Towards Financial Inclusion: Examining the Key Drivers of FinTech Adoption among Retailers in Karnataka.

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ABSTRACT

The unstructured retail market in India faces a significant difficulty in the process of moving to digital payment systems. The proposed investigation analyses influences on FinTech adoption by unorganised retailers in Karnataka using an extended Technology Acceptance Model. The model incorporates the perceived ease of use and perceived usefulness, along with the contextual factors, namely, financial literacy and governmental support. The set of data was collected on the 200 retailers in six different districts using the stratified cluster sampling approach. The regression analysis shows that the most powerful predictor of adoption intention is governmental support. Further, the perceived ease of use, perceived usefulness and financial literacy have a great impact on the choice to adopt the technology.

Keywords: Unorganised Retail, Government Support, FinTech Adoption, Technologies Acceptance Model, Karnataka.

1. Introduction

The use of technology in financial services has dramatically transformed the world economic environment. The financial technology market in India has grown exponentially in the years due to the digital infrastructure projects like the Unified Payments Interface. According to recent reports by the industry, the volumes of digital payments in the country have been growing tremendously in recent years (IFSA, 2025). This digital revolution has provided the greatest opportunities to formalise the economy and increase financial transparency in the country. Nevertheless, overall growth rates can be used to conceal substantial changes in adoption rates in various sectors and in rising geographies (Putrevu and Mertzanis, 2024).

The unstructured retail business is the source of the Indian economy but still stays in the historical dependence on cash. Small retailers experience different operational issues compared to metropolitan consumers who quickly adopt the use of digital wallets, even in semi-urban regions. These traders tend to have a low margin and less technical skills and are unwilling to change the existing practices. As a result, a digital divide in which the benefits of financial technology are inequitably distributed among the communities continues to exist (Wu and Peng, 2024). The disparity needs to be bridged in order to have real financial inclusion and economic modernisation in the rural environment (Agwu, 2021).

Karnataka offers a special background in the exploration of this phenomenon that has a differentiated dual economic structure. On one hand, Bengaluru, a technology hub in the world, is located in the state, and on the other hand, enormous rural districts with underdeveloped infrastructure are found there. The numbers at the state level have shown that even though cities are on the forefront of using FinTech, the rural areas are left behind because of the structural constraints (BFSI, 2025). Identification of individual drivers of adoption within this heterogeneous environment is of paramount importance to the policymakers and service providers. However, the amount of empirical studies specifically on the unorganised retail market within this regional setting is very limited.

The available literature mainly focuses on the acceptance of digital payments by consumers, but not on merchants (Moghavvemi et al., 2021). Furthermore, the importance of external enablers in the formation of the economies, including the support of the government, is often overlooked in the framework of ordinary theoretical models (Patnaik et al., 2023). The research fills these gaps by using a long theoretical framework that incorporates the perceptions of technology and the financial literacy and institutional support. In this respect, the main objective of this study is to analyse the main factors underlying FinTech adoption among the retailers in Karnataka, India. Isolating these determinants, the study would provide actionable information that would hasten organisational digital inclusion in the unorganised retail sector.

2. Literature Review and Hypothesis Development

2.1 Theoretical Background: The Extended Technology Acceptance Model.

The fast digitisation of financial services requires solid theoretical frameworks to learn the user adoption behaviour. Technology Acceptance Model is the most common theory used in information system literature (Khatri, Gupta and Parashar, 2020). This model assumes that the key determinants of behaviour intentions are perceived usefulness and perceived ease of use. According to scholars, the two beliefs mediate the effect of external variables on adoption (Singh, Sahni and Kovid, 2021). Nonetheless, the dependence on this model in many cases is not enough when it comes to the developing economies which are complex.

There are structural and socioeconomic challenges inherent to the Indian retail situation that cannot be explained by simple models. Recent literature implies that contextual variables should be combined to enhance predicting strength (Patnaik et al., 2023). The unorganised retailers work under environments that are limited by the structural gaps and differences in literacy levels. Thus, the scholars suggest enhancing the framework with external factors like governmental support and personal abilities. In this paper, a longer methodology has been followed to obtain a comprehensive picture of a FinTech adoption in Karnataka.

2.2 Perceived Ease of Use

Perceived ease of use is the level of effort that is related to the use of a system. In the case of unorganised retailers, the technical complexity of digital interfaces becomes one of the key psychological obstacles (Khatri, Gupta and Parashar, 2020). Small merchants are not always professionally technically trained and do not want those systems that seem to be tedious or complicated. In turn, applications with the least amount of mental effort to use are more prone to gaining universal acceptance (Seethamraju and Diatha, 2018). The ease of the user interface is a direct influence on the readiness to give the technology a first attempt.

The ease of use has been suggested to be critical among older or less-educated retailers and this is indicated by critical literature. Investigations of Malaysian merchants point to complexity being a source of fear of making irreversible transaction errors (Moghavvemi et al., 2021). In case the payment process interferes with the process of counter service, retailers will decline to pay. Therefore, FinTech solutions should be provided with convenient designs that should replicate existing cash-based processes. This minimization of the procedural complexity reduces the cognitive load of the retailer in day-to-day operations.

Moreover, the mediating role of the perception of ease exists between the external support and actual adoption. Retailers feel no pressure about the risk of money when a system can be considered effortless (Patnaik et al., 2023). It means that technical simplicity is not only a convenience factor but a risk-reduction one. This perception is further promoted in the case of Karnataka,

where the linguistic diversity is rich and the vernacular interfaces are used. As such, convenience can still serve as a key precondition to the shift to digital instead of cash.

H1: Perceived Ease of Use plays a significant positive effect on the intention to use FinTech services.

2.3 Perceived Usefulness

Perceived usefulness refers to the potential user opinion that a system improves job performance. This is translated into physical operational advantages in the retail industry like shorter checkout lines (Singh, Sahni and Kovid, 2021). The retailers are practical decision-makers who consider the technology in terms of ROI. When digital tool does not prove to enhance efficiency or revenue, then its adoption is low. There is evidence that usefulness is a highly predictive measure of the future use of technology (Khatri, Gupta and Parashar, 2020).

In addition to the obvious payments, it is also useful in better cash-flow management and access to credit. Online transaction records allow unorganised retailers to obtain formal credit lines, which was previously not available to them (Seethamraju and Diatha, 2018). The ability makes FinTech more than a payment tool but a businessmanagement resource. Inventory tracing and cash-handling expenses are usually lower among the retailers that use the tools. Therefore, the intention to use the technology is economically determined by its utility. The usefulness, however, depends on the dependability of the system on which it is based. A system should be useful enough to ensure successful transactions without much network breakdowns (Moghavvemi et al., 2021). Customers in semi-urban areas usually consider these advantages and threat of service interruptions. As such, the providers are required to show a consistent value in their operations to persuade skeptical merchants. As soon as the strategic advantage becomes apparent, retailers will be willing to overcome initial adoption obstacles.

H2: The perceived Usefulness has a strong positive impact on intention to adopt FinTech services.

2.4 Financial Literacy

Financial literacy is a basic knowledge that is required to make sound and effective financial choices. This concept can be applied in the digital era to the consideration of particular digital financial competencies (Islam and Khan, 2024). The retailers will be obliged to understand the fundamental accounting principles, as well as the electronic transaction systems and protection measures. The lack of this literacy creates an important cognitive impediment to adoption (Prabhakaran and Mynavathi, 2023). Lack of knowledge is one of the factors that make digital platforms look opaque and dangerous to merchants.

Recent studies highlight a very important difference between general financial literacy and the digital-specific expertise. Micro-enterprise managers with a higher level of digital literacy are significantly more confident in the use of FinTech solutions (Zaimovic et

al., 2025). They learn how to trouble-shoot faults and protect themselves against possible fraud. On the other hand, financial exclusion is closely associated with low literacy levels and being dependent on informal cash networks (Agwu, 2021). Therefore, educational interventions are necessary in order to close the gap between access and utilization.

According to the literature, financial literacy also serves as an internal facilitator of trust. Educated users are less prone to irrationalism about cybercrime (Islam and Khan, 2024). They are able to appraise critically the advantage of different products of FinTech suitable to the business requirements. This is a differentiating factor in the rural Karnataka which has a variable level of formal education. The financial literacy of retailers has a direct impact on their readiness to adopt new solutions.

H3: Financial Literacy positively affects intention to use FinTech services significantly.

2.5 Government Support and Infrastructure

The role of government support in the development of the digital financial inclusion ecosystem is important. In developing countries, state programmes are often the driving force behind the technological revolution at large scale (Putrevu and Mertzanis, 2024). The regulatory mechanisms that advance information privacy and protection of transactions establish requisite institutional confidence (Chiu, 2017). By actively encouraging and controlling digital payments by the government, the confidence of the retailers in the system will also increase. This kind of support gives the market the impression that the technology is safe, standardised, and legally secure.

The facilitation of the infrastructure is the practical expression of the state support in the FinTech environment. Adoption presupposes the development of adequate internet connectivity and telecommunications networks (IFSA, 2025). Research has shown that the digital divide between cities and rural communities in many cases has its origins in the infrastructural negligence (Wu and Peng, 2024). Without the regular connectivity, even the most useful applications will be useless to rural merchants. To this end, it is observed that the more a district is invested in by the government in digital infrastructure, the more the adoption rates of remote districts increase.

Karnataka, more specifically, has become a pioneer in creating an environment that is active in promoting the growth of FinTech. The policies of the state government have been passed in such a manner that accessibility and innovation in the financial sector will occur (BFSI, 2025). These are in the form of subsidies on digital point-of-sale devices and effective redressal systems on grievances. These pro-government actions reduce the structural constraints that in most cases hinder small business digitisation (Agwu, 2021). The image of strong government support, therefore, prompts the retailers to move out of informal economy.

H4: The intention to adopt FinTech services is positively impacted by Government Support significantly.

2.6 Conceptual Framework

This research is therefore a comprehensive research model as suggested in this study based on the critical review of available literature as illustrated below:
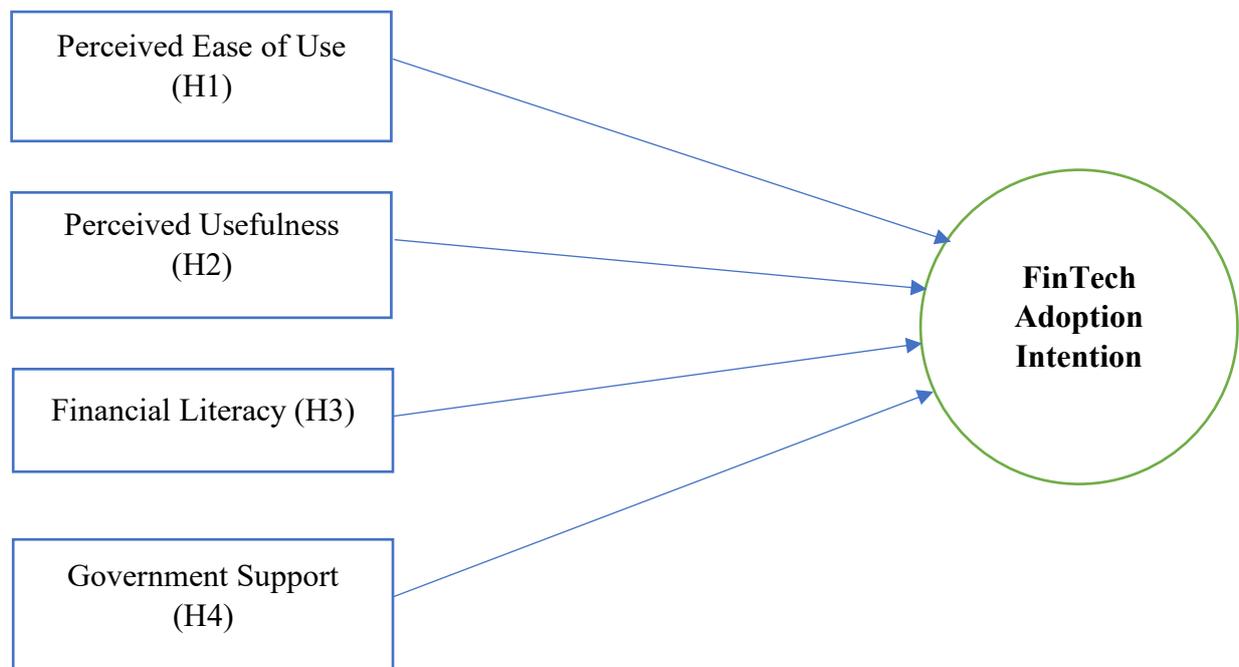

Figure 1: Conceptual Framework

The model incorporates the traditional model technological factors with the socio-economic and institutional determinants. The technological factors of adoption are perceived ease of use and perceived

usefulness. Financial literacy is the personal aptitude that is required to navigate the system. The external environmental enabler is the government support which facilitates the whole ecosystem. It is postulated that

these four independent variables would influence the intention to adopt FinTech services.

3. Research Methodology
3.1 Research Design
This research is based on a quantitative research paradigm that combines the descriptive and causal design. The descriptive element has been utilised in listing the demographic profile and base level digital preparedness of the unorganised retailers in Karnataka. At the same time, the causal element is applied to test in an empirical manner the relations between the independent determinant (technological, individual and environmental factors) and the dependent variable (FinTech adoption intention). The above methodological convergence allows to conduct a rigorous analysis of the forces behind technology adoption in the retail industry.

3.2 Sample and Data Collection
The study uses a convenience sampling method as it is straightforward to handle, predictable, and cost-effective. Starting with, the convenience sampling method has beeen used because it is easy to manage, predict and is economical.

The study population of the given investigation study includes unorganised retailers, including grocery shops, general merchants, and bakeries that are located within the Karnataka State. Since such a population is heterogeneous, a stratified cluster sampling methodology has been taken.

 To cut off variance in digital infrastructure and levels of literacy, the state was stratified into urban and rural clusters. The following are the data collected with the help of a structured questionnaire that was distributed to retailers in six types of districts, namely Bengaluru Urban, Hubli-Dharwad, Belagavi, Dakshina Kannada, Mysuru and Kalaburagi. These districts were selected to represent different administrative divisions of a state and economic classes in the state. The survey consisted of 220 questionnaires, with 200 valid responses being the final analysis set, after being screened by the style and outliers. This is a relatively large sample that meets the recommended sample size necessary to carry out multiple regression analysis, hence provides a sufficient level of statistical power.

3.3 Research Instrument
The main data gathering tool included a self-administered questionnaire divided into two different parts. The first section A was on demographic attributes, where customer and personal and business profile description data were gathered, including age, gender, education level, type of business, ownership and annual turnover. Section B represented 16 items that assessed the core research constructs, and all items were rated using a 5-point Likert scale (Strongly Disagree) to (Strongly Agree). In particular, Perceived Ease of Use (2 items) and Perceived Usefulness (3 items) were changed and adjusted to the retail setting based on chances to use the Technology Acceptance Model literature. Financial Literacy (3 items) evaluated the competency of respondents in the management of digital transactions and comprehension of security measures, whereas Government Support (4 items) evaluated the perceptions toward the sufficiency of digital infrastructure and protection by the state. Lastly, FinTech Adoption Intention (3 items) was the dependent variable, which assessed the intention of the retailer to adopt and remain using digital payment systems. Questions put negatively were inverted before analysis in order to come up with consistency in scoring.

3.4 Data Analysis Strategy
The data obtained were processed and analysed on SPSS Statistics through a two-step rigorous procedure. First, a reliability analysis was done where the Cronbach's Alpha (0) of every five constructs was calculated in order to determine internal consistency threshold values of 0.70, which were used to judge whether the scale was reliable. Second, Multiple Linear Regression was conducted as the method of testing the hypothesis to determine whether the four independent predictors have a direct effect on FinTech adoption intention. This multivariate method has helped in the identification of the most salient factors that drive adoption in the unorganised retail segment in the state of Karnataka.

4. Data Analysis and Findings
4.1 Introduction
This chapter presents the empirical results that are produced after a considerable analysis of quantitative data. The main objective is to identify the factors that influence the adoption of FinTech by retailers. The analytical process is carried out in three separate steps, including: (1) the study of the demographic data of the respondents to clarify the composition of the sample; (2) internal consistency to determine the trustworthiness of the survey instrument; and (3) regression analysis to determine causal relationships of independent variables and desire to use FinTech.

4.2 Demographic Details
The demographic profile provides the necessary information related to the background of the involved retailers. These attributes help to understand the relevance of the wider applicability of the research results in the case of a thorough understanding of these properties. The section below provides demographic information (e.g, personal and business information) on the retailers who have participated in the survey.
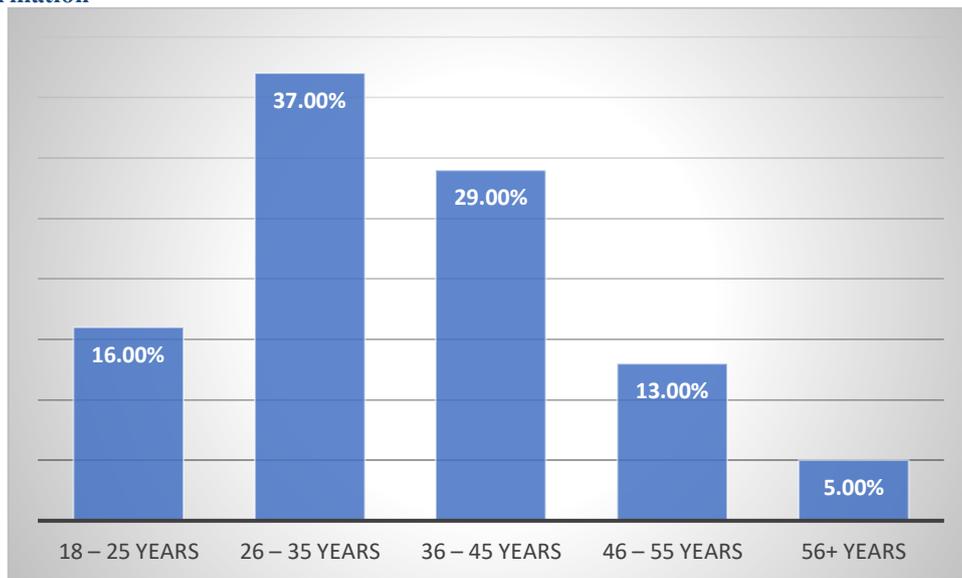
Personal Information

Figure 2: Age Distribution

Age data- Distribution indicates that the sector has an experienced and mature workforce. Most of the respondents are in the working age bracket of 26 to 45 years indicating that the retailers are mature enough to handle their businesses well. . The percentage of retailers within 18-25 age group is one of the considerable minorities in the sample, hence suggesting that the new generation has increasingly been taking a hold in the untamed retail industry. Conversely, there is a relatively low participation of persons who are above 55 years.
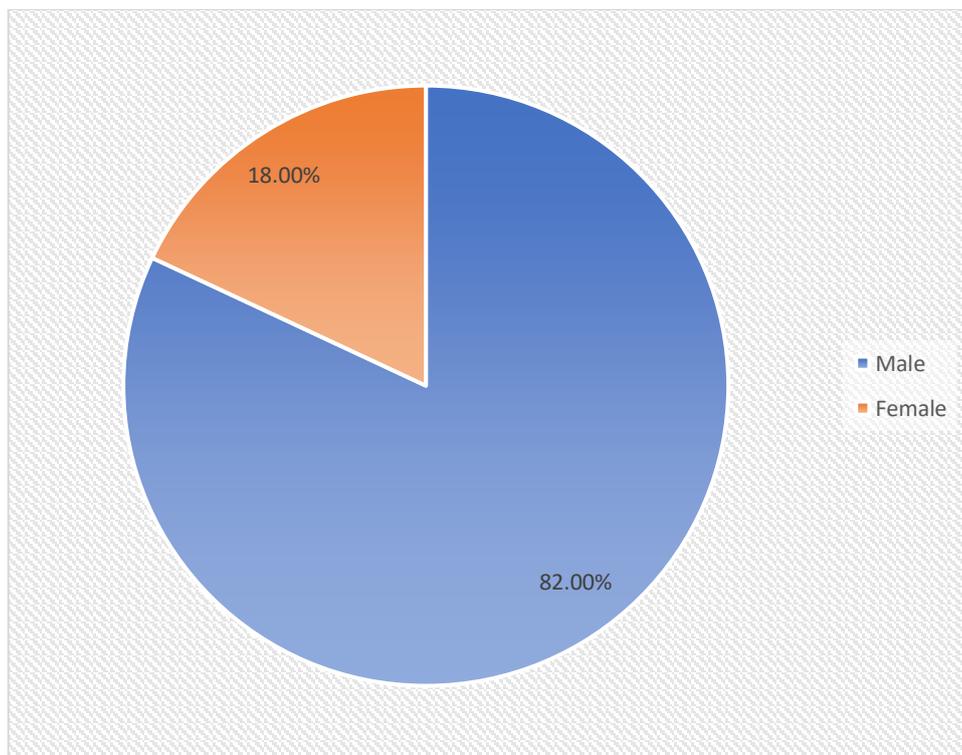

Figure 3: Gender Distribution

In the aspect of gender distribution, the sector is still mostly of male dominated as seen in the result findings. The overwhelming majority of the sample under analysis is represented by male respondents that indicates the traditional gender structure of the Indian retail environment nowadays. The number of female participants remains small, but it is a promising indicator of an impending change where the inclusivity in ownership of small businesses is more inclusive.
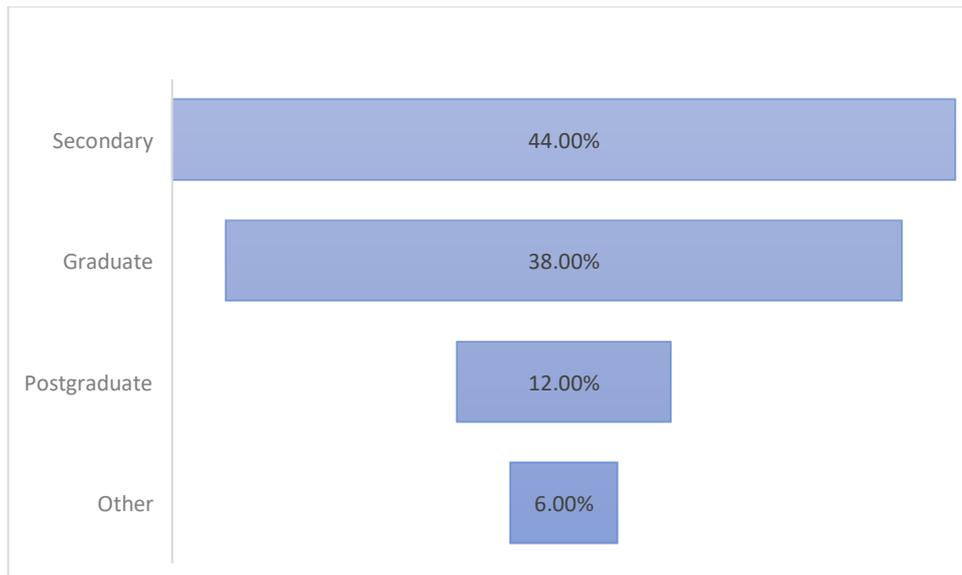
Figure 4: Education

A significant percentage of retailers have a secondary level education degree or a graduate qualification and that is vital to apprehend simple digital financial tools. These findings indicate that illiteracy is not the main reason why people do not adopt technologies in this area. As a result, training activities can be oriented to the development of digital skills as opposed to the functional level of literacy.

Business Information
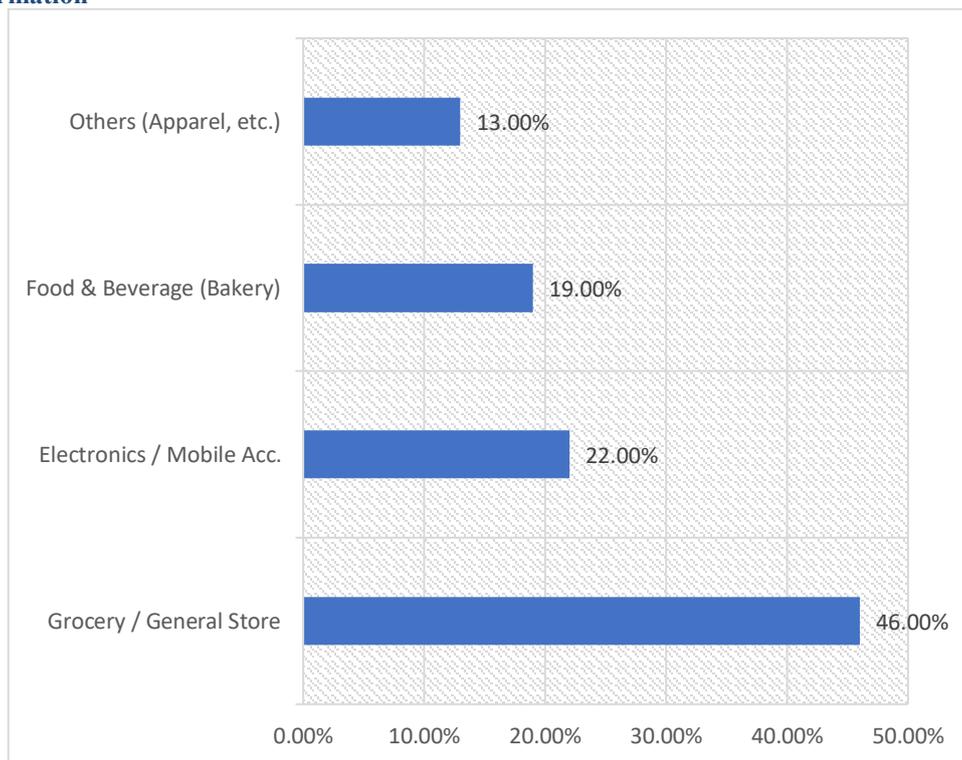
Figure 5: Type of Retail Business

The nature of the retail business is quite different in the selected districts in Karnataka. The greatest chunk of the surveyed retail businesses is made up of grocery and general stores. These businesses are normally involved with high-frequency transactions thus requiring effective payment systems like FinTech. Food outlets and bakeries also constitute quite a significant sample and, therefore, the results obtained can be generalised to different retail sub-sectors.
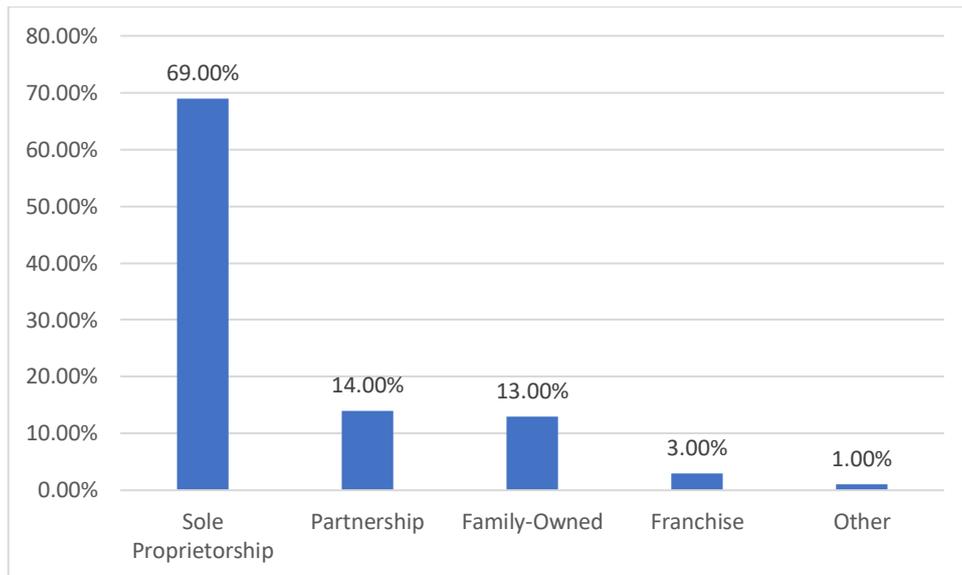
Figure 6: Ownership Type

Ownership structure analysis proves that the most common business model is sole proprietorship. Majority of the retailers are independent proprietors as opposed to partnership or franchise basis. Such a design means that technology adoption is very centralised and can be made within short periods. In this respect, the owner is the only gatekeeper in any new operational changes and thus, FinTech marketing strategies should accommodate these individual owners of the business.
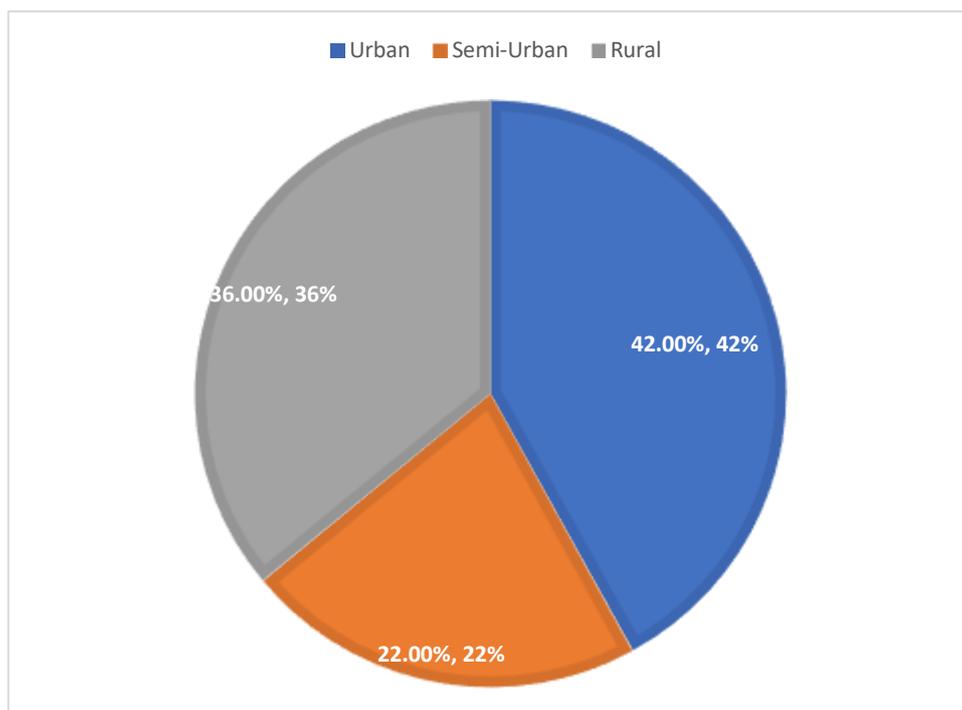
Figure 7: Business Location Type

Data about the geographic locations proves the equal representation of the urban and rural settings. The sample was stratified to reflect a difference in the availability of digital infrastructure. The urban retailers are also better connected as compared to their semi-urban and rural counterparts. Nevertheless, the rural sample of respondents allows a more thorough analysis of the region, which is critical to legitimise the role of governmental assistance on adoption.
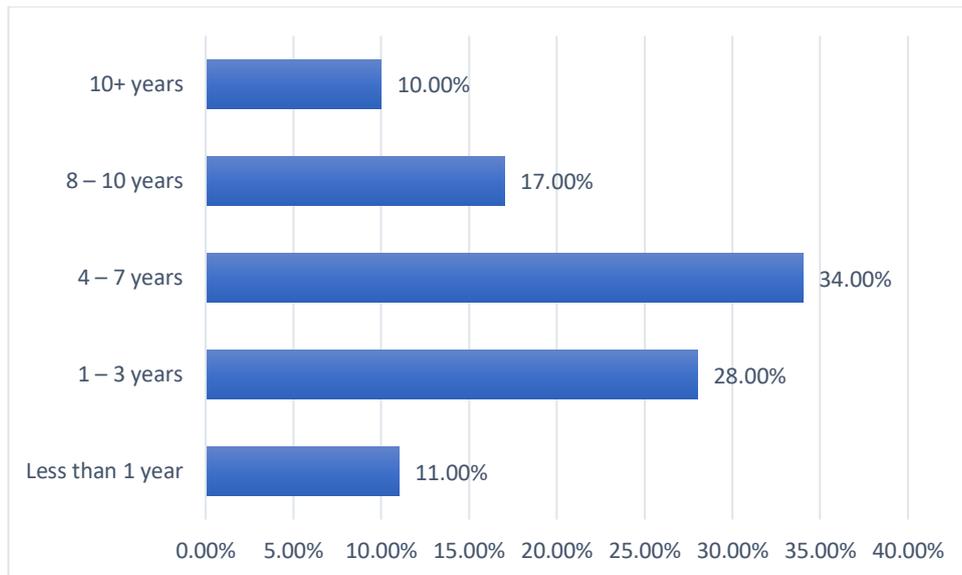
Figure 8: Years in Business

The results on years in business are high and signal that there is a high level of operating stability. A substantial proportion of the sample has been in operation over four years, which argues that these retailers have not been affected by market swings and competitive forces. The more risk-averse businesses tend to be are the established ones, dealing with implementing new technological systems. Thus, perceived usefulness of FinTech should be effectively presented to this group.
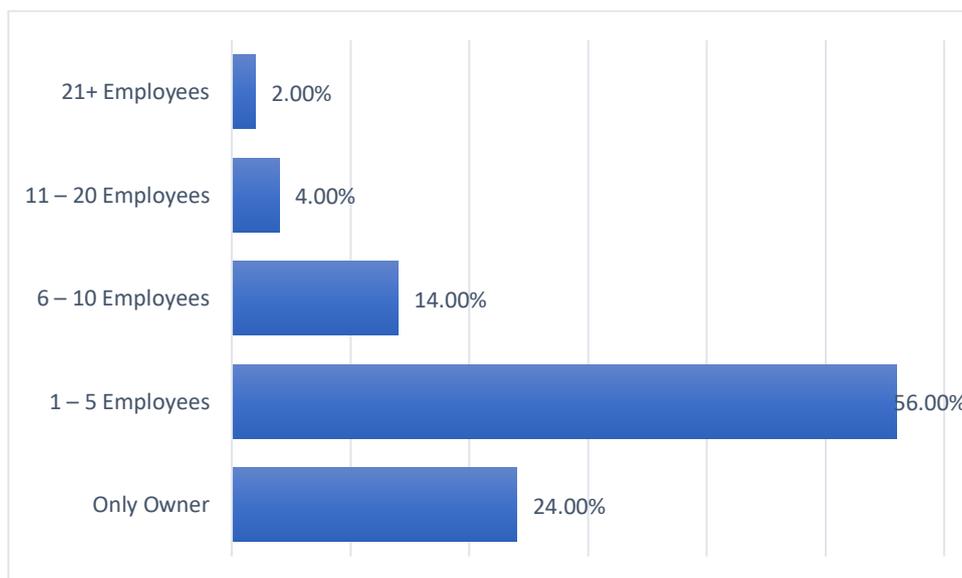
Figure 9: Size of Business (Employee Strength)

The analysis of the business size highlights the prevalence of micro-enterprises in the sample. The majority (56 percent) of them have a small number of employees (one to five). Furthermore, approximately a quarter of the respondents are sole proprietorships that do not hire any other personnel. Only a small percentage (6%) indicated that they had over ten employees in the payroll. This type of structure means that there is extreme centralization of the operational decisions of the business owner. Therefore, the implementation of the financial technology is solely subject to individual digital aptitude of the owner. The lack of specialized personnel emphasizes the need to have the intuitive and easy-to-use payment solutions. There is practically no data of larger organizations with full IT support in this disorganized retail industry.
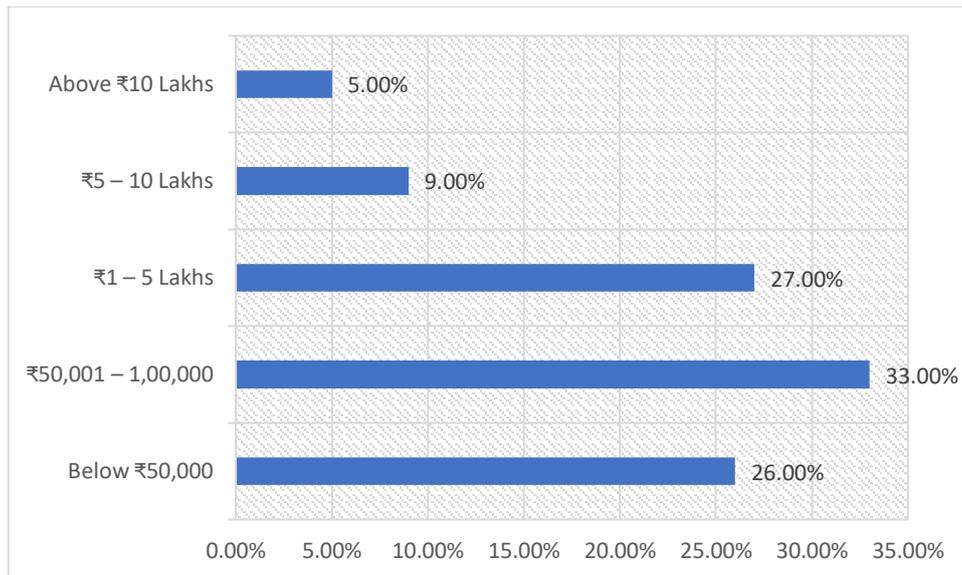
Figure 10: Monthly Turnover

Lastly, monthly turnover statistics bring out the micro-economic aspect of the said businesses. Majority of the business ventures are recording turnover that comes within the low to middle income brackets. This monetary limitation highlights the necessity of affordable or free online tools, since high transaction rates would probably discourage the use of this group of income earners. Based on this, economic feasibility is also a major requirement to the adoption of financial technology in this regard.

4.3 Reliability Tests
The reliability analysis is used to test internal consistency of the constructs used in the questionnaire. In order to perform the reliability tests, Cronbach's alpha test has been done on five different constructs. The alpha coefficient of Cronbach is the main measure of this statistical reliability; the value of this measure should be over 0.70; this is considered to be the acceptable value in the framework of social science research. The section below presents the results, providing a synthesised interpretation and implications of the findings obtained from this reliability test.

Cronbach's Alpha	N of Items
.930	2

Table 1: Perceived Ease of Use statistics of reliability
The Cronbach alpha value for this variable was found as 0.930. Such a high score shows that respondents always had the capacity to interpret the two items that were used to measure this variable. The articulateness of the questions related to the ease of the FinTech interfaces is thus corroborated proving that the tool effectively reflected the views on technical easiness.

Cronbach's Alpha	N of Items
.969	3

Table 2: Reliability statistics for Perceived Usefulness
Equally, the perceived usefulness had excellent reliability, an alpha of 0.969. The three scales to evaluate this construct showed high levels of inter-item correlation, which implied that the respondents always referred to FinTech as an element that enhanced business performance and efficiency. The large alpha value confirms the adjustment of the items of Technology Acceptance Model in the current study.

Cronbach's Alpha	N of Items
.983	3

Table 3: Reliability statistics for Financial Literacy
Internal consistency was also strong in financial literacy as alpha was 0.983. The result of this finding is that digital financial knowledge questions were easy to understand and logical and respondents were similar regarding their answers to questions concerning transaction management and transaction security. This degree of reliability supports the validity of financial literacy as a unique predictor.

Cronbach's Alpha	N of Items
.985	4

Table 4: Reliability statistics for Government Support
The support construct by the government yielded an alpha score of 0.985 in four items, which showed that the perceptions of the infrastructure and regulation were captured precisely. The consistency suggests that the retailers view the government support as a single concept, which includes the physical infrastructure and control climate offered by the government.

Cronbach's Alpha	N of Items
.987	4

Table 5: Reliability statistics for Adoption Intention
Lastly, adoption intention was the most reliable with alpha coefficient of 0.987. This confirms that there was almost perfect internal consistency in measuring the dependent variable and that the items were able to measure the willingness of retailers to adopt digital payment systems. Generally speaking, the instrument is statistically sound and can be used in further regression.

4.4 Testing of Hypotheses and Regression Analysis
There was a multiple linear regression to empirically test the proposed research hypotheses. It is used to test the effect of independent variables on the dependent variable with an aim of giving a statistical evidence to prove or disprove the theoretical framework.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.992a	.985	.985	.16642

a. Predictors: (Constant), Avg_GovtSupport, Avg_Usefulness, Avg_EaseOfUse, Avg_FinLiteracy

Figure 11: Model Summary

The overview of the model shows that the proposed research model has a high predictive capability. The model has a value of R-squared, which stands at 0.985 that indicates that the model explains a significant percentage, that is, 98.5 per cent of the changes in the adoption intention that can be explained by the variables included in the model. With an extremely high coefficient, it indicates that the choice of factors are indeed major drivers and adjusted R-squared serves the purpose of confirming that there was no over-fitting.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	350.373	4	87.593	3162.645	.000b
	Residual	5.401	195	.028		
	Total	355.774	199			

a. Dependent Variable: Avg_Adoption

b. Predictors: (Constant), Avg_GovtSupport, Avg_Usefulness, Avg_EaseOfUse, Avg_FinLiteracy

Figure 12: Anova

The statistical significance of the entire regression model is supported by the analysis of variance. The F statistic of 3162.645 and a p -value of less than 0.001 means that chances that the relationship occurred by random chance are almost insignificant. This means that this model will give a statistically sound framework to predict the motivation behind FinTech adoption intentions, and the coefficients of individual regression can be viewed with the utmost level of understanding.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.144	.051		-2.830	.005		
	Avg_EaseOfUse	.245	.064	.239	3.803	.000	.020	50.797
	Avg_Usefulness	.272	.055	.237	4.965	.000	.034	29.317
	Avg_FinLiteracy	.220	.075	.221	2.949	.004	.014	72.040
	Avg_GovtSupport	.315	.085	.303	3.698	.000	.012	86.427

a. Dependent Variable: Avg_Adoption
Table 6: Coefficients

The regression coefficients table shows the definite beta value of each independent variable which demonstrates the strength and direction of the relationship and adoption.

Perceived Ease of Use (H1)
Through the analysis, ease of use and adoption show a positive relationship that is significant. The beta coefficient of this variable is standardized at 0.239, and

its p-value is large. This result confirms the first hypothesis concerning the significance of the user-friendly interfaces, which means that the simplification of the technical process stimulates the adoption of the system by the retailers. Complex systems will most likely bring obstacles that discourage the usage by unorganized merchants and hence the emphasis on simplicity as a basic need to attract this particular group.

Perceived Usefulness (H2)
The intention to adopt is depicted by indicating a strong positive effect of the construct of perceived usefulness. The beta coefficient of 0.237 implies that utility can be determined as a decisive variable in the decision-making process. As pragmatic participants, retailers are more concerned with tools that will enhance their levels of operational efficiency. The p -value of 0.000 supports the second hypothesis of the current study, and thus the need to illustrate actual benefits in order to convince doubtful merchants.

Financial Literacy (H3)
In this regard, financial literacy turns out to be an important predictor of FinTech adoption. The beta coefficient of the variable is 0.221, which is found to be statistically significant, which contributes to the third hypothesis stating that knowledge is a major enabler of adoption. The retailers with an understanding of digital finance are more confident in using them, whereas lack of knowledge serves as a psychological obstacle to the usage. Education therefore is another key to bridging the digital divide.

Government Support (H4)
The government support can be seen as the element that has the greatest impact of all the variables that are considered alone. The significance of 0.303 (Beta coefficient) indicates that it has the highest influence on the dependent variable, which is why it highly supports the fourth hypothesis on the role of the state. This revelation suggests that regulation and infrastructure are the two key determinants of trust. The ecosystem created by government policies and initiatives is extremely important to retailers; without external assistance, internal motivation is not sufficient to adopt it.

4.4 Implications
This study has a number of critical implications on theory and practice, whereby the adoption of technology in the retail industry can be considered as multifaceted. The research has managed to positively introduce the Technology Acceptance Model to the unorganised retailing setting by showing that the external factors are as determining as the internal technological perceptions. The extreme relevance of government support undermines Western-centric adoption models of individuals; in developing economies, institutional aspects play a more important role than it was previously thought. The outcomes of these studies create a need to revise the current theories in order to integrate environmental enablers.

To the service providers, the findings highlight the importance of simplified application designs. The ease of use implication implies that interfaces should be user-intuitive, and FinTech firms ought to focus on less-literate options of languages to reach out to less-literate users. Furthermore, marketing efforts ought to target the practical use of the technology, i.e. time saved and increased sales, to appeal to the profit-driven retailer.

The hegemony of the government support as a predictor has far-reaching policy consequences. The state will also need to invest more in a strong digital infrastructure and connection; regulations that will guarantee the safety of transactions will further build on the necessary merchant confidence. Also, the importance of financial literacy implies the need to implement educational interventions on the state level, with the governmental institutions hosting workshops that would improve the level of digital confidence of small retailers.

5. Conclusion and Future Scope
The main goal of the study was the determination of the factors influencing FinTech adoption up amongst the retailers. The research was able to extract the four drivers of digital transformation that shape the unorganized retail sector. The government support was found to be the most influential predictor of adoption intention by the surveyed retailers. This highlights how much external infrastructure and regulatory safety is critical in developing merchant confidence. Perceived ease of use was also a critical element in technological acceptance motivation. Retailers would also be more willing to use systems that are easy to use and those that need little technical training. In addition, financial literacy was found to be a key enabler to deal with digital transactions. Lastly, perceived usefulness validated that retailers have a preference to the tools which provide them with a real operational value and efficiency.

This research has a lot of contributions to the available research on technology acceptance models. It is an effective extension of the Technology Acceptance Model because it implements environmental and personal situational factors in a proper manner. The presence of government support as a variable is a way to fill a gap in the standard adoption theories. The existing models pay much attention to the individual perceptions and ignore the contribution of institutional enablers. This study has shown that the state is of central and non-negotiable role in developing economies. Also, the research confirms the significance of financial literacy as a theoretical research construct. It demonstrates that mental capacity is equally critical to the technology itself to be adopted.

The results provide a viable advice to service providers in the FinTech field that would wish to capture this particular market. One way developers can approach the challenge of simplifying the payment interface of unorganized retailers in the present day would be to focus on simplicity over complexity. The applications must provide support of vernacular languages to support the individual differences in educational backgrounds of the prospective users. The time-saving and viewing

digital payments as a safe option should be explicitly mentioned in the marketing strategies. Another way that the service providers can develop trust and credibility is by working together with local trade associations. The provision of low-cost or no-transaction-charge models would promote even more usage by the micro-entrepreneurs who are cost-sensitive. Lastly, the customer support systems should be very strong to address technical problems within the shortest time possible to keep using them.

The powerful impact of governmental funding makes the policymakers realize that they should invest more money. The state should make sure that there is a good internet connection even in the rural retail clusters that are the most remote. It must be enhanced through tightening up cybersecurity laws to ensure that retailers are not exposed to digital fraud and financial loss. Localized training camps should be established by the government bodies in order to improve the financial literacy of small merchants. Tax incentives or subsidies may be created to encourage retailers who switch to using digital payments. Moreover, the perceived administrative burden would be decreased by the simplification of the regulatory compliance procedure regarding the digital transactions.

Although the results are strong, this research paper appreciates the fact that some limitations are likely to influence the generalizability. Only six districts of the state of Karnataka were to be covered by the geographic scope. This method restricts the viewing of the long run changes of adoption behaviour. Also, the sample size was restricted to those retailers who were available at the time of the survey. It focused more on the unorganized retailers without including the large retail chains that are organized in the analysis.

Future researchers will be able to build on this study by covering a more geographical region to study. A comparative analysis of various states would could point to regional differences in the drivers of FinTech adoption considerably. The longitudinal research designs would enable the study of the behaviour of post-adoption usage across time. Qualitative research can also be done in future to explore the psychological barriers to adoption in details. Exploring how certain technologies like blockchain or AI will influence retail may vary radically. Lastly, researchers may be able to study the impact of social influence and peer pressure within communities of retailers.

The disorganized retail industry has entered a decisive point of digitalization and modernization nowadays. This paper establishes that adoption is not just a matter of choice in technology but the environment. The retailers will be open to the adoption of FinTech with the help of well-developed infrastructure and easy-to-use digital solutions. The success depends on the synergy of the government policy, the design of the technology and the individual literacy. The consideration of these determinants as a whole will make the inclusion of the retailers in the digital economy successful. Finally, this shift will help in the overarching aim of formalising of the Indian retail market.

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