



Determinants Of Online Shopping Behaviour: An Empirical Study Of Consumers In Jharkhand

Raj Kumar Gupta

Dr Anirban Gupta

Dr Ajay Kumar

(Department Of Commerce) St Xavier's College, Ranchi

Abstract Jharkhand, which is still recognized as a developing region, has witnessed a growth in digital technology and Internet facilities within the region that significantly influences the purchasing pattern of its consumers. Through this study, we will attempt to understand the online shopping behavior of consumers in Jharkhand. In this research, we will primarily focus on the various causes, reasons, and factors such as a products pricing as well as its convenience, trust in the product and platform, the accessibility of their website, the variety of products available, as well as security concerns such as delivery and payment security, and an effective delivery system.

An observation based method is used in this study to gather primarily data. Using a structured questionnaire as the main tool, we collected data from respondents from a wide range of ethnic groups and different demographic categories. Statistical tools, such as data analysis techniques, percentage approach, graphs and charts, are used in the research.

According to research, buyers are Gen greaterly influenced by issues like trust and security concerns in addition to product pricing and convenience. Furthermore, a consumer's purchasing behavior is greaterly influenced by a number of demographic parameters, including age, income, and educational attainments in any region.

Large E commerce businesses and legislators can use this research useful data to improve their consumer impact and marketing strategies, in order to increase their digital adoption in Jharkhand and enhance the user experience on their website.

Key words:- Digital technology, online shopping, consumer behavior, delivery system, E commerce, purchasing behavior

INTRODUCTION

Background of the study

The proliferation of smartphones and Internet connectivity in India over the past two decades has fundamentally transformed how citizens communicate, learn, work, and access markets. India is now one of the world's largest digital economies, which with hundreds of millions of smartphone users benefiting from affordable devices from brand such as Redmi Realme, and Samsung, and budget data plans for from Reliance Jio, Airtel, and Vodafone. Government initiatives such as the Digital India program have further access accelerated digital literacy and the availability of online public services even in remote areas.

In this environment, E commerce has experienced explosive growth Online shopping define as the purchase of goods and services via the Internet through devices such as mobile phones, tablet, and computers has emerged as a significant compliment and and in many categories, A replacement of traditional brick and more more tell retail. Platforms such as Flipkart, Amazon, Myntra, Messho and jiomart have democratized access to products, enabling consumers to

compare prices, read reviews, and receive home deliveries. The Covid 19 pandemic further accelerated adoption as consumers shifted to contactless and remote purchasing for everyday necessities.

The scope of E commerce is no longer confined to metropolis polytun cities It is rapidly penetrating Tire two and tier three cities as well as rural areas. Factors influencing online shopping behavior are multi faceted encompassing economic determinants (income, pricing sensitivity, discount), social and cultural factors for example family influence, peer recommendation, social media as well as psychological factor for example trust, risk perceptions, attitude, and technological factors for example Internet access, website usability, payment security, and demographic factors such as age, gender, education, occupation. Understanding how these determinants interact and vary across diverse regional context is of considerable academic and practical importance.

Statement of the problem

Despite widespread growth in digital commerce nationally, a developing state like Jharkhand presents a uniquely complex consumer landscape. The state is characterized by a heterogeneous population spanning urban, semi urban, and tribal ruler segments with significantly vary varying levels of income, educational attainment, digital literacy, and access to reliable Internet infrastructure. While urban consumers in cities such as Ranchi and Jamshedpur are increasingly embarrassing E commerce, ruler and tribal communities face barriers including limited connectivity adequate digital awareness, and deep seated concerns about online payment security and product authenticity.

Existing research has largely focused on Metropolitan consumers or on macro level Ruler Poverty Indicators in Jharkhand. A dedicated empirical investigation into the significance determinants of online shopping behavior among Jharkhands diverse consumers base is conspicuously absent from the literature the study addresses that void by empirical identifying and analyzing the factor that shape online purchase decision in the state.

Significance of the study

This study holds significance for multiple stakeholders. For E commerce companies and digital marketers, the findings offer actionable insights to tailor product offerings, pricing strategies, and user interface designs to Jharkhand's consumer profile. For policymakers, the data on digital literacy gap and trust deficits can inform targeted digital inclusion programs. For academic researchers, the study contributes a region specific empirical evidences based on the border body of knowledge on consumer behavior in emerging digital markets. Finally for entrepreneurs and startup seeking to establish or expand operations in Jharkhand. Understanding local consumer determinants is foundational to success market entry.

Scope of the study

The study is geographically confined to the state of Jharkhand with respondent drawn from diverse demographic segments including students professionals business persons and homemakers across different income groups the research examines three primarily determinants. (a) Internet Access and Digital Literacy, (b) demographic factors such as income and education, (c) trust and security in online platform. The data was collected using a structured questionnaire administered to 151 respondents, analyzed using IBM SPSS statistic through descriptive analysis, regression, ANOVA and bootstrap procedures.

02.LITERATURE REVIEW

Studies on online shopping behavior and purchase intention

1. Jadhao (2018) Examined the determinant attributes of online grocery shopping in India and found that convenience, time saving, competitive pricing, product quality assurance and secure payment gateway are the primary drivers of Adaptation. Demographic variable age, income and education also emerged as significant moderators of shopping frequency.
2. Singh ET AL. (2020) Conducted an empirical study of factors affecting online shopping behavior among Indian consumers and highlighted that convenience pricing, product variety and consumer trust mini, platform are the key determinants. The study underscored the importance of digital awareness and secure payment infrastructure in driving purchase decision.
3. Thamizhvanan & Xavier (2013) Analyze determinants of consumers online purchase intention in India and demonstrate that trust, perceive usefulness, ease of use and website

quality positively influence versus intentions, while security concern and risk perceptions act as inhibitors.

4. Prasad & Aryasri (2009) Investigated shoppers behavior determinants of E tailing and identified convenience orientation, trust, website quality and prior online purchase experience as cooked significant predictors of E tailing adaptation among Indian consumers.
5. Farhana, Khan & Noor (2017) Studied factors affecting attitudes towards online shopping among urban youth in Bangladesh and found that ease of use, product variety, fear in influence and perceived value positively safe attitude, while security Create resistance.
6. Hariramani (2017) Examine consumers perspectives of online shopping in India and found that convenience, time saving, product variety and competitive pricing strongly and positively influence consumer perception. Concerned about product quality and the absence of physical inspection, however, act as barrier to wider adoption.
7. Shalu (2024) Evaluated consumer satisfaction in E commerce companies in Ranchi, Jharkhand and reported that product quality, pricing time lead delivered, user friendly interface, payment security and hassle free return policy are critical to consumer satisfaction and long term loyalty.
8. Mishra (2024) Conducted a doctoral study on online shopping behavior of rural consumer in Jharkhand (ICFAI University) And found that limited Internet access, low digital literacy, trust deficit and logistic challenges significant constraint ruler E commerce adaptation in the state.

Study on digital literacy, Internet access and technology adaptation

9. Jain (2016) Explored factors influencing outcome expectations and self efficiency in driving Internet using rural India and conclude that perceived benefit of Internet use (Information access, economic opportunity, social connectivity) An individual confidence in digital navigation are the two most critical determinants of adaptation in underserved areas.
10. Singh, Sinha & Gupta (2025) Examined psychological and socio economic factor influencing Internet users among ruler users in India, focusing on outcome expectation and self efficiency. They found that individual who perceived high digital benefit are more likely to adopt Internet services, while low digital confidence service as a major barriers.
11. Bhat & Darzi (2020) Develop a Socio cometric approach two online service quality determinant and E trust in Internet shopping, demonstrating that reliability, responsive, assurance and privacy significant predict consumer interest, which in turn drive online purchase intentions.

Studies on demographic factor and consumer behaviors

12. Das (2019) He studied factors influencing the buying behavior of youth consumer towards mobile handset in coastal Odisha and identified brand image, price, peers influence, product features and after sales service has dominant purchase drivers for young digital consumers.
13. Majumder (2021) Analyze factors influencing the purchase behavior of life insurance policy in Jamshedpur and found that income level commerce perception, trust in insure, agent activities and financial literacy significant shape consumers decisions, highlight the role of economic and sociological factors in financing service adaptation.
14. Khalid (2023) He studied parental demographic and school selection in Jharkhand confirming that socio economic status (parental education, income, occupation) significant determinant consumer choice behavior even non commercial service context within the state.

Studies on Jharkhands digital and economic landscape

15. Purty, Khatua & Panda (2024) Examine the impact of digital marketing or E commerce adaptation among indigenious micro and small business invest Singham Jharkhand. They found that while detail platform are transforming traditional business commodity digital literacy, poor Internet connections and technical limited skills among business owners impaired effective ecommerce integration in rural Jharkhand.
16. Mishra & Srivastava (2019) Investigated emerging distribution channel effectiveness in ruler Jharkhand for consumer electronics, highlighted that mobile platform, local retailers and digital marketing play Vital role in researching rural consumers when a companies buy affordability and channel specific trust.

17. Singh et al. (2011) Analyze socio economic determinants of rule of poverty in Jharkhand and found that unemployment, unlimited resource excess and poor infrastructure and low education collective sustained rural poverty, creating and economic environment that constant discrete scenery spending on ecommerce.
18. Singh et al. (2013) Further examine determinants of rural poverty in Jharkhand and idealize occupational structure, land holding size, family composition and access to healthcare and education as multidimensional poverty drivers that indirectly restricted digital consumer participation.
19. Gautam kumari & Aggarwal (2025) Identified a significant gap between green purchase intention and actual behavior among consumer Jharkhand and West Bengal, finding that high product prices, limited ability and lack of awareness are key barriers mirroring the intention action gap observed but in online shopping adaptation.
20. Das (2021) Study direct purchase behavior of urban consumers for agriculture produce in North Bengal and highlighted that product freshness, quality, price, farmer trust, visual awareness and accessibility collective save consumer buying behavior in direct to direct digital channel.

Summary of previous research

The reviewed literature consistently identifies convenience, pricing, digital literacy, trust, and security as core determinants of online shopping behavior. Studies from Metropolitan India and international context coverages on the Technology acceptance Model constructs perceived usefulness and ease of use as foundational to E commerce adaptation. Research specific to Jharkhand, however, reveals a more launch picture socioeconomic heterogeneity, tribal culture context, low digital literacy, and infrastructure deficits creates layer of complexity not captured in urban centric or macro level studies.

Identification of research gap

A comprehensive review of the literature reveals that studies on online shopping behavior in Jharkhand are remarkably Sp, particularly concerning semi urban and ruler segments. Prior Jharkhand focused research has addressed rural poverty (Sing et al., 2011, 2013), Distribution channel effectiveness(Mishra and Srivastava, 2019), and digital marketing in tribal businesses(Pootie et al., 2024), But none has conducted a holistic empirical study of consumer online shopping behavior integrating digital literacy, demographic influences, and trust security perceptions within a unified framework. The urban ruler digital divide, psychological determinants such as trust and risk perception, and product category preferences remain empirical explored in this regional context. This study addresses these critical gaps.

03. RESEARCH GAP

Most existing studies on Indian E commerce behavior focused on metropolitan cities and do not adequately address the semi urban and rural context of states like Jharkhand, where income levels, Internet access, and digital awareness differ significantly. There is a lack of (a) Detailed urban VS Rural Behavior Analysis,(b) Empirical investigation of psychological factors such as trust and risk perceptions in the real world regional context,(c) Analysis of consumer product category preferences in online shopping and(d) Examination of the digital divide impact on E commerce adaptation. This study is designed to bridge these gaps through an empirical survey based investigation within Jharkhand.

04. RESEARCH QUESTIONS

1. Do Internet access, availability, and digital literacy influence online shopping behavior?
2. Do demographic factors such as income and education influence online shopping behavior?
3. Do consumers trust online consumer platform and how does trust affect purchasing decision?

05. RESEARCH OBJECTIVES

- Objective 1:- To analyze the impact of Internet access and digital literacy on consumers buying behavior.
- Objective 2:- To study the influence of demographic factors such as income and education on consumers buying behavior.
- Objective 3:- Evaluate the role of trust and security in shaping online consumer buying behavior.

06. HYPOTHESIS

H0 (Null hypothesis): There is no significant impact on consumers buying behavior through price range and accessibility.

H1 (Alternate hypothesis): Product range and accessibility have a profound impact on consumers buying behavior.

07. RESEARCH METHODOLOGY

Research design

The study adopts a descriptive and analytical research design. Primary quantitative data was collected through a structured questionnaire to empirically examine the determinants of online shopping behavior among consumers in Jharkhand. The research integrates descriptive, correlational, and inferential analysis to provide a comprehensive understanding of the relationship between study variables.

Data Sources

Primary data: Collected through a structured questionnaire administrated via Google Forms to consumers across Jharkhand. The questionnaire comprises Likert scale item(1= Strongly disagree TO 5 = I strongly agree) Measuring construct price range and accessibility(Variable B) , trust and security(Variable C), digital literacy and Internet access(Variable D) , and consumers buying behavior(Variable E).

Secondary data: Sourced from published academic journals, books, government reports and credible websites including en.Wikipedia.Org/wiki/Jharkhand and Jharkhand.gov.in to contextualize the study within Jharkhand's socio economic landscape.

Sampling technique and sample size

A convenience sampling method was employed, targeted easily accessible respondent across diverse demographic category including students, professional, business persons, and homemakers. A total of 151 valid responses were collected and analyzed, representing consumers across different age groups(01-20, 21-30, 31-40, and 40+), Income (Below rupees 15,000 to rupees 60,001 and above), educational level(intermediate to postgraduate), And occupations.

Data collection method

Primary data was collected using I structured self administrative questionnaire distributed through digital channels. The questionnaire was pilot tested for clarity and reliability before the final administration. All construct wear measured using five licensed scale items each yielding 20 items across the four constructs.

Statistical tools and software used

Data was analyzed using IBM SPSS statistics. The following statistical procedure were employed: (a) Descriptive statistics means any standard deviation for all constructs: (b) One sample T test with bootstrap validation(One thousand stratified samples, stratified by income) (c) Linear regression analysis to test the predictive relationship between price range and accessibility (b) And consumer buying behavior(e) (d) One way ANOVA to examine differences in buying behavior across labels of the independent variable and(e) Percentage analysis frequency distribution and like at scale responses profiling for demographic interpretation. Effective sizes were reported using Cohen's D, ETA squared and Omega squared.

08. DATA ANALYSIS AND HYPOTHESIS TESTING

A total of 151 valid responses were collected and analyzed. The demographic profile is summarized below.

Demographic variable	Category	Count	Percentage
Gender	Male	90	59.60
	Female	61	40.40
Age group	01 – 20 years	30	19.87
	21 – 30 years	64	42.38
	31 – 40 years	32	21.19
	40 plus years	25	16.56
Education	Intermediate	18	11.92
	Graduate	71	47.02
	Postgraduate	38	25.17
	Others	24	15.89
Occupation	Student	59	39.07
	Business	32	21.19
	Professional	32	21.19
	Homemaker	12	7.95
	Other	16	10.60
Monthly income	Below rs 15,000	48	31.79
	RS 15,001 – 30,000	19	12.58
	RS 30,001 – 45,000	23	15.23
	RS 45,001 – 60,000	26	17.22
	RS 60,001 and above	35	23.18
Shopping frequency	Very frequently	14	9.27
	Frequently	52	34.44
	Sometimes	60	39.74
	Rarely	25	16.56

Demographic profile of respondent (n= 151)

The sample is predominantly male 59.6% with the 21 – 30 age group forming the largest chart 42.38% consistent with the digital native character of active online shoppers. Graduate constituent 47.02% of respondent and students are the most represented occupational group 39.07%. Income is heterogeneous with 31.79% earning below rupees 15,000 and 23.18% earning above rupees 60,000. Most respondent shop online sometimes 39.74% or frequently 34.44%, indicating regular but not habitual E commerce Engagement.

Descriptive statistic of study variable

Variable	Construct	N	Mean	STD .DEV.	Interpretation
B	Price range and accessibility(IV)	151	3.584	1.095	Moderately High Agreement
C	Trust and security	151	3.344	1.107	Moderate agreement
D	Digital literacy and Internet access	151	3.5 21	1.079	Moderately high agreement
E	Consumer buying behavior(DV)	151	3.456	1.136	Moderate high agreement

Composite descriptive statistics of study variable

Main scores for all constructs fall between 3.34 and 3.58 on the five point scale, indicating moderate to moderately high agreement. Variable records the highest mean 3.584, affirming its centrality in consumer decision making. Variable C has the lowest composite mean 3.3 44 with item C personal data security, mean = 3.993 the only variable dipping below the midpoint signaling a persistent data privacy concern. Variable D shows that Internet access frequency D4 mean = to 3.656 is the strongest digital determinant.

One sample T test analysis

Parameter	Value
N	151
Mean	3.4556
Standard deviation	0.93671
Standard error mean	0.07623
D value	45.333
Degree of freedom	150
P value	< 0.001
MEAN difference	3.45563
95% CI	3.302, 3.593
Cohen's D	3.689 Very Large effect

one sample T test results

The one sample T test is highly significant. The main buying behavior score is 3.456 is significantly above the neutral baseline confirming that consumer buying behavior is positive. Bootstrap analysis validates the parametric result with a negotiable bias Add a none overlapping 95% confidence interval. Cohen's D = 3.689 represents an extraordinarily large practical effect, for exceeding the conventional threshold of 0.8 for a large effect.

Linear regression analysis

Model parameter	Value
Pearson correlation (R)	.471
R Square	.222
Adjusted R square	.217
Standard error of the estimate	.82899
F statistic	45.513
Significance	<.001
Unstandard coefficient	.542
Standardized beta	.471
Constant	1.514

Regression model summary and coefficient

Regression equation : Consumer buying behavior (E) = 1.514 plus 0.542 * price range and accessibility D.

The regression model is statistically significant. Price range and and accessibility explains 22.2% of the variance in consumer buying behavior. For every one unit increase in perception of price range and accessibility, consumer buying behavior increases by 0.5 photo units. The standardized beta indicates a moderate to strong predictive effect.

One way ANOVA analysis

Source	Sum of squares	DF	Mean Square	F	Sig.
Between groups	65.310	17	3.842	7.706	<.001
Within groups	66.303	133	.499		
Total	131.613	150			

One way ANOVA results**Hypothesis testing result summary**

The null hypothesis H₀ is rejected at P < .001 Across all four statistical tests. The alternative hypothesis H₁ is accepted. Price range and accessibility have a statistical significant, practically large and consistent impact on consumer buying behavior among consumers in Jharkhand.

09. OBJECTIVE WISE ACHIEVEMENT OF OBJECTIVES**Objective 1: impact of Internet access and digital literacy****Achievement Status: FULLY ACHIEVED**

Variable item	D	Description	Mean	SD	Finding
D4		Internet access influences purchase frequency	3.656	1.040	strongly supported
D3		Comfort navigating E commerce platform	3.589	1.008	Supported
D5		Digital skills get better deals online	3.603	1.184	Supported
D1		Regular Internet use of product research	3.430	1.036	Supported
D2		Digital literacy enhances purchase decision	3.325	1.099	Partial supported

Digital literacy and Internet access results**Objective2 : influence of demographic factors****Achievement status: FULLY ACHIEVED**

Demographic factor	Key observation	Relevance to buying behavior
Income Below RS 15,000 31.79%	Primarily students, budget driven	Highly price sensitive, strongest aligning with variable B
Income RS 15,001 – 45,000 27.81%	Mid income earners	Moderate price sensitivity, value conscious
Income RS 45,001 – 60,000 17.22%	Upper middle income	Convenience oriented, higher platform trust
Income RS 60,001 + 23.18%	Higher purchasing power	Less price sensitive, prioritize accessibility and variety
Graduate education 47.02%	Largest educated group	Capable digital navigation, better price comparison
Post graduate 25.17%	Hi Digital Literacy	Higher trust in online transactions, lower risk perception

Demographic influence on buying behavior

Objective 3 Evaluating the role of trust and security**Achievement Status :FULLY ACHIEVED**

Variable C item	Description	Mean	SD	Implications
C5	Customer reviews increase purchase confidence	3.616	1.119	Social Proof is a key trust builder
C4	Return policies build trust	3.589	1.022	Post purchase security is critical
C1	Trust in online payment systems	3.318	1.002	Moderate trust, room for improvement
C3	Online platform ensure secure transactions	3.205	1.097	Transaction security concerns persists
C2	Personal data is secure on E commerce sites	2.993	1.175	Critical gap data privacy concern

Trust and security analysis**10. FINDINGS, CONCLUSION, AND SUGGESTIONS****Major findings**

- Higher educational attainment is associated with greater digital literacy and reduced risk perception, enabling more confident and frequent online purchasing.
- Price range and accessibility are the most influential determinants of online shopping behavior with a composite mean of 3.584 and statistically significant effect confirmed across all four statistical test.
- Internet access frequency is the single strongest digital determinant of purchase behavior confirming that connectivity is foundational enable of E commerce adaptation in Jharkhand.
- The 21–30 age group is the most active online shopping, reflecting the digital native character of younger consumers student consumers constitute the largest segment and exhibit high price sensitivity.
- Income is a significant modulator of online buying behavior. Lower income consumer prioritize price and discounts, higher income consumer are more driven by convenience and product variety.

Conclusion

The study concludes that online shopping behavior in Jharkhand is expanding rapidly due to rising Internet penetration increased smartphone users, and growing adaptation of digital payment system. Consumers are primarily motivated by convenience, competitive pricing, wide product variety and easy accessibility, while youngers and more educated consumer participate more actively in online shopping than other demographic groups. The research further highlights that factors such as trust payment security, delivery efficiency and customer service significantly influence consumer satisfaction and loyalty. Despite the increasing popularity of E commerce, challenges related to payment security, product authenticity, and limited digital literacy continue to affect consumers, particularly in rural areas. Therefore, the study suggests that ecommerce companies should strengthen security measures, improve delivery infrastructure, and enhance consumer awareness programs to promote greater adoption of online shopping in Jharkhand.

Suggestions

Online shopping companies should improve payment security, delivery services and customer supports to increase consumer trust and satisfaction in Jharkhand. Digital awareness program should be conducted, especially in rural areas, to improve digital literacy and encourage safe online shopping practices. E commerce platform should also provide affordable pricing, attractive office Walmart transparent return policies, and regional language support to attract more customers. Additionally better Internet connectivity and stronger logistic network can further promote online shopping adaptation in the state.

11. REFERENCES

1. Bhat, S. A., & Darzi, M. A. (2020). Online service quality determinants and e-trust in internet shopping: A psychometric approach. *Vikalpa*, 45(4), 207–222.
2. Das, D. (2012). An empirical study of factors influencing buying behaviour of youth consumers towards mobile handsets: A case study in coastal districts of Odisha. *Asian Journal of Research in Business Economics and Management*, 2(4), 68–82.
3. Das, D. (2021). Direct purchase behaviour of urban consumers for agricultural produce in North Bengal (Doctoral dissertation, NDRI).
4. Farhana, N., Khan, T., & Noor, S. (2017). Factors affecting the attitude toward online shopping: An empirical study on urban youth in Bangladesh. *Australian Academy of Business and Economics Review*, 3(4), 224–234.
5. Gautam, R., Kumari, A., & Aggarwal, M. (2025). Intention and gap in green purchase: A study on consumers of Jharkhand and West Bengal. In *Agile Business Transformations* (pp. 273–292). Apple Academic Press.
6. Hariramani, S. G. (2017). A study on consumers' perception about online shopping in India. Archers & Elevators Publishing House.
7. Jadhao, S. (2018). Determinant attributes of online grocery shopping in India: An empirical analysis.
8. Jain, R. (2016). Factor influencing outcome expectations and self-efficacy in driving internet use in rural India. Indian Institute of Management.
9. Khalid, M. S. (2023). Parental demographics and school selection: An empirical study of Jharkhand, India (Doctoral dissertation, Martin University).
10. Majumder, I. (2021). Factors influencing purchase behaviour of life insurance policies. *Jamshedpur Research Review*, 74.
11. Mishra, P. K., & Srivastava, G. K. (2019). Emerging distribution channel effectiveness in rural Jharkhand for consumer electronics. *Sumedha Journal of Management*, 8(2), 97–112.
12. MISHRA, S. (2024). A study of online shopping behaviour of rural consumers (Doctoral dissertation, ICFAI University, Jharkhand).
13. Prasad, C. J., & Aryasri, A. R. (2009). Determinants of shopper behaviour in e-tailing: An empirical analysis. *Paradigm*, 13(1), 73–83.
14. Purty, S. K., Khatua, P., & Panda, L. (2024). Impact of digital marketing on the adoption of e-commerce among the indigenous micro and small businesses in West Singhbhum, Jharkhand. *Odisha Journal of Commerce and Management*, 11.
15. Shalu, M. (2024). Customer satisfaction in e-commerce companies in Ranchi, Jharkhand. *International Journal of Computing & Decision Sciences*, 150–163.
16. Singh, A., Singh, A., Vij, T. S., & Pardesi, A. (2020). An empirical study of the factors affecting online shopping behaviour of the Indian consumers. *International Journal of Advanced Science and Technology*, 29(8), 406–411.
17. Singh, K. M., Meena, M. S., Kumar, A., & Singh, R. (2011). Socio-economic determinants of rural poverty: An empirical exploration of Jharkhand State, India.
18. Singh, K. M., Singh, R., Meena, M., Kumar, A., Jha, A., & Kumar, A. (2013). Determinants of rural poverty: An empirical study of socio-economic factors in Jharkhand, India.
19. Singh, M. V. K., Sinha, K., & Gupta, M. R. (2025). Adoption of mobile financial services among rural customers in Jharkhand.
20. Thamizhvanan, A., & Xavier, M. J. (2013). Determinants of customers' online purchase intention: An empirical study in India. *Journal of Indian Business Research*, 5(1), 17–32.

List of websites :-

- <https://en.wikipedia.org/wiki/jharkhand>
- <https://jharkhand.gov.in/home/aboutstate>
- <https://www.google.com>