their knowledge. Generally, there are three primary types of research paradigms: positivism, constructivism, and critical theories.

##### 3.1.1 Positivism:

Positivist paradigm is linked with the quantitative research approach. The basic assumption behind this paradigm is that there is one reality, which can be discovered by using empirical testing. In terms of theory, positivism proposed theories that aimed to be tested in order to accept and reject. These theories are tested in a controlled environment with aim of supporting and rejecting on conclusion based on proper experimentation. Nature of reality is objective when it comes to positivism, researcher and reality are independent. Knowledge is established on verified hypothesis.

##### 3.1.2 Constructivism:

The constructivist paradigm operates under the premise that researchers have the capacity to derive subjective meaning from individual experiences related to specific situations in order to comprehend a particular phenomenon. This paradigm is linked with qualitative research approach. In theory testing, theories are constructed from multiple realities and are shaped by social and cultural context. In terms of reality, it is constructed, experienced and interpreted by people while

interaction. Knowledge is shaped on the basis of subjective beliefs, values, reason and understanding.

### 3.1.3 Critical Theory

The critical theory research paradigm rests on the premise that the shaping of reality is influenced by a range of social, political, cultural, gender, and ethnic values. Knowledge is formed through lived experiences and the social connections that organize and shape these experiences. Theories are constructed by examining power relationships and deconstructing the world.

It seems that the approach taken by positivism researchers would be the most appropriate for guiding this investigation. The reason for this is that the assumptions of positivism research are supported by the manner by which this study examined reality and the core of knowledge. According to this philosophy, knowledge is predicated on tested theories that aid in the discovery of reality. This reality can then be generalized, taking into account the researcher and reality as two distinct entities.

### 3.2 Population and Sample

The term population refers to the universe of units from which the sample has to be selected. Units can be anything from individuals to cities, countries, regions, organizations and industry. The intent of this study was to examine the relationships among income, adoption of e-payment and last the financial well-being in twin cities of Pakistan within the entrepreneurship industry. The study targets Small and Medium Enterprises (SMEs) across all service categories, regardless of the industry they belong to. This study aims to study the SME's in the twin cities of Pakistan specifically targeting the SME's operating in the Business incubation center developed by HEC. They are total 39 as per HEC website in Pakistan, 10 are in Islamabad and Rawalpindi region. Except this NIC and First business incubation center were also visited. Specifically target the SME's operating in the first level of incubation centers startup level. So the population is 170 and sample is set 120 according to Morgan Table.

### 3.3 Sample Technique

To meet the research objectives, the primary data for this study were collected using a survey questionnaire. Survey research is defined as the systematic gathering of specific information about a particular person or entity. According to Guba and Lincoln a survey is “a method of collecting data from people about who they are (education, finances, etc.), how they think (motivations,

beliefs, etc.), and what they do (behavior)”.

One of the major tools in research is sampling. It is an important part of methodology as it is used to select the respondents from whom the data is collected, analyzed, and interpreted. Sampling can be used in a situation whereby time or finance does not allow a researcher to survey the entire population.

To conduct research on Small and Medium Enterprises (SMEs) in Pakistan, a purposive sampling technique would be suitable. Purposive sampling involves selecting participants based on specific characteristics relevant to the research objectives. The first purpose of this study is to collect the data from SME’s who are their initial stage of their business and the other purpose is to collect data from the one who are using or well-aware of e-payment technologies. In the context of SME research in Pakistan, this method allows researchers to target SME owners, managers, or employees who possess valuable insights and experiences related to the study. Purposive sampling ensures that the selected participants can provide in-depth information about the challenges, opportunities, and dynamics of SMEs in Pakistan, leading to a more focused and insightful research outcome. Due to time constraints, I was only able to collect data from the SME’s in incubation center.

### 3.4 Measurement Instrument

The use of scales in questionnaires restricts the respondents to a predetermined range of answers and can make it easier for quantitative analysis, and enabling straightforward comparison and tabulation. Scales chosen to assess the concept of the study were derived from previous studies based on the variables in the study. This study employed a five-point Likert scale. The scale provided respondents with a number of brief statements associated with measuring each category within the variable. Likert scaling assesses the level of agreement for each item, with 1 = strongly disagree and 5 = strongly agree.

***Table 1: Variables and number of items***

<b>Variables</b>	<b>No. of items</b>	<b>Sources</b>
Income	4	E-payments in the eyes of students: analyzing the effect of trust, risk, benefit and income.

Adoption of e-payment	6	Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology.
Financial well-being	5	Digital Payments and Financial Wellbeing of the Rural Poor: The Moderating Role of Age and Gender. The Influence of Financial Knowledge, Financial Socialization, Financial Behavior, and Financial Strain on Young Adults' Financial Well-Being

**3.5 Data Analysis Strategy:**

The result of the collected data was analyzed by using SPSS and SMART PLS4. In the first phase of data analysis, descriptive statistics was conducted using SPSS software, the aim was to analyze the characteristics of the demographic’s variables. In the second phase, For the measurement model, the PLS-SEM algorithm procedure was applied to analyze the outer loading of items as well as the validity and reliability. To test the hypothesis, the PLS algorithm, bootstrapping technique was applied for mediation analysis.

## CHAPTER 4

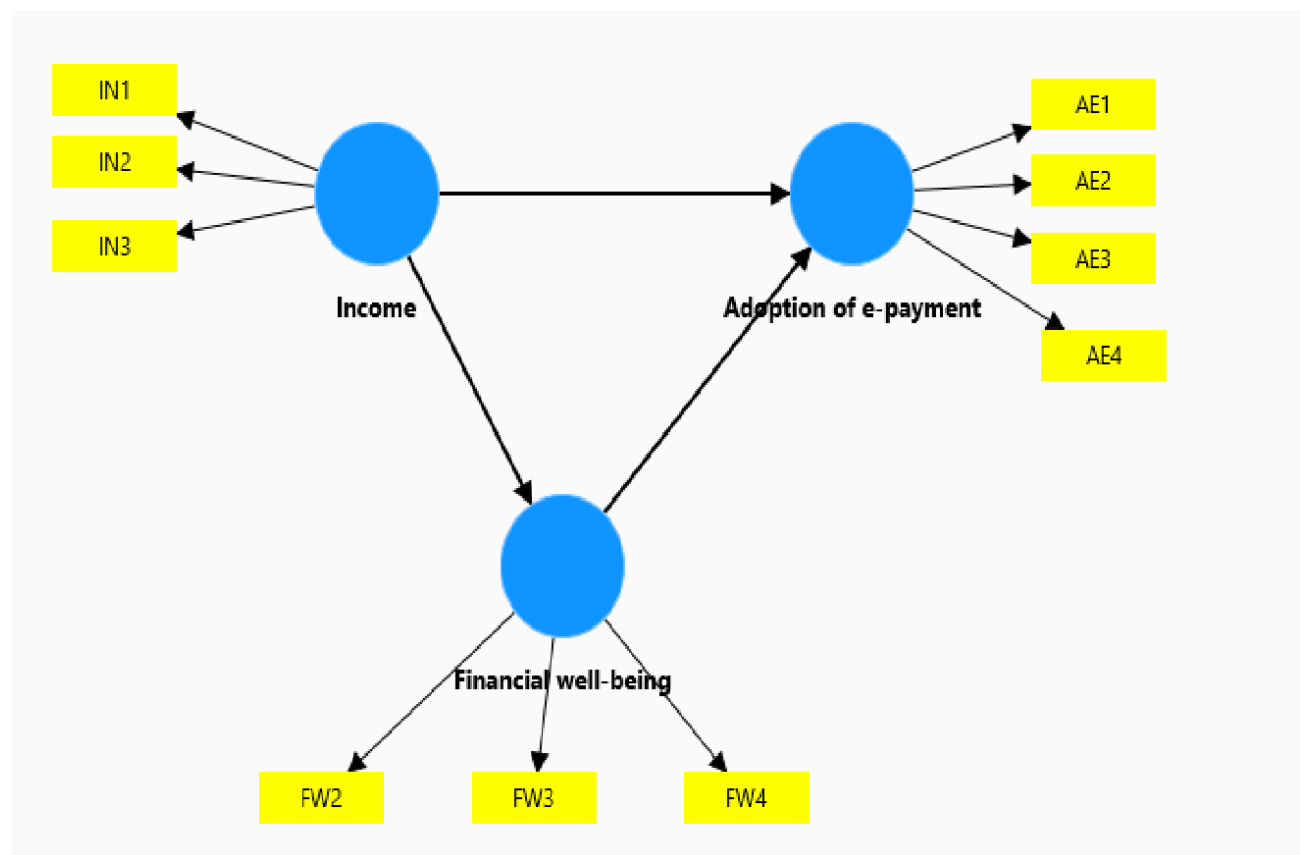
### RESULT AND ANALYSIS

Data analysis was carried out using SPSS and SMART PLS 4. Data cleaning was done and demographics were analyzed using SPSS. PLS-SEM was carried out using SMART PLS 4 to test the measurement model followed by the structural model for this study. Such as outer loading of items, reliability and validity of data, were calculated to check the interaction between variables. Testing of hypothesis was also done by Smart PLS to check the direct effect and mediating effect.

#### 4.1 Model

The purpose of this research is to investigate the relationship between income treated as independent variable, Adoption of E-payment as dependent variable, and financial well-being as mediating variable. To examine this relationship, a conceptual model has been developed and tested using Smart PLS version 4 for both measurement and structural model.

*Figure 2: Model*



## 4.2 Demographics Data

***Table 2: Demographic Variables***

<b><i>Gender</i></b>					
		<b><i>Frequency</i></b>	<b><i>Percent</i></b>	<b><i>Valid Percent</i></b>	<b><i>Cumulative Percent</i></b>
Valid	Male	71	59.1	59.1	59.1
	Female	49	40.8	40.8	100.0
	Total	120	100.0	100.0	
<b><i>Experience</i></b>					
		<b><i>Frequency</i></b>	<b><i>Percent</i></b>	<b><i>Valid Percent</i></b>	<b><i>Cumulative Percent</i></b>
Valid	6 months	29	24.2	24.2	24.2
	Upto 1 year	74	61.7	61.7	85.8
	1.5 year	9	7.5	7.5	93.3
	Above 2 years	8	6.7	6.7	100.0
	Total	120	100.0	100.0	
<b><i>Revenue</i></b>					
		<b><i>Frequency</i></b>	<b><i>Percent</i></b>	<b><i>Valid Percent</i></b>	<b><i>Cumulative Percent</i></b>
Valid	0-1 M	76	63.3	63.3	63.3
	2-3 M	25	20.8	20.8	84.2
	3-4 M	12	10.0	10.0	94.2
	Above 5 M	7	5.8	5.8	100.0
	Total	120	100.0	100.0	
<b><i>Age</i></b>					
		<b><i>Frequency</i></b>	<b><i>Percent</i></b>	<b><i>Valid Percent</i></b>	<b><i>Cumulative Percent</i></b>
Valid	18-25 years	46	38.3	38.3	38.3
	26-36 years	43	35.8	35.8	74.2
	36-45 years	23	19.2	19.2	93.3
	Above 45 years	8	6.7	6.7	100.0
	Total	120	100.0	100.0	
<b><i>Education</i></b>					
		<b><i>Frequency</i></b>	<b><i>Percent</i></b>	<b><i>Valid Percent</i></b>	<b><i>Cumulative Percent</i></b>
Valid	Matriculation	2	1.7	1.7	1.7



	Intermediate	7	5.8	5.9	7.6
	Graduate	74	61.7	62.7	70.3
	Post-Graduate	35	29.2	29.7	100.0
	Total	118	98.3	100.0	
Missing	System	2	1.7		
Total		120	100.0		
<b>Mode of Payment</b>					
		<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Mobile Wallets	31	25.8	25.8	25.8
	Online Banking	54	45.0	45.0	70.8
	Credit/Debit Cards	17	14.2	14.2	85.0
	QR Code Payments	18	15.0	15.0	100.0
	Total	120	100.0	100.0	

A total of 120 responses were collected. The table provided presents a frequency distribution of various demographic data characteristics of a sample population. The gender distribution shows that 71 individuals (59.1%) are male, while 49 individuals (40.8%) are female. Concerning experience, the majority of the sample (61.7%) has less than one year of experience, with a smaller proportion having 6 months (24.2%), 1.5 years (7.5%), or upto 2 years (6.7%) of experience. Regarding revenue distribution, states that the majority of the sample (63.3%) has a revenue of less than one million, with smaller proportions having a revenue of 2-3 million (20.8%), 3-4 million (10.0%), or more than 5 million (5.8%). In respect of age, results of data collection show that the majority of the sample (38.3%) is between 18-25 years old, followed by those between 26-36 years old (35.8%), 36-45 years old (19.2%), and above 45 years old (6.7%). In respect of education distribution revealed that the majority of the sample (62.7%) has a graduate degree, followed by those with a post-graduate degree (29.7%), intermediate degree (5.9%), and matriculation degree (1.7%). Finally, the mode of payment distribution shows that the majority of the sample (45.0%) uses online banking, followed by mobile wallets (25.8%), credit/debit cards (14.2%), and QR code payments (15.0%) in the SME's industry, Pakistan.

#### 4.2 Measurement Model

The three main assessment criteria are needed in the assessment of the measurement model. The

first is Internal Consistency, Cronbach Alpha, Composite reliability, and Dijkstra-Henseler's rho are the main measures of consistency of the model. factor loadings and average variance extracted are the two gauges to test Convergent Validity. Fornell & Larcker criteria, cross-loading and Heterotrait and Monotrait Ratio of correlations (HTMT) test are true representatives of Discriminant Validity.

#### 4.2.1 Internal Consistency Model

In the past, Cronbach's Alpha was dominant over the other measurement tests. Construct with high Cronbach alpha implies, that items of this construct have similar range and meaning. Cronbach alpha has been criticized for being riddled with problems stemming from unrealistic assumptions. Many researchers, stated that one should stay away from Cronbach alpha, for internal consistency must rely on omega reliability also known as composite reliability, rho\_a, and rho\_c tests widely used in many researches to check composite reliability. The values of these tests must be greater than 0.7 are acceptable and satisfactory, the reliability of rho\_a sometimes relies between the value of Cronbach Alpha and rho\_c.

**Table 3: Measurement of internal consistency model**

<i>Constructs</i>	<i>Cronbach's alpha</i>	<i>Composite reliability (rho_a)</i>	<i>Composite reliability (rho_c)</i>
Income	0.749	0.754	0.857
Adoption of e-payment	0.677	0.695	0.805
Financial Well-being	0.710	0.822	0.834

The table result shows that the value of all three constructs are meeting the threshold of Cronbach alpha, rho\_a, and rho\_c which implies that the reliability measures for the constructs in this study are within the acceptable range, suggesting that the items within each construct are closely related and measure the same underlying concept. This provides confidence in the internal consistency and reliability of the measurement model.

#### 4.2.2 : Convergent Validity:

Convergent validity is a type of criterion-related validity to measure to what degree an item of one construct is correlated with the other items of the same construct. In simple words, it implies to what extent a questionnaire measures the concept it was designed to measure. The acceptable value of outer loading is greater than 0.7 and labeled as excellent, and the loading equal or greater than 0.5 is acceptable if contributing to the (AVE), the threshold for AVE is

greater than 0.5. the following result meets the acceptable criteria.

**Table 4: Average Variance Extracted**

<i>Constructs</i>	<i>Average variance extracted (AVE)</i>
Income	0.666
Adoption of e-payment	0.510
Financial well-being	0.637

The AVE values for Income (0.666) and Financial well-being (0.637) exceed the recommended threshold of 0.5, suggesting that these constructs have a good level of convergent validity. The AVE value for Adoption of e-payment (0.510) is also close to the recommended threshold, indicating an acceptable level of convergent validity for this construct.

**Table 5: Outer Loading**

<i>Constructs</i>	<i>Items</i>	<i>Outer loadings</i>
Adoption of e-Payment	AE1	0.723
	AE2	0.608
	AE3	0.716
	AE4	0.796
Financial Well-Being	FW2	0.533
	FW3	0.892
	FW4	0.912
Income	IN1	0.845
	IN2	0.825
	IN3	0.777

The table shows that the outer loadings for all items associated with each construct are within the acceptable range, suggesting that the items are reliable indicators of their respective constructs.

#### 4.2.3 Discriminant Validity

Discriminant validity is a kind of construct validity, that helps to measure that items designed to check the construct must not correlate with other constructs that aim to measure another construct. In other words, it aims to check the uniqueness of the construct. In HTMT criteria, a value above 0.9 demonstrates a lack of validity. According to Fornell and Lacker Criteria, this compares the square root of the AVE values with the latent variable correlations. Discriminant validity is established if the square root of each construct's AVE is greater than its highest correlation with any other construct. The last criterion to check discriminant validity is cross-loading, the loading of each indicator must be highest for its designed construct. The results of the following tables meet the criteria of each test.

***Table 6: Heterotrait-Monotrait Ratio***

	<i>Heterotrait-Monotrait ratio (HTMT)</i>
Income <-> Adoption of e-payment	0.503
Income <-> Financial well-being	0.178
Financial well-being <-> Adoption of e-payment	0.307

The HTMT values indicate the degree of discriminant validity between constructs. Values below 0.85 are generally considered acceptable. All HTMT values are below 0.85, indicating that they meet the threshold criteria.

***Table 7: Cross Loading***

<i>Cross Loading</i>	<i>Adoption of E-payment</i>	<i>Financial well-being</i>	<i>Income</i>
Ae1	<b>0.723</b>	0.129	0.275
Ae2	<b>0.608</b>	0.124	0.218
Ae3	<b>0.716</b>	0.131	0.247
Ae4	<b>0.796</b>	0.226	0.287
Fw2	0.122	<b>0.533</b>	-0.050
Fw3	0.190	<b>0.892</b>	0.147
Fw4	0.205	<b>0.912</b>	0.036
In 3	0.331	0.012	<b>0.845</b>
In1	0.283	0.085	<b>0.825</b>
In2	0.267	0.112	<b>0.777</b>

The cross-loadings show that each item loads more strongly on its corresponding construct than on the other constructs. For example, the items for "Adoption of e-payment" (Ae1, Ae2, Ae3, Ae4) have higher loadings on the "Adoption of e-payment" construct than on the "Financial well-being" and "Income" constructs. Similarly, the items for "Financial well-being" (Fw2, Fw3, Fw4) and "Income" (In3, In1, In2) have higher loadings on their respective constructs. This pattern of cross-loadings suggests that the constructs have good discriminant validity.

***Table 8: Fornell and Lacker Criteria***

<b><i>Fornell and Lacker Criteria</i></b>	<b><i>Adoption of e-payment</i></b>	<b><i>Financial well-being</i></b>	<b><i>Income</i></b>
Consumer Behavior	0.714		
Financial well-being	0.219	0.798	
Income	0.361	0.082	0.816

The Fornell-Larcker criterion compares the square root of the Average Variance Extracted (AVE) of each construct with the correlations between that construct and the other constructs in the model. In this case, the square root of the AVE for each construct is shown on the diagonal of the table is higher than the correlations with the other constructs, indicating that the constructs have good discriminant validity.

### 4.3 Regression

#### 4.3.1 : R square

***Table 9: R-Square***

	<b><i>Adoption of e-payment</i></b>
R-square	0.131
R-square adjusted	0.122
Durbin-Watson test	1.667

The R-square value is 0.131, which indicates that the independent variables, income in the model explain approximately 13.1% of the variation in the dependent variable, adoption of e-payment. The adjusted R-square value is 0.122, which is slightly lower than the R-square. It suggests that the model explains approximately 12.2% of the variation in adoption of e-payment, considering the number of independent variables. The Durbin-Watson statistic ranges from 0 to 4, with a value of approximately 2 indicating no autocorrelation. Values less than 1 or greater than 3 are cause for concern and suggest the presence of autocorrelation. In this case, the Durbin-Watson statistic of

1.667 falls within the acceptable range, suggesting that there is no significant autocorrelation in the residuals of the regression model.

#### 4.3.2 : ANOVA Table

***Table 10: ANOVA table***

	<i>Sum square</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>P value</i>
Total	101.000	100	0.000	0.000	0.000
Error	87.814	99	0.887	0.000	0.000
Regression	13.186	1	13.186	14.866	0.000

The table shows that the regression model is statistically significant, and the independent variable: Income explains a significant portion of the variation in the dependent variable, adoption of e-payment. The F-statistic value 14.866 and its associated p-value 0.000 provide evidence that the overall regression model is a good fit for the data.

#### 4.3 Structural Model

A structural model is a mathematical and statistical framework used to analyze the relationships between variables. It involves a set of equations that describe the causal connections among variables, both observed and unobserved. The model can be represented using diagrams with arrows to illustrate the hypothesized causal relationships.

***Table 11: Measurement of Structural Model***

	<i>Original sample (O)</i>	<i>Sample mean (M)</i>	<i>Standard deviation (STDEV)</i>	<i>T statistics ( O/STDEV )</i>	<i>P values</i>
Income -> adoption of e-payment	0.346	0.370	0.080	4.336	0.000
Income -> Financial well-being	0.082	0.088	0.160	2.513	0.000
Financial well-being -> adoption of e-payment	0.191	0.204	0.114	2.667	0.004

From this table, we can interpret the following:

- Income -> Adoption of e-payment: The impact of income on adoption of e-payment is highly significant, with a t-statistic of 4.336 and a p-value of 0.000. This indicates a strong positive correlation between income and adoption of e-payment therefore, the following hypothesis is accepted.  
H1: Income has a significant impact on adoption of e-payment.
- Income -> Financial well-being: The impact of income on financial well-being is also statistically significant, with a t-statistic of 2.513 and a p-value of 0.000. This suggests that there is strong correlation between income and financial well-being. therefore, the following hypothesis is also accepted.  
H2: Income has no significant effect on financial well-being.
- Financial well-being -> Adoption of e-payment: The impact of financial well-being and adoption of e-payment is statistically significant, with a t-statistic of 2.677 and a p-value of 0.004. This suggests that there is a positive correlation between the two variables, Hence, the following hypothesis is being accepted on the bases of p-value.  
H3: Financial well-being has a significant impact on adoption of e-payment.

#### 4.4 Mediation Analysis

Mediation analysis was performed to assess the mediating role of financial well-being on the linkage between Income and Adoption of E-payment. The results revealed that the total effect of Income on Adoption of e-payment was significant ( $\beta=.361, t \text{ value}=4.484$  and,  $p \text{ value}<0.05$ ). With the inclusion of the mediating variable Financial well-being, the impact of income on consumer behavior becomes significant ( $\beta=.346, t \text{ value}=4.336$  and,  $p \text{ value}<0.05$ ). The indirect effect of income on Adoption of e-payment through financial well-being was found insignificant ( $\beta=.016, t \text{ value}=2.455$  and,  $p \text{ value}>0.05$ ). This shows that the relationship between income and Adoption of E-payment is fully mediated by financial well-being.

**Table 12: Mediating Analysis**

Total Effect		Direct Effect		Indirect Effect				
$\beta$	p-value	$\beta$	p-value	B	p-value	t-value	SD	BI (5%-95%)
0.361	0.000	0.346	0.000	0.016	0.004	2.455	0.034	(-0.043;0.070)

## 4.5 Hypothesis Testing

***Table 13: Hypothesis Testing***

<b><i>Hypothesis</i></b>	<b><i>P-value</i></b>	<b><i>Decision</i></b>
H1: Income has significant impact on adoption of e-payment	0.000	Accepted
H2: Income has a significant effect on financial well-being	0.000	Accepted
H3: Financial well-being has a significant impact on adoption of e-payment	0.004	Accepted
H4: Does Financial well-being mediates the relationship between income and financial well-being.	0.004	Accepted



## Chapter 05

### Conclusion

#### 5.1 Conclusion:

The conclusion of this study highlights the significance of small and medium size businesses and their contribution towards the improvement of GDP of Pakistan. This main aim of this study was to explore the relationship of income and consumer behavior with regard to the adoption of e-payments with the mediating role of financial well-being. Through the use of purposive sampling, the primary data was collected through survey questionnaire via online google form was the main medium for data collection.

In conclusion, the study revealed a direct correlation between income and consumer behavior, specifically in relation to their inclination to utilize electronic payment methods. The findings suggest that individuals in Pakistan, particularly those in small and medium-sized enterprises (SMEs), predominantly utilize the online banking method of electronic payment, within a certain income range of 0-1 million. Moreover, this study also emphasizes that income is a determinant of an individual's financial adequacy. This financial happiness does not pertain to an individual's actions or attitudes towards the use of electronic payments. Furthermore, the study demonstrates that the mediator variable of financial well-being completely mediates the association between income as an independent variable and consumer behavior as the dependent variable.

#### 5.2 Limitations of the Study

One of the principal limitations inherent in this study pertains to its geographical scope, which is confined solely to Pakistan more specifically to Islamabad and Rawalpindi. Furthermore, the research overlooks demographic differentiations, such as marital status, thus potentially neglecting significant variations in consumer behavior and financial well-being across diverse population segments. Furthermore, this study addresses the entrepreneurship industry and introduces a notable restriction. Moreover, the data was only collected from the incubation centers in the twin cities of Pakistan and was only supported by questionnaires, not by interviews. Consequently, the study's conclusions cannot be generalized to other cultures, regions, and industries within Pakistan.

#### 5.3 Implications:

This study makes theoretical advances by introducing a novel paradigm that illustrates the connection between e-payment technologies, financial well-being, and consumer behavior. The

practical implications of this study are substantial, since they imply that governments and businesses may employ new e-payment technology to enhance financial well-being and consumer behavior

#### 5.4 Direction for future work

Building on the findings of this study, future research should explore this study to other industries like education, hotels, etc. They may also extend this study to collect data from other than incubation-centered small and medium enterprises and online startups as well. Future studies can also target the low-income segment in Pakistan. A comparative study on the adoption of e-payment systems in developing and developed countries could be conducted to identify and address the challenges faced by developing countries in this sector.

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## Appendix 01: Questionnaire

### **The Impact of Income on adoption of E-payment with mediating role of Financial well-being in twin cities of Pakistan.**

#### **Dear Participants,**

Thank you for your valuable time and participation in this research study. The purpose of this questionnaire is to investigate the impacts of new e-payment technologies on income and consumer behavior, with the mediating role of financial well-being in the twin cities of Pakistan. Your responses will contribute to a better understanding of this important topic.

#### **Instructions**

- When answering the questions, please consider the following e-payment methods available in Pakistan:
    - i. Mobile Wallets (e.g., JazzCash, EasyPaisa, UPaisa)
    - ii. Online Banking (e.g., HBL, MCB, UBL)
    - iii. Credit/Debit Cards (e.g., Visa, Mastercard, UnionPay)
    - iv. QR Code Payments (e.g., JazzCash QR, EasyPaisa QR)
  - Please answer all questions to the best of your knowledge and experience.
  - Your responses will be kept confidential and used solely for research purposes.
1. Gender:
- Male
  - Female

2. Name of your Business.

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3. Mode of E-payment

- Mobile Wallets (e.g., JazzCash, EasyPaisa, UPaisa)
- Online Banking (e.g., HBL, MCB, UBL)
- Credit/Debit Cards (e.g., Visa, Mastercard, UnionPay)
- QR Code Payments (e.g., JazzCash QR, EasyPaisa QR)

4. How long have you been in this business.

- 6 months
- Upto 1 years

- 1.5 year
- Upto 2 years

5. Revenues generated per year. (Level of Income).

- 0-1 Million
- 2-3 Million
- 3-4 Million
- Above 5 Million

6. Age

- 18-25 Years
- 26-33 Years
- 34-40 Years
- Above 40 Years

7. Education

- Matriculation
- Intermediate
- Graduate
- Post Graduate



<b>Questions</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
1. My desire to use e-payment is influenced by income					
2. Income Influences me in consuming goods and services using e-payment.					
3. I use e-payment in a well-planned manner according to my income.					
4 Income affects my e-payment balance.					
5. I find e-payments useful in my daily life.					
6. I find e-payments easy to use.					
7. People who influence my behavior think that I should use e-payments.					
8.. I intend to continue accepting the use of e-payment in the future.					
9.. I will try to use e-payment in my daily life.					
10.. I plan to accept E-payments frequently.					
11.. I have enough money for daily expenses.					
12.. I can afford to buy the items I want.					
13. I have a surplus of money at the end of the month.					
14. I have at least three months of savings for emergency.					
15. Using digital payment is economical and am NOT bothered about the 1% commission charged.					

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