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## A Study On The Influence Of Demographic Factors (Age, Gender, Occupation) On E-Finance Service Adoption

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**Abstract:** This study examines the influence of demographic factors on e-finance services in the Bareilly division & Moradabad division of Uttar Pradesh, India. The data is collected through primary method from respondents across Bareilly, Budaun, Pilibhit, Moradabad and rampur. This research analyse the mode of payment available through e-finance services & find the correlation between demographic factors and e-finance services with the help of descriptive statistics and ANOVA. This study recommends that, Boost digital infrastructure facilities, proper implementation of regulatory framework & Strengthen consumer protection and redress consumer's grievances.

**Key words:** E-finance services, demographic factors, FMCG products, Uttar Pradesh, infrastructure .

**1. INTRODUCTION-** The provision of financial services and markets using electronic tools, technology, and online communication is known as "e-finance." Numerous financial advancements are advantageous to banks and the government. The demand for digital banking products and services has increased as a result of the sharp increase in smart phone use. Over half of the 1.6 billion people who use financial services are women, thanks to online finance. By cutting spending and taxes, the government may save \$110 million annually, contribute an extra third to people's financial participation in MSMEs, increase GDP by \$3.7 trillion by 2025, and create 95 million new jobs overall.

As the financial services sector has become more digitalized, an increasing number of consumer touch points have emerged. In actuality, banks are rapidly using online banking apps, ATMs, SMS, email messaging, social media, and conventional paper-based methods to entice clients. In order to give their clients a seamless Omni channel experience, many are focusing on merging data analytics and AI talents.

**1.1 Problem statement:** Adopting e-finance solutions is challenging for consumer goods that move quickly due to issues with security, complexity, and integration as well as the need for specialized financial instruments.

The purpose of this issue statement is to identify practical solutions that will enhance financial processes and overall operational effectiveness, as well as to look into and remove barriers that FMCG companies have when putting financial systems into place.

The 2016 invalidation of the high-denomination currency notes resulted in a cash crisis that affected the sales of FMCG products and decreased consumer spending power.

Businesses have challenges as a result of the shift to digital transactions, especially in dominant areas with low levels of digital infrastructure and awareness.

### 1.2 RESEARCH OBJECTIVES:

1. To research various digital payment methods, including contactless payment, QR codes, and digital wallets, in order to accommodate a range of consumer preferences.
2. To determine the correlation between e-finance services & customers' age, gender, and occupation.

### 1.3 Significance of the study:

1. E-finance allows shops to offer digital payment options that speed up and improve the efficiency of transactions.

2. E-finance provides businesses with valuable data for customer insights and decision-making.

### 2. LITERATURE REVIEW-

1. Mishra's (2024) study, which focuses on Kanpur, Lucknow, and Ghaziabad, presents significant results about the relationship between branding and consumer purchasing patterns in Uttar Pradesh's FMCG sector. This chapter concludes the study's extensive analysis of consumer behavior dynamics and branding strategies by summarizing research findings to offer strategic insights for effective branding practices, guiding stakeholders.

2. **Anupasna Parashar, Arun Khatri, and Nakul Gupta (2020):** This study analyzes consumer behavior intentions on the usage of financial technologies using the technology acceptance model (TAM). A practical sampling technique was used to sample 220 customers.

Perceived utility and ease of use are characteristics that affect behavior intention and usage, according to Davis' TAM model. Five distinct dimensions—brand and service trust, perceived utility, Corresponding Author / Joint Authors



perceived usability, attitude toward usage, and behavior intention to use—are used in the study to analyze customer behavior toward new technology.

### 3. Key characteristics of digital financial services and financial inclusion in India, Chapter 2 (2020):

The author of this paper used a quantitative research methodology to track a significant shift in India's digital financial services. It places payment and banking services in client bands. He illustrates the advantages of the government's Jan-Dhan-Aadhar mobile program by providing rural residents with access to digital banking services. Under the Jan-Dhan-Yogana, each Indian citizen receives a basic account using just their Aadhar. According to the survey, the constraints were high translation costs and a dearth of bank branches.

**4. Lakshika Sammani Chandradevi (2020):** The study's main focus was on how well customers had adapted to using digital financial services. The researcher collected data via a questionnaire, and he made inferences based on the answers provided by 125 respondents. After choosing the sample at random, he also divided the respondents into groups according to their age and gender. He found that 70% of consumers utilize digital platforms either daily or weekly after analyzing his data.

**2.1 Research gap-** While studying e-finance services in various states of India, research specially examine limited research on e-finance in Uttar Pradesh. The few studies only talk about the consumer behaviour towards its acceptance. The current study addresses the gap by analysing different modes of e-finance services across various districts using statistical methods to access the adoption of e-finance services and its influence.

### 3. RESEARCH METHODOLOGY-

**3.1 Research design:** This study was conducted in Bareilly, Budaun, Pilibhit Moradabad & Rampur districts of Uttar Pradesh. The method used in the research paper is descriptive in nature. The data is collected with the help of Convenience sampling method. The structured questionnaire was used to collect primary data from the respondents.

**3.2 Sampling method and data collection:** Primary data were collected using structured questionnaire and face to face interviews. The data was collected from customers and retailers to find demographic factors and the mode of payment used by the respondents while purchasing goods. The total sample size is 570.

#### According to proportionate sampling method

Districts	Total population	Number of respondents
Bareilly	4448359	125
Budaun	3681896	105
Pilibhit	2031007	100
Rampur	2335819	100
Moradabad	2335819	140
Total	17269087	570

#### Rationale for selecting the sample size:

Roscoe, J.T. "Fundamental research statistics for the behavioral sciences" (1975). Holt, Rinehart, and Winston, New York. He recommends a general rule for sample sizes. A sample size of at least 30 but not more than 500 would be advantageous for the majority of investigations. Subgroups should include at least 100 samples from each site when doing research.

#### 3.3 Variables and measures:

- Independent variable- demographics (age, gender, income, district & education).
- Dependent variable- Preference or usage of contactless, QR code and digital wallet.

**3.4 Data analysis techniques:** The data collection was analysed using IBM SPSS statistics. The following methods were used to analyse the data:

**a) Descriptive statistics-** Mean, standard deviation, frequency distribution and percentage.

**b) One-way ANOVA-** to test for significance difference in mode of e-finance services and impact across three districts.

**c) Post HOC analysis-** Turkey's HSD test to identify specific group differences indicating significant inter-district variations.

### 4. RESULT AND DISCUSSION-

#### 4.1 Digital payment forms

**Table 1. Digital payment platforms**

Digital payment platforms	Frequency	Percent	Valid Percent	Cumulative Percent
Mobile banking app	49	8.6	8.6	8.6
Online banking	48	8.4	8.4	17.0
Digital wallets	11	1.9	1.9	18.9
UPI	304	53.3	53.3	72.3
Credit/ Debit cards	158	27.7	27.7	100.0
Total	570	100.0	100.0	

Most of the respondents opted for UPI as the mode of payment for purchasing goods with 158 respondents at 53.3%. Followed by credit/ debit cards with 158 respondents (27.7%). Remaining others consists with 8.6% usage mobile banking app, 8.4% usage online banking & only 1.9% respondents use digital wallets.

#### 4.2 Demographic profile of respondent

**Table 2. Gender & consumer behaviour toward E-finance services**

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	261	45.8	45.8	45.8
Female	309	54.2	54.2	100.0
Total	570	100.0	100.0	

The gender distribution shows that the female respondents are in majority of 309 respondents at 54.25% as compared to male respondent with 261 respondents at 45.8%, who opted for E-finance services.

**Table 3. Age & consumer behaviour toward E-finance services****Table 3. Age & consumer behaviour toward E-finance services**

Age	Frequency	Percent	Valid Percent	Cumulative Percent
18-24	230	40.4	40.4	40.4
25-34	140	24.6	24.6	64.9
35-44	122	21.4	21.4	86.3
above 45	78	13.7	13.7	100.0
Total	570	100.0	100.0	

The age wise distribution of respondents of e-finance services in table 2. Out of all the respondent majority of them constitute 230 respondents at 40.4%. Most of the respondents are at the age group of 18-24 years.

**Table 4. Income & consumer behaviour towards E-finance services**

Income	Frequency	Percent	Valid Percent	Cumulative Percent
less than 10,000	307	53.9	53.9	53.9
10,000 -20,000	53	9.3	9.3	63.2
20,000 - 30,000	77	13.5	13.5	76.7
above 30,000	133	23.3	23.3	100.0
Total	570	100.0	100.0	

The relationship between individual income and consumer buying behaviour shown in table 3. The category of between less than 10000, 53.9% agreed to it with highest majority. Followed by 30000 and above income with 133 respondents (23.3%). Remaining others are 20000-30000 with 7 respondents (13.5%), 10000-20000 with only 53 respondents (9.3%).

**Table 5. District & consumer behaviour towards E-finance services**

District	Frequency	Percent	Valid Percent	Cumulative Percent
Bareilly	125	21.9	21.9	21.9
Budaun	105	18.4	18.4	40.4
Rampur	100	17.5	17.5	57.9
Pilibhit	100	17.5	17.5	75.4
Moradabad	140	24.6	24.6	100.0
Total	570	100.0	100.0	



According to the data, a sizable majority of respondents—24.6% and 21.9%, respectively—came from the districts of Moradabad and Budaun. Budaun comes in second with 18.4%. The remaining two districts, Rampur and Pilibhit, each had 17.5% of the total responses.

**Table 6. Education & consumer behaviour towards E-finance services**

Education level	Frequency	Percent	Valid Percent	Cumulative Percent
No schooling completed	29	5.1	5.1	5.1
Nursery to 8th class	13	2.3	2.3	7.4
High school to Intermediate	91	16.0	16.0	23.3
Bachelor's degree	261	45.8	45.8	69.1
Master's degree	154	27.0	27.0	96.1
Others	22	3.9	3.9	100.0
Total	570	100.0	100.0	

The relationship between education & consumer behaviour toward E-finance services is presented in the table 5. In the category of no schooling 5.1%, nursery to 8th class 2.3%, high school to intermediate level 16%, bachelor's degree holders are at 45.8% and remaining 27% are in the category that has completed their masters. The most of the respondents comes to the category of who has completed their bachelors (261 respondents).

**4.3 Descriptive statistics:** The demographic characteristics of the 570 respondents are summarized with the help of descriptive statistics in table 7.

**Table 7. Descriptive statistics**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum		
					n					
						Lower Bound	Upper Bound			
Mobile banking app	49	1.4898	.50508	.07215	1.3447	1.6349	1.00	2.00		
Online banking	48	1.5833	.49822	.07191	1.4387	1.7280	1.00	2.00		
Age	Digital wallets	11	1.7273	.46710	.14084	1.4135	2.0411	1.00	2.00	
	UPI	304	1.4836	.50055	.02871	1.4271	1.5400	1.00	2.00	
	Credit/ Debit cards	158	1.6456	.47986	.03818	1.5702	1.7210	1.00	2.00	
	Total	570	1.5421	.49866	.02089	1.5011	1.5831	1.00	2.00	
	Mobile banking app	49	1.6531	.90257	.12894	1.3938	1.9123	1.00	4.00	
	Online banking	48	2.0833	1.19988	.17319	1.7349	2.4317	1.00	4.00	
Gender	Digital wallets	11	1.4545	.93420	.28167	.8269	2.0821	1.00	4.00	
	UPI	304	1.9967	.99004	.05678	1.8850	2.1084	1.00	4.00	
	Credit/ Debit cards	158	2.4304	1.16404	.09261	2.2475	2.6133	1.00	4.00	
	Total	570	2.0842	1.07697	.04511	1.9956	2.1728	1.00	4.00	
	Mobile banking app	49	1.7755	1.14137	.16305	1.4477	2.1033	1.00	4.00	
	Online banking	48	1.9375	1.19228	.17209	1.5913	2.2837	1.00	4.00	
Income	Digital wallets	11	1.5455	1.03573	.31228	.8496	2.2413	1.00	4.00	
	UPI	304	2.3454	1.31598	.07548	2.1969	2.4939	1.00	4.00	
	Credit/ Debit cards	158	1.6835	1.11211	.08848	1.5088	1.8583	1.00	4.00	
	Total	570	2.0632	1.26722	.05308	1.9589	2.1674	1.00	4.00	
	Mobile banking app	49	3.0612	1.44926	.20704	2.6449	3.4775	1.00	5.00	
	Online banking	48	3.1875	1.46819	.21192	2.7612	3.6138	1.00	5.00	
District	Digital wallets	11	3.1818	1.47093	.44350	2.1936	4.1700	2.00	5.00	
	UPI	304	2.9901	1.53826	.08823	2.8165	3.1637	1.00	5.00	
	Credit/ Debit cards	158	3.0886	1.42935	.11371	2.8640	3.3132	1.00	5.00	
	Total	570	3.0439	1.49039	.06243	2.9212	3.1665	1.00	5.00	
	Mobile banking app	49	4.2245	.82324	.11761	3.9880	4.4610	3.00	6.00	
	Online banking	48	3.9583	.92157	.13302	3.6907	4.2259	1.00	5.00	
	Education	Digital wallets	11	4.6364	.67420	.20328	4.1834	5.0893	4.00	6.00
	UPI	304	4.2730	.82121	.04710	4.1803	4.3657	1.00	6.00	
	Credit/ Debit cards	158	3.3354	1.29973	.10340	3.1312	3.5397	1.00	6.00	
	Total	570	3.9895	1.06546	.04463	3.9018	4.0771	1.00	6.00	

(Researcher's compilation)

The demographic data revealed various figure. Female consists of 54.2%. The predominant age group was 18-24 years, representing 40.4% of the respondents. Income level among the respondent are



below Rs.10000 as majority of respondent who usage E-finance services are young ones. Education among the respondents having education below senior secondary is 23.4% & higher education is 76.7% which shows that, most of the respondents come under highly educated sector that prefers E-finance services. Highest number of respondents belongs to Moradabad district of Uttar Pradesh.

#### 4.4 One way ANOVA

Table 8. One way ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
gender	Between Groups	3.326	4	.832	3.401	.009
	Within Groups	138.163	565	.245		
Age	Total	141.489	569			
	Between Groups	34.731	4	8.683	7.846	.000
incom	Within Groups	625.227	565	1.107		
	Total	659.958	569			
district	Between Groups	54.745	4	13.686	9.002	.000
	Within Groups	858.981	565	1.520		
education	Total	913.726	569			
	Between Groups	2.408	4	.602	.270	.898
	Within Groups	1261.495	565	2.233		
	Total	1263.904	569			
	Between Groups	99.384	4	24.846	25.685	.000
	Within Groups	546.553	565	.967		
	Total	645.937	569			

(Researcher's compliance)

The ANOVA result indicates significance differences across group sizes.

**4.5 Post HOC analysis:** To identify specific inter district differences, turkeys honest significance post-hoc test was conducted for each category.

Multiple Comparisons  
Dependent Variable: platform Tukey HSD

(I) district	(J) district	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
Bareilly	Budaun	.30133	.15054	.266	-.1106	.7133
	Rampur	.45800*	.15257	.023	.0405	.8755
Budaun	Pilibhit	-.45200*	.15257	.026	-.8695	-.0345
	Moradabad	.32514	.13994	.139	-.0578	.7081
Budaun	Bareilly	-.30133	.15054	.266	-.7133	.1106
	Rampur	.15667	.15890	.862	-.2782	.5915
Rampur	Pilibhit	-.75333*	.15890	.000	-.11882	-.3185
	Moradabad	.02381	.14681	1.000	-.3780	.4256
Rampur	Bareilly	-.45800*	.15257	.023	-.8755	-.0405
	Budaun	-.15667	.15890	.862	-.5915	.2782
Pilibhit	Pilibhit	-.91000*	.16083	.000	-.13501	-.4699
	Moradabad	-.13286	.14890	.900	-.5403	.2746
Pilibhit	Bareilly	.45200*	.15257	.026	.0345	.8695
	Budaun	.75333*	.15890	.000	.3185	1.1882
Moradaba	Rampur	.91000*	.16083	.000	.4699	1.3501
	Moradabad	.77714*	.14890	.000	.3697	1.1846
Moradaba	Bareilly	-.32514	.13994	.139	-.7081	.0578
	Budaun	-.02381	.14681	1.000	-.4256	.3780
	Rampur	.13286	.14890	.900	-.2746	.5403
	Pilibhit	-.77714*	.14890	.000	-.11846	-.3697



## Multiple Comparisons

Dependent Variable: platform Tukey HSD

(I) district	(J) district	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
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	Pilibhit	-.45200*	.15257	.026	-.8695	-.0345
Budaun	Moradabad	.32514	.13994	.139	-.0578	.7081
	Bareilly	-.30133	.15054	.266	-.7133	.1106
	Rampur	.15667	.15890	.862	-.2782	.5915
	Pilibhit	-.75333*	.15890	.000	-1.1882	-.3185
Rampur	Moradabad	.02381	.14681	1.000	-.3780	.4256
	Bareilly	-.45800*	.15257	.023	-.8755	-.0405
	Budaun	-.15667	.15890	.862	-.5915	.2782
	Pilibhit	-.91000*	.16083	.000	-1.3501	-.4699
Pilibhit	Moradabad	-.13286	.14890	.900	-.5403	.2746
	Bareilly	.45200*	.15257	.026	.0345	.8695
	Budaun	.75333*	.15890	.000	.3185	1.1882
	Rampur	.91000*	.16083	.000	.4699	1.3501
Moradabad	Moradabad	.77714*	.14890	.000	.3697	1.1846
	Bareilly	-.32514	.13994	.139	-.7081	.0578
	Budaun	-.02381	.14681	1.000	-.4256	.3780
	Rampur	.13286	.14890	.900	-.2746	.5403
	Pilibhit	-.77714*	.14890	.000	-1.1846	-.3697

\*. The mean difference is significant at the 0.05 level.

## (Researchers compliance)

Post hoc analysis revealed several differences between the districts. Mean for groups in homogeneous subsets are displayed. The group sizes are unequal.

**5. CONCLUSION AND FUTURE RESEARCH-**

**5.1 Summary:** Customer service has a high touch point activity in the financial services industry, but it is not a powerful force behind growth and differentiation. The majority of financial services firms consider fraud detection and regulatory compliance to be two of the most crucial uses of A.I. since frauds are a huge worry for FMCG items and may be quite costly.

E-finance studies that concentrate on financial performance, investment trends, risk considerations, and overall economic trends may be advantageous to FMCG companies. Researchers may discover connections between consumer behavior and market dynamics.

**5.2 Recommendations:**

- Boost digital infrastructure facilities.
- Proper implementation of regulatory framework.
- Strengthen consumer protection and redress consumer's grievances.

**5.3 Limitation & Future research directions:** This study had some of the limitations. The sample size can be expended for future research. The cross- tabulation can be designed. Future research can have following limitations:

- Expanding geographical districts to all the districts of Bareilly division & Moradabad division.
- Conducting longitudinal studies tracking e-finance services growth.

**5.4 Conclusion-** The e-finance services play a significant role in the life of consumers in the state of Uttar Pradesh. The following are some possible novelties that this study may reveal: Studying purchasing patterns and their financial impacts in the context of CPG as a whole, analyzing the impact of contemporary technologies on financial strategies, assessing financial strategies, assessing the financial effects of green initiatives in FMCG products, and investigating innovative financial frameworks for supply chain management could make a substantial contribution to the field.

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