Comparative Study Between User and Non-user Behavior Towards Unified Payment Interface (UPI) & QR payments in an Unorganized Retail Sector in India

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A B S T R A C T

This study is conducted with the objective to check the adaptation behavior toward Unified Payment Interface (UPI) & QR payments in the unorganized retail sector in India. Data was collected through structured questionnaires and schedules with help of 330 retailers of which 165 retailers were using Unified Payment Interface (UPI) & QR payments and 165 Non-Users. Data analysis was done through ANOVA, with help of 330 samples in the sector. The study has undertaken cross-tabulation to compare the relationship between users and non-users. The findings and implications are discussed.

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INTRODUCTION

Mobile wallet is also known as Payment Apps. The entire globe is moving towards a cashless society. The post COVID-19 has changed the shopping pattern and in a short time, digital payment in India has evolved. UPI payment & QR payments among merchants have surpassed credit/ debit card payments and replaced the traditional payment system. Unified Payment Interface (UPI) & QR payments, it has become even easier, as the transfer happens directly from the bank account rather than from a wallet. National Payments Corporation of India (NPCI) has developed a single-window mobile payment system for Indian users. Mobile wallet types in India are open, closed, semi-open, and semi-closed classified based on usage and payments. The top ten mobile payment apps are Google Pay, PhonePe, Dhani, BHIM Axis Pay, PayTM, MobiKwik, SBI YONO, ICICI Pockets, HDFC PayZapp, and Amazon Pay.

REVIEW OF LITERATURE, CONCEPTUAL FRAMEWORK AND HYPOTHESIS

The primary generic IT model was developed in the name of the diffusion of innovation (DOI) (Rogers, 1995). The secondary generic model was developed in name of the technology acceptance model (TAM) (Davis, 1986; Davis, 1989; Davis et al., 1989). The third generic model was developed in the name of the theory of planned behavior (TPB) (Ajzen, 1985; Ajzen, 1991). The fourth generic model was developed in the name of a unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). The adoption of DOI to IS/IT is influenced by four moderators viz., Age, Gender, Experience, and voluntariness of entrepreneurs to adapt to technology.

Personal characteristics of Retailers:

The personal characteristics of the Retailers (i.e., owner) will influence decision-making for investment into Point of Sale Terminal with Unified Payment Interface (UPI) & QR payments. Past studies showed that the Age of Retailers, Gender of Retailer, Experience of retailer, computer literacy of Retailers, and the Innovativeness of retailer affect the adoption of POS Terminal adoption of Unified Payment Interface (UPI) & QR payments.

H_1: There is no significant relation between the adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's gender.

Gender of the retailer, defined as male or female, will influence decision making for investment into Point of Sale Terminal with Unified Payment Interface (UPI) & QR payments. Past studies has showed that male has adapted to technology more than that of female retailers Roger(2003),Venkatesh etal.(2003), Park et al(2007),Plomp et al.(2011), Slyke et al. (2002), and Zhou et al. (2007).

H_2: There is no significant relation between Adoption of Unified Payment Interface (UPI) and QR payments and Entrepreneur's age.

Entrepreneur's Age of the retailer is defined based on young age or old age which influences decision making for investment into Point of Sale Terminal with Unified Payment Interface (UPI) & QR payments. Past studies has showed that retailers of young age has adapted to technology more than that of old retailers, Plomp et al.(2011), Roger(2003), and Venkatesh etal.(2003).

H_3: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's experience.

Experience of the retailer is defined based on lower or higher Entrepreneurial experience of Retailer, will influence decision making for investment in to Point of Sale Terminal with Unified Payment Interface (UPI) & QR payments. Past studies have shown that Entrepreneur's experience has adapted to technology more than that of less experienced, Chau(1995), Ekanem(2005), Park et al(2007), Plomp et al.(2011), Slyke et al. (2002), and Zhou et al. (2007).

H_4: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Computer literacy.

Computer literacy of the retailer is defined based literate or illiterate Adapt by Retailer to investment into Point of Sale Terminal with Unified Payment Interface (UPI) & QR payments. Past studies showed that literate has adapted to technology more than that of computer illiterate of retailers, Thong and Plomp et al.(2011), Yap.(1995), Van and Cavaye(1999).

H_5: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Size.

Competitiveness of the retailer is defined based able to compete with the Retailer in the market that influence decision making for investment into Point of Sale Terminal. Past studies

showed that flexibility of usage of technology more in the of competitive environment Iacovou et al. (1995), Julien and Raymond (1994), Plomp et al.(2011) and Thong and Yap (1995).

Research question: Why are the owners of unorganized retailing sector optioning Unified Payment Interface (UPI) & QR payments? What are the various determinants that the impacting Unified Payment Interface (UPI) & QR payments?

Research Methodology:

Need for the study:

The study is conducted to know POS terminal using Unified Payment Interface (UPI) & QR payments in unorganized retail sector and its efficiency on operations.

Objectives of the study: The study examines the unorganized retailer's behaviour towards Unified Payment Interface (UPI) & QR payments and makes comparison between User and Non-User Behavoiur.

Study site: The study is conducted in Karimnagar district of Telangana state of India

Nature of study: Nature of study is purely explorative and conclusive in nature.

Data collection method: The study considers primary data as well as secondary data. A primary source is collected through structured questionnaires and secondary sources through website, textbooks and journals.

The Questionnaire development

A polite study is conducted and questionnaires are developed through interaction with local retailers and experts in the market. Questionnaires are designed under three stages, first and second are closed in and thirdly an open ended. First part of questionnaire is general questions related to nature of business, ownership structure, personnel position, usage of UPI or not. Second part of the questionnaire is of application of organization factors.

Operational definition of unorganized retailers

Unorganized retailers for the study have to meet below criteria

    i.   Sole trade concern

ii.   Partnership firm (Unregistered)

iii. Local presence

iv.   Single Branch in local area

The Sample Nature: The samples of the study are 330 retailers of which 165 Users and Non-Users of UPI by unorganized retailers.

Sampling procedure: The samples are selected based on convenient and co-operation of people within specified strata.

The field works: The questionnaires were given to retailers in Karimnagar District and interviews and Schedules are conducted.

Statistical tools: The study considers descriptive statistic and ANOVA.

Hypothesis testing:

H_1: There is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Gender.

H_2: There is no significant relation between Adoption of Unified Payment Interface (UPI) and QR payments and Entrepreneur's Age.

H_3: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Experience.

H_4: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Education.

H_5: There is no significant relation between Adoption of Unified Payment Interface (UPI) & QR payments and Size.

Period of the study: The survey is conducted during June 2020 to September 2021.

Limitation of the study: Study conducted in Karimnagar district and with limited sample of unorganized sector only.

RESULTS

Usage of the Digital Payment versus Gender

Usage of Digital Payment	Count	Female	Male	Total
	Yes	17	148	165
	No	23	142	165
	Total	40	290	330

Table 1: Cross tabulation of Usage of the Digital Payment versus Gender

Gender plays vital role deciding the nature of business they invest. Women entrepreneurs have invested into Fashion designing & tailoring, women Beauty parlors, food catering and confectionary & bakery, Grocery shops, interior designing, Medical shops, and cosmetic shops. Men entrepreneurs have invested into grocery shops, men Beauty parlors, medical shops, foot ware shops, sweet house and bakery, fast food centers, Plastic and steel utensils stores, Vegetables, apparels, furniture, home decorative, cement and hardware shops, gold and jewelries.

Figure 1: Gender of the entrepreneurs
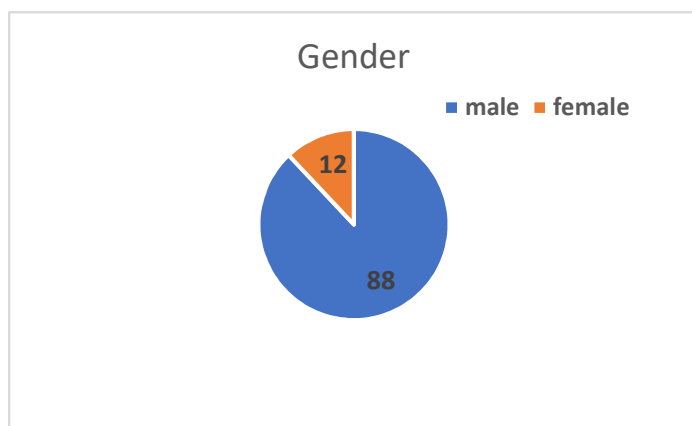
The sizable female respondents adapted Unified Payment Interface (UPI) & QR payments are 42% but   57% yet too adopted. The sizable male respondents adapted Unified Payment Interface (UPI) & QR payments are 51% but 49% yet to adopt. The majority of male have adapted to Unified Payment Interface (UPI). (Fig.1)

Adoption of UPI & QR payments versus Entrepreneur's Gender

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between the group	0.256	1	0.256	1.021	0.313
Within the group	82.244	328	0.251		
Total	82.50	329			

Table 2: ANOVA to test the relation between Adoption of UPI & QR payments versus Entrepreneur's Gender

Interpretation

The Null Hypothesis states there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Gender. ANOVA is used to check and test the hypothesis. F value is 1.021 is less than 2. P value is 0.313 is more than 0.05. This is statistically insignificant and accept null hypothesis. The Null Hypothesis is accepted, there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Gender. The women entrepreneurs facing challenges are limiting their entrepreneurship due to the following reasons: (i) Lack of opportunities. (ii) Lack of support from the family. (iii) Lack of mentorship. (iv) Lack of network. (v) Lack ability to take risk. (vi) Lack of access to capital. (vii) Lack of fixed assets ownership. (viii) Male dominated business. (ix) Family responsibilities. (x) Lack of productive environment. (xi) limited mobility. (xii) Lack of experience in running business. (xiii) Lack of education related to business, and (xiv) Lack of financial freedom.

Usage of the Digital Payment versus Age group

| Usage of Digital Payment	Count	<30 years	30-40 years	40-50 years	Above 50 years	Total
	Yes	83	40	42	00	165
	No	6	60	90	09	165
	Total	89	100	132	09	330

Table 3: Cross tabulation of usage of digital payment versus Age group

It is basic belief that older generation may recognize technology or innovation is hard to use, which current generation accept and adopt easily. Riskinanto.A. et.al.(2017) has observed that age group between 30 to 40 years respondents are active users of digital payment system. Liébana-Cabanillas.F.et.al (2015) has found that age between 35-45 respondents have adopted to Mobile

commerce. During COVID-2109 and De- monetarisation in India, the people are force to adapt to modern technology.

In general, young generation has higher learning capacity over previous generation people. The sizable age group less than 30 years, respondents adapted Unified Payment Interface (UPI) & QR payments are 93%. The sizable age group 40 to 50 years, respondents preferred cash payment over Unified Payment Interface (UPI) & QR payments are 68%. Whereas the majority of age group less than 30 years have adapted to Unified Payment Interface (UPI) because of later mover advantage and born with technology. But the majority of age group 40 to 50 years has to adapt to cash payment rather than Unified Payment Interface (UPI).(Fig.2)

Figure 2: Number of responders of different age groups
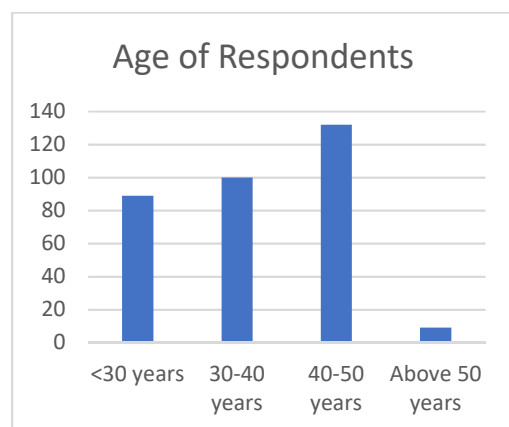
Adoption of Unified Payment Interface (UPI) & QR payments versus Entrepreneur's Age.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between the group	24.268	3	8.089	45.287	0.00
Within the group	58.232	326	0.179		
Total	82.50	329			

Table 4: ANOVA to test the relation between adoption of UPI & QR payments versus Entrepreneur's Age.

Interpretation

The Null Hypothesis states there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Age. ANOVA is used to check and test the hypothesis. F value is 45.287 is greater than 2. P value is 0.00 is less than 0.05. The statistically significant and reject null hypothesis. The alternative Hypothesis is accepted, there is a significant

relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Age. There are reasons for not using UPI & QR Code among respondents are no smart phones, fear of stolen devices, and phishing scams, forgetfulness of password, using public wifi, human error, security flaw, cloned application, and network risk, not aware of technology and dependent on others for technology.

Usage of the Digital Payment versus Entrepreneur's experience

Usage of Digital Payment	Count	0-5 years	5-10 years	Above 10 years	Total
	Yes	79	63	23	165
	No	7	63	95	165
	Total	86	126	118	330

Table 5: Cross tabulation of Owner Experience on usage of digital payment

Every business owner wants to get connected with their customers and serve the customer's better way. It is the basic belief that experienced owner may adapt to technology in order to make customers life easy and provide customer friendly services. In this way, the owner experiences can enhance business and sales revenue.

Figure 3: Number of responders with different experience levels
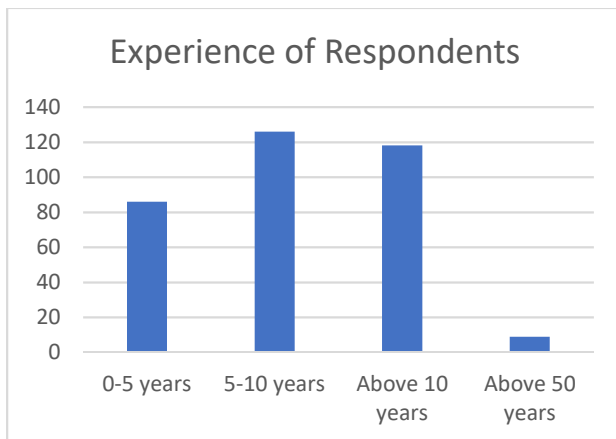
An experienced owner can move with latest technology to serve the customer better and retain them. Owner with less than 5 years' experience has adapted to technology (92%) to increase sales revenue. High experienced have preferred cash payment over UPI & QR Code payment (80%) they have royal customers, brand name, and reputation in the market.

Adoption of Unified Payment Interface (UPI) & QR payments versus Entrepreneur's experience

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between the group	26.053	2	13.026	75.462	0.000
Within the group	56.447	327	0.173		
Total	82.50	329			

Table 6: ANOVA to test the relation between adoption of Unified Payment Interface (UPI) & QR payments versus Entrepreneur's experience

Interpretation

The Null Hypothesis states there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's experience. ANOVA is used to check and test the hypothesis. F value is 75.462 is greater than 2. P value is 0.00 is less than 0.05. The statistically significant and reject null hypothesis. The alternative Hypothesis there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Experience. The reasons for not using UPI & QR Code among experienced owners claim that they are having brand name, loyal customers, reputation in the local market, business will grow. Most experienced owners are not interested in UPI & QR Code payment for various reasons, lack of trust in technology, cash handling is easier, time wastage for visiting bank, (whole sellers) suppliers are demanding payment in cash only, and fear that any time payment banks may charge addition cost for usage of technology services.

Usage of the Digital Payment versus Education

| Usage of Digital Payment	Count	Up to XII	Degree	Other	Total
	Yes	0	49	116	165
	No	59	31	75	165
	Total	59	80	191	330

Table 7: Education Cross tabulation of Usage of the Digital Payment over Cash Payment versus Education

The education had direct relation with technology adoption in the past studies. Similarly, it has found that higher education qualification, higher is adoption of technology. The respondents have

completed their degrees in Bachelor of Science, Bachelor of Commerce, Bachelor of Business Administration, Bachelor of Law, and Bachelor of technology and Bachelor of Hotel Management. Some respondents have completed master in Science, master in Commerce, master in Business Administration, master in Law and master in Hotel Management.

The respondents with less than schooling preferred cash payment over technology. Within group of respondents it is found that Degree (61%), and above (62%) preferred technology. Usage of technology degree qualified people has utilized UPI & QR Code payment (100%).

Figure 4: Number of Entrepreneurs with different educational levels
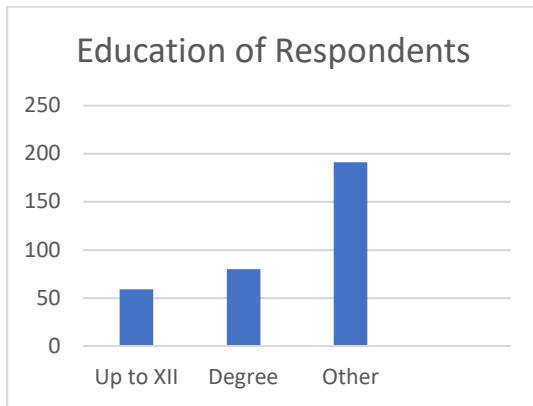
Adoption of Unified Payment Interface (UPI) & QR payments versus Entrepreneur's Education

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between the group	17.963	2	8.981	45.507	0.000
Within the group	64.537	327	0.197		
Total	82.50	329			

Table 8: ANOVA to test the relation between UPI & QR payments versus Entrepreneur's education

Interpretation

The Null Hypothesis states there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Education. ANOVA is used to check and test the hypothesis. F value is 45.507 is greater than 2. P value is 0.00 is less than 0.05. The statistically

significant and reject null hypothesis. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Education. Education is primary reason for adopting the technology. Less educated have adapted to cash payment over using UPI & QR Code payment. The following are the reasons of the less educated for not adapting UPI & QR Code payment: (i) They cannot read mobile message. (ii) Machine speaks in english and they cannot understand. (iii) They are depend on someone for everything. (iv) Lack of trust in technology. (v) Cash handling is easy. (vi) Time wastage for visiting bank (waiting in que), (whole sellers). (vii) Suppliers are demanding payment in cash only. (viii) Doubtful regarding payment credited to banks account. (ix) A bird in the hand is better than many in the bush.

In this study highly educated are not interested in UPI & QR Code payment for the following main reasons: (i) Lack of trust in technology. (ii) Cash handling is easier. (iii) Time wastage for visiting bank. (iv) (whole sellers) Suppliers are demanding payment in cash only. (v) Phobia of Income Tax and Goods and Services Tax (GST). (vi) Fear that any point of time payment banks may charge addition cost for usage of technology services. (vii) Initially the UPI & QR Code payment companies have given discount and points but this points have completed or partly removed. (viii) No benefits in holding such account.

From the above, it is well understood that education can manifest ones thinking and change in one's behavior.

Usage of the Digital Payment versus Income size

Usage of Digital Payment	Count	Low (< 5000)	Moderate (5000-1000)	High (>10000)	Total
	Yes	11	63	91	165
	No	36	76	53	165
	Total	47	139	144	330

Table 9: Cross tabulation of Usage of Digital Payment versus income Size

Business income is basis to decide the business size. The study has assumed low income less than 5000 per week, moderate income business income between 5000 to 10000 per week and high income above10000 per week. It basic belief is that low cash inflow can be easily managed with cash where as higher sales revenues have to be managed with technology.

Figure 5: Number of Entrepreneurs with different income groups.
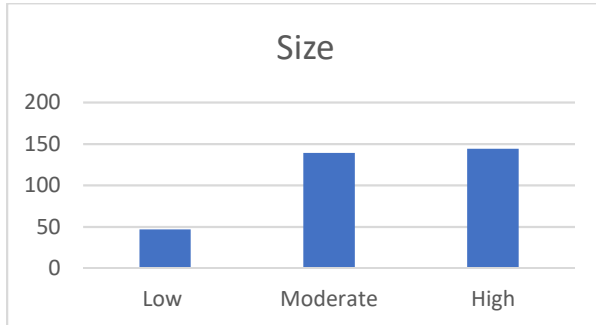
The peoples Income less than 5000 (per week) have preferred cash over the UPI & QR Code payment. The peoples Income between 5000- 10000 (per week) have preferred the UPI & QR Code payment. Income above 10000 (per week), preferred the UPI & QR Code payment. It's observed that higher the business volume, owners preferred the UPI & QR Code payment. It becomes easy to handle billing process and their by saves time.

Adoption of Unified Payment Interface (UPI) & QR payments versus Entrepreneur's income Size

Model	Sum of Squares	df	Mean Square	F	Sig.
Between the group	6.135	2	3.068	13.136	0.000
Within the group	76.365	327	0.234		
Total	82.50	329			

Table 10: ANOVA relation between adoption of UPI & QR payments versus Entrepreneur's Size.

Interpretation

The Null Hypothesis states there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Size. ANOVA is used to check and test the hypothesis. F value is 13.136 is greater than 2. P value is 0.00 is less than 0.05. The statistically significant and reject null hypothesis. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Size. Small business with less than 5000 (per week) has adapted to cash payment instead of using UPI & QR Code payment, the reasons cited for these are cash handling is easier, time wastage for visiting bank (waiting in que), (whole sellers) suppliers are demanding payment in cash only, and

doubt and fear that whether payment is credit or not banks account. In this study Income between 5000- 10000 (per week) have also preferred the UPI & QR Code payment the various reasons are as follows, it is easier to handle customers, time saving and with less people manage the business, change for money can be reduced, waiting que can be reduced, and focus core business rather than only billing.

CONCLUSION

This study is conducted with an aim to compare between User and Non-User behavior towards Unified Payment Interface (UPI) & QR payments in unorganized retail sector in India. The data collected through structured questionnaires and schedules with help of 330 retailers of which 165 retailers are using Unified Payment Interface (UPI) & QR payments and 165 Non-Users. The unorganized retail sector is dominated by the men. Men preferred Unified Payment Interface (UPI) & QR payments. Hypotheses testing, the Null Hypothesis is accepted, there is no significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Gender. Young aged people have preferred Unified Payment Interface (UPI) & QR payments and old aged people have preferred cash payment. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Age. The entrepreneurs with less experience have preferred Unified Payment Interface (UPI) & QR payments whereas high experienced preferred cash payment. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's experience. Less educated preferred cash payment whereas High educated preferred Unified Payment Interface (UPI) & QR payments. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Education. Those people with large volume of business preferred Unified Payment Interface (UPI) & QR payments. The alternative Hypothesis is accepted, there is a significant relation between adoption of Unified Payment Interface (UPI) & QR payments and Entrepreneur's Size. All entrepreneurs adapted Unified Payment Interface (UPI) & QR payments are also using cash payment.

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