

## FOREIGN DIRECT INVESTMENT AND FINTECH SECTOR GROWTH IN INDIA

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### ABSTRACT

The paper at hand is concerned with the connection between the Foreign Direct Investment and the development of the FinTech industry in India throughout 2015-2025. The study relies on secondary information and a quantitative research design to examine the significance of foreign investment in some of the pointers to the FinTech development in India. The study variables are the Foreign Direct Investment inflows, UPI transaction value, GDP growth rate, internet penetration, FinTech funding and number of FinTech startups. These variables have been selected to determine the investment climate as well as overall growth trend of the Indian digital financial ecosystem. The methodology of the research is descriptive statistic, correlation analysis and regression analysis. Descriptive statistics were applied to learn about the general behaviour and distribution of the variables throughout the study period. Correlation analysis was used to analyse the extent and direction of correlation between FDI and selected FinTech growth indicators. Regression analysis was also used to analyze the effect of FDI on FinTech funding in India. The hypothesis that was tested in the study was whether or not Foreign Direct Investment has a significant impact on FinTech funding.

The results of the study show that Foreign Direct Investment has a positive link with important measures of FinTech development such as the value of transactions on a UPI, and the number of FinTech startups. However, the results of the regression indicate that FDI does not exert any statistically significant effect on FinTech funding, as the p-value is 0.228, which is higher than the level of significance. The R-squared value of 0.157 is also indicative that FDI explains a limited part of the variation of FinTech funding. Based on these results, the null hypothesis is accepted and the alternative hypothesis is rejected. The study concludes that while FDI and FinTech growth have a positive movement in the larger Indian context, Foreign Direct Investment is not a significant standalone determinant of FinTech funding during the study period. It appears that the evolution of the FinTech industry in India is influenced by a variety of digital penetration, maturation of the startup environment, and the overall technological and economic environment. The research contributes to the body of literature on intersection between foreign capital and digital financial development in India and future research opportunities based on broader variables and industry-specific data about investment.

**Keywords:** Foreign Direct Investment, FinTech, India, FinTech Funding, Digital Payments

### 1. INTRODUCTION

One of the most significant factors in economic developments of both developed and developing nations has been the Foreign Direct Investment (FDI). The countries in a more global world are also seeking foreign capital with the aim of getting the funds as well as the

more broadly based benefits that accompany such capital - technology transfers, managerial knowledge, innovation, market penetration and productivity. For emerging economies like India, FDI has contributed significantly in supporting industrial growth, developing the infrastructure, providing better employment opportunities and linking the domestic economy with the external world. Over the years, India has adopted various liberalization and policy reforms to attract foreign investment into different sectors of the economy in making it one of the major destinations of international capital inflows. At the same time, India has experienced a swift change in the financial system with the technological advancement and digital innovation. The advent of Financial Technology, often known as FinTech, has made a massive impact on the way financial services are produced, delivered and consumed. FinTech is a broad term that is used to refer to the use of technology to improve and automate financial services to ensure they are faster, more accessible, more efficient, and more customer-oriented. The FinTech sector includes digital payment solutions, online lending solutions, wealth management solutions, insurtech, regtech, blockchain based solutions and other technology based financial services. The evolution of this industry has changed the classic model of financial intermediation and has created new opportunities of innovations, competition, and financial inclusion.

India is a very dynamic FinTech development market. The high population, the rapid use of smart phones, the improved internet connectivity, the productive government programs and the transition towards the desire to engage in digital transactions have seen the FinTech Ecosystem in the country grow. Within recent years, India is one of the most active markets regarding digital financial innovation. The expansion of the digital payments infrastructure and, in particular, Unified Payments Interface (UPI) has transformed the payment infrastructure in the nation and turned India into an international standard of the scalability of digital transactions. Together with this, the rise in the number of FinTech startups and influx of investments into digital financial projects are also signs of the growth in the role of the sector in the national economy. All these changes imply that FinTech is no longer a periphery of the financial system, but a continuous and significant support of financial modernization and online economic development. In this context, the role of Foreign Direct Investment will be especially topical. FDI may be used as an agent of FinTech development in terms of growth capital, strategic alliance, the use of sophisticated digital technologies, and improvement of business operations by international experience. Foreign investors can also come with their own knowledge of operation, their technological power, regulatory experiences and international market networks as well as funds. Such contributions could be particularly applicable in such a technology-intensive industry as FinTech, where businesses need to be constantly innovative, scale, improve cybersecurity, and develop products to remain competitive. Thus, the foreign capital may affect the sector both directly and indirectly, by financing it and indirectly via the creation of the ecosystem.

Nevertheless, FDI and FinTech development might not be as straightforward as this relationship implies. Although more foreign investment can offer the resources to grow, the factual growth of the FinTech sector could also be dependent on a number of other factors including internet penetration, digital infrastructure, regulatory support, consumer adoption, the general macroeconomic conditions, etc. In India, the emergence of UPI payments, the development of FinTech startups and the redistribution of the FinTech resources over the course of time demonstrate the industry as an object of a complex of technological, economic and institutional factors. It means that, though it is possible that FDI is the part of the FinTech ecosystem development, the impact of FDI can vary in different growth indicators and at different time frames. The relevance of examining this relationship has been increased by the

fact that the Indian FinTech industry is expanding when the digital transformation process is gaining prominence as a priority economic strategy. What triggers sustainable growth of FinTech has become the subject of interest to policymakers, investors, researchers, and financial institutions. In case it is established that FDI has a positive impact that is highly positive, this would serve as the rationale to take additional policy actions so that to bring in the foreign investment in technology-enabled financial services. Conversely, when some of the indicators have weak or statistically non-significant relationships, it would imply that FinTech development in India is being stimulated by domestic demand, public digital infrastructure, and internet accessibility and internal ecosystem development to a larger degree and external capital to a lesser degree on its own. These findings are significant because it helps in differentiating sectoral expansion driven by inflow of investment and sectoral expansion driven by structural adoption of digital.

The particular correlation under investigation in the present paper is the connection between the Foreign Direct Investment and the development of the FinTech sphere in India since 2015 and up to 2025. The pioneers of the research have anchored the research using secondary data and they have estimated the variables namely FDI inflows, UPI transaction value, FinTech funding, FinTech startups, GDP growth and internet penetration. These variables provide a quantifiable point upon which the influence of changes in foreign investment can be established in relation to the changes in the growth of FinTech sector. It is especially pertinent to include UPI value and startup growth since they indicate digital transaction growth as well as the development of an entrepreneurial ecosystem which is a valuable aspect of FinTech development in India. Similarly, FinTech funding offers an indicator of the capital flow into the sector and GDP growth and internet penetration help to understand the broader economic and technological context in which the sector is evolving. The need for this study is also due to the gap in the existing work. Much of the previous literature has focused on FDI in relation to economic development as a whole, to industrial development, or to the financial sector performance in general. Similarly, the FinTech studies have been focussed on Innovation, Digital payments, Financial inclusion and Regulation. However, not much focus has been put on the direct relationship between FDI and FinTech growth in the Indian context with the help of measurable sector-specific indicators. As India has become one of the world's fastest growing digital financial markets, there is a great need to explore whether the foreign capital is playing a significant role in this growth or whether the growth element in this sector is being impelled by other domestic factors.

## 2. LITERATURE REVIEW

The research on Foreign Direct Investment and development of the financial sector has been very consistent in pinpointing the importance of external capital in promoting growth, technological improvement and institutional fortification. Simultaneously, the current research on FinTech has highlighted the disruptive nature of digital innovation to remake financial services, make them more efficient, and become more financially inclusive. Nevertheless, the nexus between FDI and FinTech growth remains not properly studied, particularly in the Indian context, despite the fact that both streams of researches are well-developed in isolation. The current research, thus, utilizes both sources to learn about the possible correlation that foreign investment can bear on the expansion of Indian FinTech industry.

Alfaro, Chanda, Kalemli-Ozcan and Sayek examined the correlation between FDI and economic growth and asserted that the benefits of growth on FDI are highly dependent on the extent of financial market development in the host country. They found that foreign investment generates better positive outcomes when the economy receiving them is well

developed in its financial system in order to allocate resources well and absorb technological spillovers. This contribution is significant because it implies that the effectiveness of FDI does not ensue, but it depends on the domestic financial preparedness. Within the frame of the given research, the given argument is particularly relevant because the changing state of the FinTech environment in India can be perceived as a continuation of the maturity of the financial sector, which may contribute to or restrict the advantages of foreign investment.

Hermes and Lensink also accentuate the mediating role of the financial development in the FDI-growth nexus. Their comparison of the developing countries has shown that FDI can only contribute to the growth of the developing countries positively when they have sufficient financial infrastructure in the host economies. The less developed countries had less financial systems capable of transforming inflows of foreign capital into productive growth. The current study gives a better rationale to the fact that the relationship between capital flows and financial development is two-way. In the case of the investigation of the FinTech industry of India, it provides an excellent theoretical foundation to examine the possibility of any correlation between the increase of digital financial services and broad capital inflows.

Azman-Saini, Law, and Ahmad generalized this argument and indicated that the effect of FDI on economic growth is not significant until the point when a country has reached certain level of financial development. Their work is suggesting that the returns of foreign investment are non linear and that there are institutional and financial capacities that have to reach some level so that FDI can generate developmental returns that are measurable. This knowledge applies to the current study because the digital financial environment in India and particularly with the level of internet penetration and development of digital payment platforms may have matured to the point where FDI can have a more constructive engagement with sectoral growth.

The contribution that Iamsiraroj contributed to the broader literature on FDI was the fact that the impact of FDI on growth is often positive, however it is determined by the absorptive capacity, openness and quality of the institutional infrastructure of the host country. The research stressed the fact that it is no use in having foreign capital unless the domestic mechanisms can put it to good use. This confirms the view that the development of the FinTech industry in India can be not only reliant on the rate of FDI but also on the availability of such facilitating factors as digital preparedness, support of startups and technology-based financial products acceptance among consumers. Borensztein, De Gregorio and Lee focused on the technology transfer aspect of FDI and concluded that foreign investment is a source of growth more than domestic investment in host countries with sufficient human capital. Their study emphasized the function of FDI as a means of knowledge, managerial capability and productive technologies transfer. This is especially true in relation to FinTech as a sector, which is led by digital platforms, innovation and the ability to adapt to new technology very quickly. In the Indian setting foreign investment may therefore be important, not only as financial input, but also in the form of speeding up technological modernization in the field of financial services.

Alfaro, Kalemli-Ozcan, and Volosovych studied the wider factors that determine international capital flows and concluded that institutional quality, governance standards, and financial development play an important role in the decision to invest in a foreign country. Their findings suggest that capital is likely to find its way to countries that offer supportive financial and regulatory environments. This is very relevant to the FinTech landscape in India where policy support, digital public infrastructure and increasing internet penetration can be expected to increase the attractiveness of the sector to foreign investors. A second, large body of literature is on FinTech and digital finance.

Gomber, Koch and Siering offered an important review of FinTech research and defined FinTech as a force transforming financial services through innovation in banking, payments, lending and investment management. Their analysis highlighted the factors affecting FinTech growth as technology adoption, changes in regulation, and investment support. This research is significant for the current research because it explains that one of the structural enablers of FinTech expansion is the availability of capital.

Thakor looked into the evolving nature of the relationship between FinTech and banking, and suggested that financial innovation based on technology is reshaping the pattern of competition, efficiency and intermediation in the financial world. The study highlighted that FinTech can reduce operational costs, increase accessibility and open up new options for service delivery, however it also presents regulatory and risk management issues. For the present study, this view is important because it demonstrates that sectoral growth is influenced not only by the inflow of capital, but also by the effectiveness of the ecosystem in absorbing innovation effectively.

Boot, Hoffmann, Laeven and Ratnovski discussed what is structurally new and what is continuous in FinTech-led financial transformation. Their work emphasized the core of innovation, governance, and institutional adjustment to sustainable development of FinTech. They claimed that digital finance makes competition and inclusion more common but innovation and regulation will have to be balanced to achieve sustainability in the long term. This has relevance in India, where FinTech growth has been happening in conjunction with the evolution of the regulations, public digital infrastructure and surge of investor interest.

Lee and Shin focused on the FinTech eco-system and identified the major players involved, such as startups, regulators, traditional financial institutions, customers, and investors. They emphasized in their work that capital providers are the key to scaling FinTech projects and ensuring innovation. This study is directly related to the current research as it supports the argument that funding and investment are important to FinTech growth and as such, foreign capital could have a meaningful impact on sectoral outcome.

Philippon investigated the potential of FinTech efficiency and stated that digital innovation has the potential to lower the cost of financial intermediation and increase market efficiency. Although the study stated that the real efficiency gains may not be the same in all contexts, it stressed the need for investment in technological modernization for FinTech to realize its potential. This insight is in support of the present study's focus on how capital inflows may interact with digital financial growth.

Ozili researched digital finance and financial inclusion and discovered that technology-based financial services have the potential to greatly support access to finance by reducing transaction costs, and by extending service delivery to underserved groups. The importance of policy and regulatory assistance in making sure that digital finance is developed in a stable and inclusive manner was also emphasized in the research. In India where UPI and digital payment systems have increased access and convenience significantly, this literature is useful in explaining why the growth of FinTech may be driven by both technology adoption and institutional support.

Frost, Gambacorta, Huang, Shin, and Zbinden examined the role of digital platforms and BigTech in financial intermediation and found that digital ecosystems can help increase efficiency, access, and introduce new competitive pressures in the financial sector. Another significant point in their study was the growing global nature of digital finance including international investment and integration. This view is of relevance to the current research in the extent that it interconnects the digital financial transformation with the capital flow

dynamics at large. The literature is also filled with research that links the diffusion and investment in technology.

Keller demonstrated that international capital flows can be instrumental in spilling over technology from one country to another and boosting productivity in host countries. This is in favor of the argument that the foreign investment in a technology driven financial sector like FinTech, may hasten innovation, skill development and efficiency in operation.

Aghion, Howitt and Mayer-Foulkes posited that financial development is conducive to convergence and technological advancement, supporting the view that the digital financial ecosystems may boost the ability of an economy to take advantage of outside capital.

Law and Singh brought a note of caution to the argument by stating that over-expansion of money may not necessarily have a positive impact on growth. Their work seems to imply that it is not only the amount of financial expansion that matters but the quality and balance of financial development. This is pertinent to FinTech as well, given that rapid growth in the digital financial sector without proper governance or sustainable funding structures could lead to instability in the sector and lessen the progress achieved in the long term.

The research itself on digital lending and platform finance, such as Tang, and by Buchak, Matvos, Piskorski, and Seru, showed that FinTech platforms can transform the character of financial intermediation radically: by improving access, efficiency, and disintermediation of traditional institutions. These papers indicate that FinTech is not a technological complement to finance, but rather a structural force that has the potential of shaking up the industry. Such insights are useful for putting in context the focus of the present study on measurable growth indicators of FinTech such as transaction value, startup expansion and sectoral funding.

### 3. DATA ANALYSIS

The present study is based on secondary data and analysed using descriptive statistical technique from the period 2015 to 2025. The variables that were taken into the dataset were Foreign Direct Investment in USD million, UPI transaction value in lakh crore, GDP growth rate, internet penetration and FinTech funding in USD billion and number of FinTech Startups. These statistics give a preliminary knowledge about the behavior of the variables prior to applying correlation & regression analysis.

**Table 1 Descriptive Statistics of the Study Variables**

Variable	Count	Mean	SD	Min	25%	Median	75%	Max
FDI Inflows	11	73778.91	11631.64	55559.00	61487.50	80615.00	83000.00	85000.00
Volume of Transactions	11	85.26	96.73	0.00	3.00	41.00	152.50	260.56
GDP Growth	11	5.51	4.40	-7.30	6.50	6.70	7.05	8.70
Internet Usage	11	48.73	16.30	25.00	35.00	50.00	62.50	70.00

Fintech Sector Inflows	11	3.17	1.94	1.50	1.95	2.50	3.40	7.80
Fintech Startups	11	5045.45	4996.87	500.00	1500.00	3000.00	6500.00	14500.00

The descriptive statistics results show that the average annual FDI inflow achieved in the period of study was 73,778.91 USD million with a minimum and maximum of 55,559 and 85,000 USD million respectively. This shows that India received a lot of foreign investments during the period under study even though the variance across years is also noticeable from the standard deviation of 11,631.64. The median value of 80,615 USD million indicates that FDI remained rather high in the later years of the period. The UPI transaction value reveals extremely swift growth throughout the study period. Its mean value is 85.26 lakh crore with values varying from 0.00 to 260.56 lakh crore. The high standard deviation of 96.73 indicates a lot of variation and that there is a lot of growth in the activity of digital transactions over time. This implies that India's digital payments ecosystem grew substantially during the selected period.

The data on GDP growth rate showed the mean of 5.51 percent, the minimum and maximum variables were -7.30 percent and 8.70 percent respectively. This change is an indication of bigger fluctuations in the economic performance of the study period. Internet penetration measured an average of 48.73 percent from a minimum of 25 percent to a maximum of 70 percent, which measures a progressive improvement in the digital access and technological readiness in India. FinTech funding had an average value of 3.17 USD billion, a minimum of 1.50 USD billion and a maximum of 7.80 USD billion. Although the sector received a significant flow of funds in the period, the standard deviation at 1.94 represents the volatility of annual investments. Similarly, the number of the FinTech startups recorded a mean of 5,045.45, varying between 500 and 14,500. The high standard deviation of 4,996.87 shows huge growths and expansions in the start-up ecosystem over the years.

### CORRELATION ANALYSIS

Correlation analysis is adopted in this work to analyze the extent and direction of association between the Foreign Direct Investment and selected indicators of the India's FinTech growth. It helps in understanding whether the variables are moving together in the positive direction, in the negative direction or weakly over the study period from 2015 to 2025. In current study, correlation coefficient is calculated between FinTech funding, FDI inflow, UPI transaction value and number of FinTech startups. This analysis gives an initial idea of the statistical nature of the relationship between the variables as analysis before interpreting the results of regression.

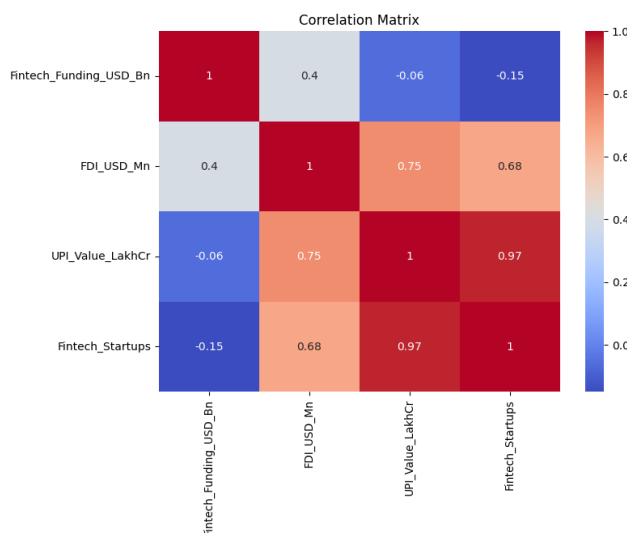
**Null Hypothesis (H0):** There is no significant relationship between Foreign Direct Investment and the growth indicators of India's FinTech sector.

**Alternative Hypothesis (H1):** There is a significant relationship between Foreign Direct Investment and the growth indicators of India's FinTech sector.

**Table 2 Correlation Matrix of FDI and FinTech Growth Indicators**

Variables	Fintech Sector Inflows	FDI Inflows	Volume of Transactions	Fintech Startups
Fintech Sector Inflows	1.000	0.396	-0.060	-0.149

FDI Inflows	0.396	1.000	0.746	0.677
Volume of Transactions	-0.060	0.746	1.000	0.967
Fintech Startups	-0.149	0.677	0.967	1.000



**Fig.1 Correlation Matrix of FDI and FinTech Growth Indicators**

The correlation matrix indicates that Foreign Direct Investment has a moderate positive correlation with FinTech funding with a correlation coefficient of 0.396. This suggests that increases in FDI are associated with some increase in FinTech funding, but there is not a very strong relationship. Therefore, while foreign investment and sectoral funding are moving in the same direction to an extent, the association does not seem to be very. Foreign Direct Investment is also shown to have a strong positive relationship with UPI transaction value as the correlation coefficient was 0.746. This suggests that the higher the inflow of FDI, the higher the digital transaction values in the period of study. The strength of this relationship implies that the wider digital financial environment might have grown with an increasing foreign investment.

The correlation between Foreign Direct Investment and number of FinTech startups is 0.677 which shows a moderately strong positive relationship. This means that the higher the inflow of FDI, the more the number of FinTech startups in India. The result is a possible coincident between a favourable investment environment and the growth of the FinTech entrepreneurial ecosystem. The strongest relationship in the matrix is found to be with UPI transaction value and FinTech startups with a coefficient of 0.967. This means that there is a very strong positive association and it means that the growth in digital transactions and the growth in the number of FinTech startups have been very closely correlated during the period under study. This is in line with the overall growth in the digital financial ecosystem in India. At the same time, FinTech funding has a very weak negative relationship with UPI transaction value with a coefficient of -0.060 and a weak negative relationship with FinTech startups with a coefficient of -0.149. These values indicate that FinTech funding does not influence FinTech funding strongly with these two indicators in the dataset used for the study. This may mean that sectoral funding does not always increase each year in accordance with digital transaction growth and the number of startups.

## REGRESSION ANALYSIS AND HYPOTHESIS TESTING

Regression analysis is applied in this research work to study the effect of Foreign Direct Investment on FinTech funding in India between the year 2015 and 2025. While the correlation analysis shows the direction and degree of association between variables, the regression analysis helps in assessing if the independent variable shows a significant level of explanation of variation in the dependent variable. In the current study FinTech Funding (USD billion) is taken as the dependent variable and Foreign Direct Investment (USD million) is taken as the independent variable. The regression model is used to determine if there is a statistical significance of FDI on FinTech funding in India.

**Null Hypothesis (H0):** Foreign Direct Investment has no significant impact on FinTech funding in India.

**Alternative Hypothesis (H1):** Foreign Direct Investment has a significant impact on FinTech funding in India.

The regression equation used in the study is:

$$\text{FinTech Funding} = a + b (\text{FDI}) + e$$

Where:

**FinTech Funding** = Dependent variable

**FDI** = Independent variable

**a** = Constant or intercept

**b** = Regression coefficient

**e** = Error term

**Table 3 Regression Results: Impact of FDI on FinTech Funding**

Particulars	Value
Dependent Variable	Fintech Sector Inflows
Independent Variable	FDI Inflows
R-squared	0.157
Adjusted R-squared	0.063
F-statistic	1.672
Prob. (F-statistic)	0.228
Constant (Intercept)	-1.6923
Coefficient of FDI	0.00006594
t-value of FDI	1.293
p-value of FDI	0.228
Number of Observations	11

The results of the regression analysis show that the R-squared value is 0.157, that is, only 15.7 percent of the variation in FinTech funding in the study period can be explained by Foreign Direct Investment. This demonstrates that the power of explanation in the model is low. The adjusted R-squared value of 0.063 further validates that the model has a poor ability to explain changes in the dependent variable upon adjustment for sample size. Therefore, despite the potential relationship with FDI in FinTech funding, FDI does not seem to be a

strong standalone predictor in this model. The coefficient of FDI is 0.00006594 and it is positive. This suggests that the higher the level of Foreign Direct Investment, the higher the impact on FinTech funding. In other words, the direction of the relationship is positive, meaning that FDI inflows tend to correspond higher levels of FinTech funding. However, the practical strength of this relationship is not strong and the statistical significance must be investigated before any conclusive interpretation of the results can be made.

The t-value of 1.293 and p-value of 0.228 indicate that the effect of FDI on FinTech funding is not statistically significant at the conventional 5 percent level. Since the p-value is higher than 0.05, the null hypothesis cannot be rejected. This means that the study is not finding sufficient statistical evidence to conclude that Foreign Direct Investment have significant impact on FinTech funding in India for selected period. Although the coefficient is positive the result is not strong enough to demonstrate a significant causal effect in this regression model. The F-statistic value of 1.672 with a corresponding probability of 0.228 also shows that the overall regression model is not significant. This means that the model taken as a whole does not provide strong evidence that FDI is a meaningful predictor of variations in FinTech funding. Thus, the regression output indicates that there may be other factors, besides FDI, that play a greater role in deciding on annual FinTech funding in India.

**Table 4 Hypothesis Testing Result**

Hypothesis	p-value	Decision	Result
H0: Foreign Direct Investment has no significant impact on FinTech funding in India	0.228	Accept H0	No significant impact
H1: Foreign Direct Investment has a significant impact on FinTech funding in India	0.228	Reject H1	Not supported

Based on the regression analysis, null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, it is concluded that Foreign Direct Investment has no statistically significant impact in FinTech funding in India during period between 2015 and 2025. This observation leads to the conclusion that despite the fact that the expansion of the FDI and FinTech to a certain degree co-move, foreign investment does not have a significant impact on the alterations in the annual funding in the FinTech sector. The outcome can indicate that FinTech financing in India is conditional upon additional aspects including the local investor activity, the market sentiment, regulatory trends, digital adoption, start-up ecosystem maturity and more general technological situations.

#### **Implication of the Regression Result**

The implication of such finding is that the increase of the FinTech industry in India, particularly in terms of finance, cannot be attributed to the general inflows of foreign direct investment. In as much as India is still receiving a lot of foreign capital, the statistical result indicates that a capital flow is not necessarily translated into more FinTech funding in a meaningful way. This implies that the FinTech sector can experience its internal dynamics of expansion and it can be dependent on the more sector-specific trends of investment, phases of innovations and evolution of the digital ecosystem than it is on aggregate inflows of FDI. To policymakers, it implies that the promotion of FinTech development might require additional policy assistance, more startup financing systems, improvement of digital infrastructure and ecosystem-related investment facilitation as opposed to general FDI trends.

#### 4. DISCUSSION AND CONCLUSION

The present study was made in order to examine the connection between the Foreign Direct Investment and the development of the FinTech industry of India in the time span of 2015 to 2025. The research narrowed down to some of the indicators of FinTech funding, UPI transaction value, and the count of FinTech startups that depended on secondary data and quantitative analysis. The descriptive statistics revealed that India witnessed large inflow of FDI during the study period and FinTech sector also witnessed large expansion in terms of digital transaction and startup development. These preliminary patterns suggested that both the FDI and the FinTech growth were upward sloping in time and provided a basis for investigating whether there was any meaningful statistical relationship between the two factors. The correlation analysis showed that there was a positive correlation between Foreign Direct Investment and the selected FinTech growth indicators. The relationship between FDI and FinTech funding was found to be moderate and positive; however, the relationship between FDI and UPI transaction value and the relationship between FDI and FinTech startups were stronger and also found to be positive. These findings indicate that the more general investment environment and FinTech growth indicators were moving in precisely the same direction during the period covered by the study. In particular, the high positive correlation between UPI transactions value and the number of FinTech startups indicates the rapid development of the Indian digital financial ecosystem. This means that the growth of digital transactions and start-ups have been closely linked in the Indian scenario.

However, a more specific understanding of the role of FDI in FinTech funding could be obtained from the regression analysis. Although the regression coefficient for FDI was positive, the p-value was found to be 0.228 which is greater than the conventional level of statistical significance. The R-squared value was also low at 0.157, indicating that FDI was a poor explanatory factor of the variation in the amount of FinTech funding during the study period. Based on this result, the null hypothesis was accepted and the alternative hypothesis was rejected in the study, and it is concluded that Foreign Direct Investment did not have a statistically significant impact of FinTech funding in India in the selected model. This means that although the growth of FDI and FinTech may be related on a broad level, the growth of FDI was not found to be a strong or significant explanatory factor for the change in FinTech funding from year to year. This is a significant conclusion in that it reveals the difference between the general association and quantifiable statistical impact. The positive correlation means that it showed that FDI and FinTech growth moved in various ways but the outcome of the regression model implies that the movement did not necessarily mean that there is a strong impact of FDI in the sectoral funding. That is, it appears that FinTech funding in India is controlled by other aspects rather than the aggregate foreign investment inflows. These can be domestic investor engagement, venture capital, maturity of the startup ecosystem, technology adoption, regulatory developments and market specific constructive confidence in the digital finance industry. Thus, it can be observed based on the study that the development of Fin-Technology in India cannot be linked only to the alterations of the total FDI inflows.

The results of the research also indicate that the Indian FinTech ecosystem has been influenced by a broader shift in its organization rather than the investments by foreign countries only. The increasing worth of UPI transactions and the rise in FinTech start-ups within a limited span of time indicates the presence of a sound domestic digital infrastructure supported by the proliferation of the internet, adoption of digital payments and the increasing use of financial technology by consumers. It means that even though the FDI can be viewed as a supplement to the growth process, the development of the FinTech sphere in India is also being promoted by the forces inherent to the ecosystem. It is thus recommended in the study

that there is a need to make a difference between total foreign investment in the economy and those that drive the growth of the digital financial sector. Policymaking The conclusion of the study indicates that it is desirable to get foreign investment but it might not be enough by itself to guarantee any substantial growth in FinTech funding. It may be necessary to put more targeted efforts that would help to promote the FinTech industry. These can be enhanced digital infrastructure, enhanced start-up assistance mechanisms, promotion of innovation, enhanced regulatory transparency, and creation of an atmosphere that drives industry-specific investments. The results indicate that the inflow of FDI on a large macro-level may not necessarily imply the improved financing of FinTech sector unless it is facilitated by the right ecosystem conditions.

## 5. FUTURE SCOPE FOR THE RESEARCH

The current research offers the future research in a variety of ways. First, it is possible to discuss the future research expanding the data set in terms of time and adding more recent data, as the FinTech ecosystem in India is still developing. The longer time horizon can be providing more empirical evidence, and can enhance statistical reliability of results. Because this research is carried out on eleven observations of a year, future research with additional time-series information can yield stronger results of long-term interaction between Foreign Direct Investment and FinTech growth.

Second, future studies may consider to use multiple regression models by including additional explanatory variables such as regulatory changes, digital infrastructure indicators, venture capital activity, policy support, financial inclusion measures, and innovation-related variables. The present study primarily focused on the relationship of FDI with FinTech funding, however, FinTech growth is multidimensional and it may be affected by various sector specific and macroeconomic factors. Including more variables may give more explanatory power and a more complete understanding of the determinants of FinTech growth in India.

Third, future research may analyse separately other dependent variables, such as the value of UPI transactions and the number of FinTech startups, by individual regression models. In the present study, the result of correlation analysis showed that these variables had a positive association with FDI, particularly in the case of the value of transactions of UPI and the growth of start-up. Therefore, it is possible that future studies combine these indicators and test whether FDI has a statistically significant impact on the indicators in separate regression frameworks. This would help to broaden the understanding of the way in which foreign investment could affect different dimensions of the FinTech ecosystem.

Fourth, comparative studies may be undertaken between countries or by sectors. A cross country study with other emerging economies may have some relevance in determining whether the relation found in India is unique or a part of a larger global pattern. In like manner, comparison across sectors in relation to FinTech, and other technology-based sectors, can provide information regarding whether the investment-growth relationship varies across digital sectors. Such studies may give more weight to the findings in terms of their generalizability.

Fifth, mixed methods or quantitative and qualitative methods can be used in future studies. Although the current investigation entirely depends on the secondary quantitative data, qualitative information about investors, start-up founders, policy professionals or financial analysts could be helpful to provide explanations to why FDI does not significantly affect the financing of FinTechs in the current model. This could provide a more detailed insight into

investment behaviour, and how startups are funded and policy or ecosystem contribute to the growth of FinTech.

Lastly, the difference between aggregate and industry-specific foreign investment into FinTech could be examined in future studies. The broad FDI inflows are used as the explanatory variable in the present study, but a narrower data set on direct foreign investment entering FinTech related businesses can give more precise and valuable results. This would be useful in answering the question of whether the absence of statistical significance in the present research is because the total inflows of FDI do not reflect the whole investment that is directly sustaining the FinTech sector. Thus, there is good scope for future research work to enhance and elaborate on the relationship between Foreign Direct Investment and development of India's FinTech sector.

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