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Developing and Validating an Integrated Fintech Entrepreneurial Ecosystem Model in the POST-COVID-19 era for Fintech Startup Success in Pakistan

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Abstract

The rapid rise of fintech, driven primarily through technological innovation, has changed finance (Financial Services) through increased efficiency, new products, and more access to finance. The success of fintech is greatly affected by the quality of their entrepreneurial ecosystem (entrepreneurial culture, access to finance, human capital, market conditions, regulations, support services). The purpose of this study is to assess the impact of these six key components on the success of fintech startups. The study takes an Ecosystem Approach to build a model that explains how these components affect fintech startup success based on data collected from fintech professionals and ecosystem participants via surveys and interviews. The model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). The analysis showed that all six components had a statistically significant and positive effect on the success of fintech startups. The regulatory component, followed by access to finance, showed the greatest positive effect on success. This study builds on prior literature and adds to the growing body of research within the fintech ecosystems by presenting new empirical evidence from an emerging economy, as well as having practical policy implications for developing more successful fintech ecosystems. The findings offer valuable recommendations for policymakers, investors, and entrepreneurs pursuing to promote sustainable fintech development and startup success.

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Keywords: Fintech ecosystem, fintech startups, entrepreneurial ecosystem, startup success, PLS-SEM, financial innovation.

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INTRODUCTION

The FinTech (financial technology) industry is changing the way finance is conducted in both the Pakistan and worldwide by providing traditional financial institutions with advanced digital technologies for their core finance-related functions. The rapid advance of FinTechs over the last decade has caused a significant change in how consumers access financial products and services such as banking, lending, payments, insurance, investment management, and regulatory technology. Not only has the transformation of the financial services sector created substantial opportunities for innovation, but it has also created new imposition of regulatory, operational, and strategic obstacles for the financial services participants. Fintech's relevance is even more pronounced in a post-COVID-19 environment, as the pandemic has accelerated the acceptance of technology-enabled financial solutions; and exposed significant flaws (vulnerabilities) in existing financial infrastructure. In response to these issues, this research seeks to determine the critical success factors (CSFs) for new FinTech startups to sustain themselves in a more complex and rapidly changing environment.

Significance of the Study

The instant growth of fintech has redefined how tourists and local communities access finance, globally, with an emphasis on developing countries, where fintech has an opportunity to increase the overall financial inclusion of individuals and the overall financial efficiency of the economy. In Pakistan, fintech has been a driving force for the overall digital transformation of the financial system and has progressed the most through the creation of digital payment platforms, mobile banking, and online financial services. The retail payment system of Pakistan, according to the State Bank of Pakistan, has recorded impressive increases in recent times, with total retail payments for the year growing to around 9.1 billion in terms of the number of transactions valued at PKR 612 trillion, with approximately 88% of the transactions conducted through digital channels (State Bank of Pakistan, 2025). Therefore, it is reasonable to assume that the accelerated use of digital financial services has demonstrated the increasing use of fintech companies to change the financial infrastructure in Pakistan.

Global Perspective of Fintech Development after COVID-19

The COVID-19 pandemic has made the digital transformation of the financial services industry happen much faster than it would have without the pandemic, and as a result, the adoption of financial technology (FinTech) has skyrocketed. As countries imposed mobility restrictions, lockdowns and social distancing measures to control the spread of COVID-19, both consumers and businesses turned to new digital financial channels such as mobile banking, online payments, digital lending and blockchain-based financial services. This led to FinTech being a major part of the current financial system because it enabled contactless transactions, increased financial access to people around the world and improved operational efficiencies (World Bank, 2021; IMF, 2022).

During the past decade, the global FinTech industry has experienced incredible growth and development. In 2025, the global FinTech market is projected to reach a value of USD 394.9 billion, and by the end of 2034, it will reach a value of USD 1.76 trillion, which represents a compound annual growth rate (CAGR) of approximately 18% (Fortune Business Insights, 2024). Likewise, venture capital investment made in FinTech has also increased significantly. In 2021, the global FinTech funding reached a record USD 113 billion, which is the largest amount for any year; however, the funding level has stabilized since that time (KPMG, 2023). These statistics demonstrate the increased significance of digital technologies, such as artificial intelligence, blockchain, cloud computing and big data analytics, in being instrumental in transforming the way financial services operate and consequently, constructing new digital financial ecosystems.

The US FinTech ecosystem is currently one of the most developed in the world. There are thousands of FinTech startups operating in the US and a significant amount of venture capital being invested into them. The US has also an advanced level of technology infrastructure and an established financial services industry. By 2022, the US FinTech market was valued at over \$4 trillion, as a result of the growth of digital payments, robo-advisors and digital banking (Research and Markets, 2023). On the other hand, China has risen to become one of the leaders in the global FinTech innovation and adoption space, with organisations such as Ant Group and Tencent creating a major digital financial ecosystem based around mobile payments platforms a la Alipay and WeChat Pay that process trillions of dollars annually. With

high smartphone penetration, advanced digital infrastructure and pro-active government policies related to digital finance, China has one of the highest rates of digital payment adoption in the world, with mobile payments being fully integrated in every day economic activities.

The rapid adoption of smartphones, government programs and vibrant startups in India have all contributed to the rapid development of FinTech in that country. The implementation of the Unified Payments Interface (UPI) has significantly increased the number of digital payments and helped facilitate the process of Financial Inclusion. By 2030, India's FinTech market will grow from approximately \$44 billion to \$95 billion (+a compound annual growth rate of 17.5% which makes it one of the fastest-growing FinTech markets in the world) (Deloitte, 2021). India now contains one of the largest FinTech startup ecosystems in the world and ranks among the top countries for the volume of digital payment transactions.

In Bangladesh, the adoption of FinTech has accelerated, particularly through the use of mobile financial service platforms such as bKash which have provided access to these services for millions of people but particularly to those living in rural areas where traditional banking services are lacking (Asian Development Bank, 2022).

Table: 1
Global FinTech Development Indicators

Country	Characteristics	No of FinTech Startups	Major Payment Platforms	Digital Key Indicators	Growth
United States	Mature fintech ecosystem with strong venture capital funding	~8,700+	PayPal, Square	Stripe, Fintech market > USD 4 trillion; global leader in fintech investment	
China	Highly integrated mobile payment ecosystem	~3,000+	Alipay, Pay	WeChat One of the highest fintech adoption rates globally	
India	Rapidly expanding fintech ecosystem supported by government initiatives	~7,000+	UPI, PhonePe	Paytm, Digital payments exceed billions of monthly transactions	
Bangladesh	Emerging fintech ecosystem driven by mobile financial services	~200+	bKash, Nagad	Rapid growth in mobile financial services and financial inclusion	

Sources: Deloitte (2021); IMF (2022); KPMG (2023); World Bank (2021); CB Insights (2023); Asian Development Bank (2022).

Fintech is rapidly changing the global financial services industry, improving efficiency, accessibility and innovation in financial services for consumers and businesses. Fintech start-ups are a vital component of financial innovation through their delivery of disruptive solutions such as digital payments, peer-to-peer lending, blockchain based financial services and mobile banking. Although it is evident that fintech start-ups will play an increasingly important role in driving innovation and economic prosperity, there are still considerable barriers that many of them must overcome including; regulatory uncertainty; insufficient access to financing; lack of skilled labour; inadequate support infrastructure; and ever changing competition. There is a distinct lack of academia that considers the entrepreneurial ecosystem (e.g., institutional,

financial, human, and market nexus relationships) in its entirety rather than just examining each of these individual factors independently.

Most of the empirical studies about fintech ecosystems have been conducted in developed countries because they have mature regulation, capital markets, and technology infrastructure. As a result, there is very little empirical research to show how fintech ecosystem components are associated with the success of startups in developing countries. There is therefore an opportunity to conduct a comprehensive study of the factors that influence the performance of a fintech startup within the context of an entrepreneurial ecosystem. Thus, this research is going to examine the impact of key components of the fintech ecosystem (entrepreneurial culture, access to capital, human capital, market conditions, regulatory framework, support infrastructure) on the success of fintech startups. An integrated model of the fintech ecosystem will be developed and tested in this study to provide an understanding of the determinants of success of fintech startups, while also contributing to the growing body of literature on fintech ecosystems.

Based on the identified research gaps—particularly the lack of an integrated fintech ecosystem framework and limited empirical evidence on fintech startup success in Pakistan—this study proposes the following research questions:

- a) What are the key entrepreneurial ecosystem factors influencing the success of fintech startups in Pakistan?
- b) How do institutional, financial, cultural, infrastructural, human capital, and market conditions collectively shape fintech startup success within the Pakistani fintech ecosystem?

LITERATURE AND HYPOTHESIS DEVELOPMENT

History of Fintech

The Term Financial Technology or well-known "fintech" has been witnessed in the 1950s, and kept transforming over period of time however, it was formally introduced in the financial market owing to consortium namely "Financial Services Technology Consortium," of citycorp (now city group) led by Abrahams and Singh associated with Citicorp, in the early 1990s. The FSTC was aimed to explore as how the technology can be utilized in the financial industry (Arner et al., 2016). The Evolution of Financial Technology (Fintech) has had an entire history, which has been formed by both advancements in technology as well as financial theories. History of PayPal and a Financial Technologist by Keith C. Decker. As events have passed, Financial Technology has gone through multiple stages of Evolution all impacted by the development of ideas and theories as well as advancements in technology.

The foundation of Financial Technology (Fintech) was constructed in the Pre-digital Era (pre-1970) through the theoretical development of finance. Markowitz (1952) developed the concept of diversification in Portfolio Theory to assist investors in achieving optimal risk-return ratios. Fama (1965) also presented a theory using the Efficient Market Hypothesis (EMH) that explained how markets utilize the information available to make asset prices. During the pre-digital period, banks were beginning to use the first generation of computers (mainframes) to automate their accounting and record keeping. The Early Digital Era (between 1970-1999) was the first time the Financial System began utilizing Electronic Financial Systems as an improvement to the efficiency of financial markets. The first electronic stock exchange was created in

1971 with the formation of the NASDAQ, which created fast and reliable trading. The Black-Scholes (1973) Options Pricing Model developed financial derivatives and algorithmic trading markets. The development of Electronic Banking, Automated Wire transfers (SWIFT), and Automated Transaction Machines (ATM) took a Financial Technology Step-change in payment processing from a domestic focus to a Global focus.

Between 1999-2008, we experienced another step change in the Electronic Banking and Digital Financial Services (DFS). The internet allowed for online banking and Digital Financial Services, and as a result of the creation of PayPal and other companies, they created the infrastructure that allowed for the safe and secure electronic payment system. During the internet era, most of the focus on Financial Research centered around Cyber Security, Cryptography, and Electronic Trading Systems, including High-Frequency Trading. Following 2008 global financial crisis, fintech innovation accelerated with emergence of blockchain and cryptocurrencies, particularly Bitcoin (Nakamoto, 2008). New models such as peer-to-peer lending and mobile payment systems expanded financial access. In the post-COVID-19 era, fintech is driven by artificial intelligence, big data analytics, and decentralized finance (DeFi), transforming financial services through enhanced automation, efficiency, and financial inclusion.

Historic development of Fintech

SNO	Period		Major Developments	Contribution	Contributors/Players
1	Pre-Digital (Pre-1970s)	Era	Introduction of quantitative finance and computation in banking	Portfolio diversification theory, Efficient Market Hypothesis, mainframe computers for banking operations	Markowitz (1952); Fama (1965); Early banking mainframe systems
2	Early Digital (1970s–1990s)/ Fintech 1.0	Era	Addition of automation and e-financial system	Electronic stock exchanges, options pricing models, global payment messaging systems, ATMs	NASDAQ (1971); Black & Scholes Model (1973); SWIFT (1973); ATM networks
3	Internet (1990s–2008)/Fintech 2.0	Era	Online Banking and E-commerce	Online banking, digital payments, electronic trading platforms, high-frequency trading	PayPal (1998); Amazon; eBay; Algorithmic & HFT trading
4	Post-Crisis (2008–2019)/ Fintech 3.0	Era	Growth of fintech and financial innovations (decentralized) after financial crisis	Blockchain technology, cryptocurrencies, peer-to-peer lending, mobile payments for financial inclusion	Bitcoin & Blockchain (Nakamoto, 2008); LendingClub; Zopa; M-Pesa
	Post-COVID-19 Era (2020–Present)		Integration of advanced technologies in financial services	Artificial intelligence in finance, robo-advisors, big data analytics, decentralized finance (DeFi), digital currencies	Betterment (robo-advisor); Ethereum-based DeFi; MIT Digital Currency Initiative

HYPOTHESES DEVELOPMENT

Regulatory Framework (RF)

The environment regarding laws, regulation, and institutions is an important element for startup success and is considered a key factor impacting the evolution of a fintech

ecosystem. The formal rules in which the fintech sector operates (e.g., the laws, the regulatory environment, and the government policies) have a considerable influence on the way that fintech startups operate. More specifically, the formal rules affect how easily fintech startups can enter the market, innovate and create investor confidence in their businesses through regulatory sandboxing, innovation hubs, or being an authorized digital bank.

The role of institutions in the entrepreneurship ecosystem concept is to unify the interaction among regulatory authorities, investors, and businesses and to, to engage through collaboration techniques, has a direct impact on the types of businesses, investors, and/or investors that will eventually agree to collaborate in different types of business activity, resulting in higher levels of entrepreneurial success or failure (Stam & van de Ven, 2018). This relationship is demonstrated by evidence from various regions throughout the world, such as Singapore, Africa, and Europe where fintech innovations and startup activity have been very successful as a result of a higher level of collaboration and cooperative alignment by governments (Alaassar et al., 2022; Molla & Avital, 2023).

H1: Regulatory Framework positively influences fintech startup success.

Financial Architecture (FA)

The availability of funds for businesses is one of the keys to a successful entrepreneurial ecosystem and also affects whether fintech companies grow or continue to exist. Fintech businesses usually require large amounts of cash to build their technology platforms, protect against cyber attacks, and operate within these laws and regulations. Financial institutions and other investors can provide the capital they need through venture capital, angel investors, crowdfunding, and also through government grants and/or programs (Audretsch & Belitski, 2017; Cumming & Schwienbacher, 2018). In addition, fintech ecosystems typically consist of complex systems of investors, technology companies, banks, and fintech companies, and all of these entities facilitate the movement of capital into and out of these businesses and provide for the passing of knowledge from one entity to another. The role that these systems provide for supporting the growth of entrepreneurs and technological innovations is critical (Campanella et al., 2023; Markose, 2025).

H2: Financial architecture positively influences fintech startup success.

Entrepreneurial Culture (EC)

An entrepreneurial culture is a collection of community values, belief systems, and customs that encourage the creation of new products or services (i.e., entrepreneurship), as well as taking risks and seeing opportunities to create something new. When there is an entrepreneurial culture in a community, it helps to foster experimentation and create opportunities for innovative startups to emerge. Communities that have a culture that supports entrepreneurship and tolerates business failure tend to have higher rates of startup creation and innovation (Isenberg, 2011; Stam, 2015).

Furthermore, research conducted on the development of fintech ecosystems has shown how the entrepreneurial culture interacts with institutional conditions and market demand to provide a supportive environment for fintech innovation (Schilirò, 2025).

H3: Entrepreneurial culture positively influence fintech startup success.

Support Infrastructure (SI)

Entrepreneurial ecosystems contain a vital element composed of support structures and middlemen known as support infrastructure or intermediaries, such as acceleration and incubation programs, innovation hubs, fintech labs, consulting firms, as well as professional services that support startups in their development by delivering mentoring, technology, network connections, and regulatory advice needed to help early-stage ventures grow (Spigel, 2017; Stam & van de Ven, 2018). For these reasons, a strong support system facilitates access to resources through entrepreneurial learning and ultimately leads to entrepreneurial success by accelerating the growth of startup companies in the fintech industry.

H4: Support infrastructure positively influence fintech startup success.

Human Capital (HC)

The development of human capital is critical to the technological advancement and innovativeness in fintech ecosystems and has unique skill sets necessary for the creation of competitive financial technologies and innovative business models through collaboration and sharing of knowledge from different disciplines (Becker, 1964). Evidence shows that having various workers that possess the requisite competencies within an organization increases the likelihood of using fintech, increasing service innovation, and promoting organizational growth. (Alaassar et al., 2022; Markose, 2025). Further, the research institutes, universities and knowledge hubs contribute to entrepreneurial ecosystems by breeding knowledge spillovers and developing skilled talent pools. These knowledge systems enrich innovation proficiencies and strengthen fintech startup performance (Campanella et al., 2023; Audretsch & Belitski, 2017).

H5: Human capital positively influences fintech startup success.

Markets Conditions (MC)

Market accessibility and strong entrepreneurial networks are key drivers of fintech startup growth. Increasing demand for digital financial services, mobile payments, digital lending, and blockchain-based applications creates significant opportunities for fintech startups to scale rapidly. The digital transformation of financial services has expanded market opportunities and increased consumer adoption of fintech solutions (Philippon, 2016; Campanella et al., 2023). Recent ecosystem research further highlights that domestic demand, talent availability, and collaborative networks collectively drive the development and performance of fintech ecosystems.

H6: Markets conditions positively influence fintech startup success.

RESEARCH METHODOLOGY

Research Design

The components of fintech ecosystem have been scrutinize based on theoretical analysis and thereafter, a panel of expert comprised of five members such as three industry experts and two academicians was constitute to short the most relevant factors to be considered ecosystem in the context of Pakistan. Finally, the six components were shortlisted. Thereafter, a comprehensive questionnaire was designed to collect the responses from the senior management of fintech startups in Pakistan. Therefore, the quantitative research design was followed for empirical validation of the ecosystem.

Population and Sampling

Population: The senior management of Fintech startups operating in Pakistan was taken as population. Then data collection instrument was circulated using the purposive sampling. Consequently, data of 150 sample was collected.

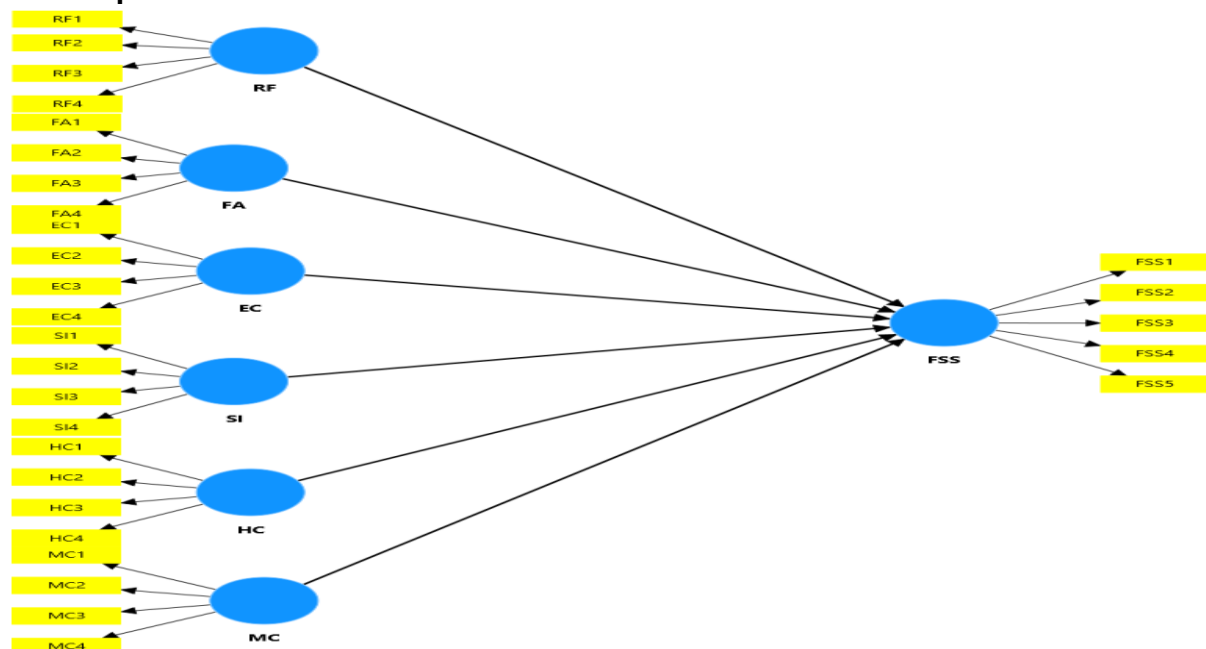
Data Collection

The self-administrative questionnaire was designed for data collection. Since the ecosystem components were taken on expert opinion of panel of experts, therefore, validation of the questionnaire was also made through the same panel. Further, reliability and validity was also tested through pilot testing taking the initial sample of 25 respondents. The questionnaire was then allowed for wider circulation. The items of constructs were prepared based on Likert-scale with 05 option.

Data Analysis Technique

The data analysis was performed using the Structural Equation Model using Smart Pls 4. Fintech Success was taken as dependent variable, whereas, the six components viz-a-viz were taken as independent variables. The model framework is given in the table below.

Conceptual Framework



Source: Conceptual model designed based on theoretical analysis.

RESULTS AND INTERPRETATIONS

Reliability of the data

Table 4.1 shows the reliability of data, the findings illustrate that the measurement model has acceptable reliability and convergent validity, since the value exceeds 0.7 threshold following the guidelines of Joseph F. Hair Jr. et al. (2022). Each construct has met acceptable minimum values for Cronbach's Alpha, Composite Reliability, and Average Variance Extracted, since the value exceeds 0.5. Consequently, each indicator is a reliable representation of its construct and allows for continued analysis of discriminant validity and evaluation of the structural model.

Table 1.
Reliability of the data

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	Result
EC	0.741	0.741	0.758	0.647	Reliable
FA	0.747	0.752	0.762	0.662	Reliable
FSS	0.782	0.782	0.786	0.733	Reliable
HC	0.737	0.743	0.756	0.646	Reliable
MC	0.746	0.748	0.761	0.658	Reliable
RF	0.751	0.756	0.765	0.672	Reliable
SI	0.748	0.757	0.763	0.668	Reliable

Indicator reliability Outer loading

The outer loading represents the indicator reliability of the measurement as suggested by Joseph F. Hair Jr. et al. (2022). It exhibits the depth of the affiliation between observed indicators and latent constructs. The results of table 4.2 shows since the loadings exceeds 0.70, and that the construct reliability is also more than 0.70, therefore, measurement model satisfies the criteria of reliability of indicator, convergent validity and all construct measures can be viewed as valid indicators of the dimensions of the fintech ecosystem, therefore the next steps can be to evaluate the structural model.

Table 2.
Outer loading of constructs

	EC	FA	FSS	HC	MC	RF	SI
EC1	0.726						
EC2	0.731						
EC3	0.713						
EC4	0.716						
FA1		0.731					
FA2		0.724					
FA3		0.737					
FA4		0.718					
FSS1			0.764				
FSS2			0.766				
FSS3			0.770				
FSS4			0.768				
FSS5			0.761				
HC1				0.728			
HC2				0.709			
HC3				0.711			
HC4				0.728			
MC1					0.716		
MC2					0.739		
MC3					0.731		
MC4					0.722		
RF1						0.727	
RF2						0.739	
RF3						0.735	
RF4						0.735	
SI1							0.723
SI2							0.723
SI3							0.737
SI4							0.743

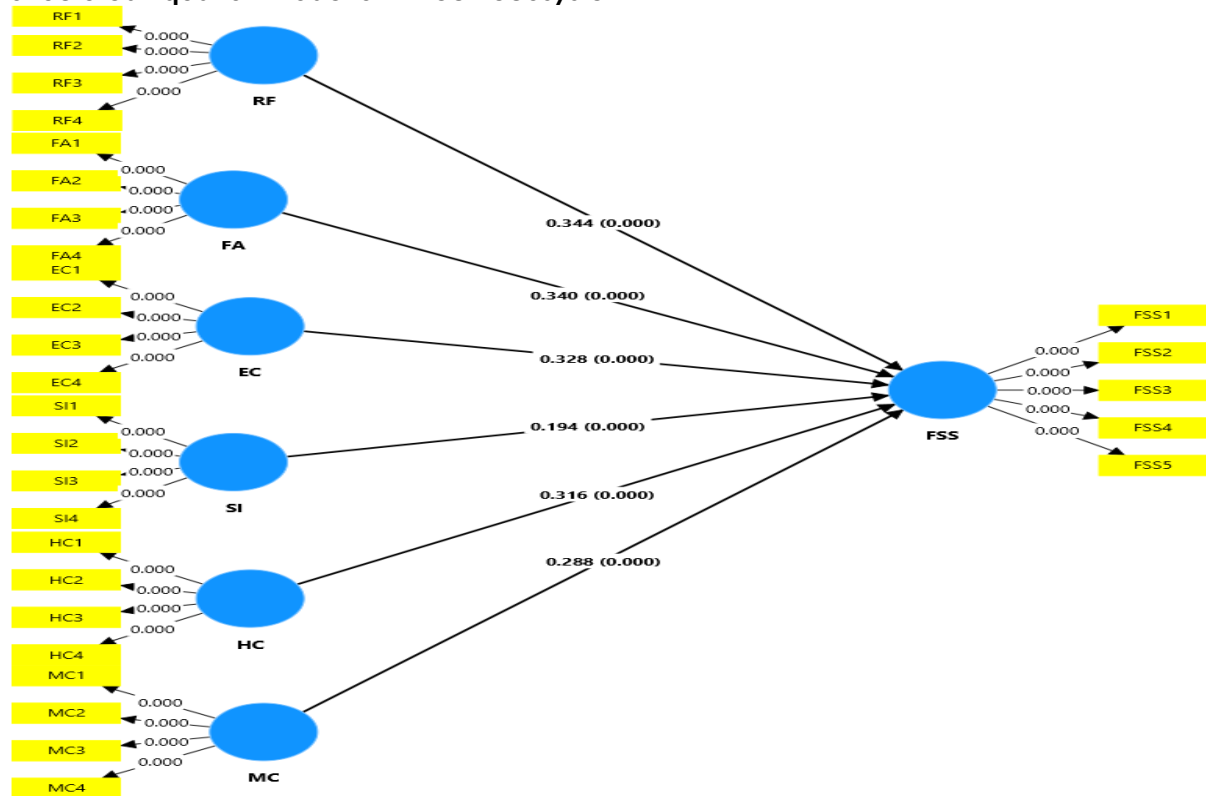
Table 3.
Coefficients of Structured Equation Model of Fintech ecosystem

	Coefficient	Sample mean	Standard deviation	P values	Result
EC -> FSS	0.328	0.328	0.032	0.000	Significant Positive

FA -> FSS	0.340	0.339	0.038	0.000	Significant Positive
HC -> FSS	0.316	0.316	0.037	0.000	Significant Positive
MC -> FSS	0.288	0.288	0.039	0.000	Significant Positive
RF -> FSS	0.344	0.345	0.045	0.000	Significant Positive
SI -> FSS	0.194	0.194	0.033	0.000	Significant Positive

Figure 1.

Structured Equation Model of Fintech ecosystem



INTERPRETATION OF THE RESULTS

The results of the SEM as depicted in above table and graph support conceptual link between fintech ecosystems components and the success of fintech startups. Entrepreneurial culture (EC) has significant positive effect on the success of fintech startups ($\beta = 0.328$; $p < .001$), indicating that a strong entrepreneurial culture endorsing innovation, risk, and opportunity recognition plays an important role in helping to foster both the development and sustainability of fintech companies. (Isenberg, 2011; Stam, 2015) have shown that entrepreneurial culture positively influences the capacity for innovation and the success of startup ventures within entrepreneurial ecosystems. Fintech startup success shows strong support for the idea that access to financial resources has a significant impact on start-ups, with the financial resources predicting three different sources of equity financing ($\beta=0.340$, $p<.001$). Venture capital, angel investors, and other forms of financing can be used by start-ups to fund development of their technology and regulatory compliance, thereby allowing start-ups to expand into the market. This finding confirms earlier studies (Cumming & Schwienbacher, 2018) that have demonstrated that financial capital is an important driver of innovation in the fintech space and has an effect on the growth of entrepreneurs.

Further, the result shows that human capital are critical for the success of fintech start-ups ($\beta=0.316$, $p<.001$). The skilled professionals, expertise, and knowledge resources in the market directly affects the capacity of fintech firms. The results are consistent with Becker's (1964) theory of human capital and (Audretsch & Belitski, 2017) that talent and knowledge systems are critical elements in the development of an entrepreneurial ecosystem

Market conditions also have significant effect on the success of fintech start-ups ($\beta=0.288$, $p<.001$). Access to market conditions are conducive to growth in consumer demand for digital financial services and business networks positioned to support positive growth provide funding opportunities for fintech start-ups to expand and compete effectively. This finding supports prior research in the fintech ecosystem that was used to study how market conditions and consumer demand shape innovation and growth within the fintech ecosystem (Lee & Shin, 2018).

The regulatory framework of the ecosystem has had the most significant impact on the success of fintech startups ($\beta = 0.344$, $p < .001$). Regulatory clarity helps mitigate uncertainty and increase investments into entrepreneurship within the fintech sector. Prior research has shown evidence of the role of regulatory support for fintech ecosystems (Arner, Barberis, & Buckley, 2016).

Lastly, support infrastructure has a positive and statistically significant impact on fintech startup success ($\beta = 0.194$, $p < .001$). The results indicate that incubators, accelerators, and innovation hubs play a crucial role in promoting the development of startups through provisions of mentorship, technical expertise, and connections that help overcome startup challenges. The results support research on the role of support infrastructure in entrepreneurial ecosystems (Spigel, 2017; Stam & van de Ven, 2018).

CONCLUSION AND RECOMMENDATION

Conclusion

This study concludes that fintech startups succeed using multiple ecosystem dimensions such as: institutional, financial, human, and market factors. Therefore, the results provide support for the entrepreneurial ecosystem view, which suggests that successful entrepreneurial outcomes are generated through active interactions among many diverse ecosystem components and not through distinct ecosystem components.

RECOMMENDATIONS AND POLICY IMPLICATIONS

As per the empirical study findings of this research proposed recommendations for policymakers, fintech entrepreneurs, investors and others playing a role in the ecosystem. The findings show that the success of a fintech startup may be caused by multiple factors, including; entrepreneurial culture, access to finance, human capital development level, market conditions, regulatory framework and support infrastructure, making it crucial to continue working at enhancing these components of the ecosystem to build sustainable fintech innovation.

- The supportive and flexible regulatory environment is critical. The State Bank of Pakistan should create policies and programs which support innovation at fintech companies while ensuring financial stability is maintained.
- The financial industry and government should work collaboratively to develop more funding options for fintech startups through potential sources like venture

capital funds, angel investor networks and fintech-focused investment funds or public-private partnerships.

- Education and Training Institutes need to provide courses/programs related to fintech within their curriculum through the development of partnerships with fintech firms.
- The financial technologies, artificial intelligence, , and blockchain are influenced by cooperation between educational institutions and business sectors; in particular, these relationships shall enhance the Knowledge and Technology Transfer and produce the highly skilled professionals to drive innovation within Fintech.
- Entrepreneurial activities can be boosted through initiatives of both governmental agencies and the business sector such as the provision of innovation grants to innovative companies, the establishment of competitions for entrepreneurs wishing to launch new ventures; the provision of mentorship programs which will facilitate entrepreneurship and foster Fintech innovation and encourage new venture development.
- Funding for innovative Fintech hubs, incubator programs, and accelerator programs can provide start-ups with resources including : mentorship; technology; and/ or networking opportunities; furthermore, such support systems can help Fintech start-ups to overcome the challenges associated with launching a company and expedite their development.
- Policymakers can stimulate the growth of the Fintech ecosystem by supporting digital financial inclusion through expanding access to digital payments, promoting the use of mobile banking, and supporting the use of financial technology; as a result, increased consumer knowledge of and confidence in digital financial technologies will lead to faster growth of the Fintech ecosystem.

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