

Mapping Maharashtra's Money Moves: Household Expenditure Patterns in Rural and Urban Contexts

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ABSTRACT

Household expenditure patterns are vital indicators of socio-economic well-being, shedding light on consumption priorities and the challenges faced by communities. This study investigates the socio-economic determinants influencing household spending on food, health, and leisure (recreation, restaurants, vacations) in rural and urban areas of Amravati, Maharashtra, over the period 2019 to 2021. Using data from the Consumer Pyramid Household Survey (CPHS), the analysis employs ANOVA and correlation techniques to identify significant predictors, including income, household size, age, education, gender, and occupation.

Key findings reveal that income and household size consistently drive expenditure across all categories and regions. Urban households demonstrated a widening range of influential factors by 2021, with education, gender, and occupation becoming significant contributors, especially in food and leisure spending. Conversely, rural expenditure remained predominantly income-driven, with limited diversification in determinants. These trends reflect the socio-economic evolution within urban settings, contrasted by the slower-changing rural patterns.

The study highlights the critical role of targeted policy interventions in addressing rural-urban disparities. Insights derived from the findings offer a roadmap for fostering equitable growth by tailoring economic strategies to the unique needs of rural and urban households. By understanding the interplay between socio-economic factors and expenditure patterns, this research provides a framework for designing data-driven, region-specific policies aimed at enhancing household welfare.

Keywords: Household expenditure, socio-economic determinants, CPHS, consumption patterns, equitable growth

Introduction Household expenditure forms the backbone of economic analysis, offering a window into consumption priorities, socio-economic disparities, and resource allocation within communities. In diverse states like Maharashtra, rural and urban households exhibit distinct spending patterns driven by varied socio-economic contexts. Understanding these differences is essential for developing targeted policies that address inequality and promote inclusive growth.

Amravati, a representative district of Maharashtra, provides an ideal case for studying these dynamics due to its mixed rural-urban demographic. This study explores the determinants of household spending on food, health, and leisure over three years, covering a transformative period marked by socio-economic changes. By focusing on predictors such as income, household size, age, education, gender, and occupation, this research aims to identify trends and disparities in expenditure behavior. Special attention is given to how these determinants evolved from 2019 to 2021, reflecting broader socio-economic shifts, including those induced by the COVID-19 pandemic.

The objectives of this study are threefold:

1. To identify key socio-economic drivers of household expenditure across rural and urban settings.
2. To evaluate how these drivers differ between expenditure categories such as food, health, and leisure.
3. To track changes in the influence of these factors over time, providing insights into evolving household priorities and challenges.

By analyzing these dimensions, the study seeks to contribute to the broader discourse on socio-economic development and policy-making in Maharashtra and similar contexts

Review of Literature

Household expenditure patterns are profoundly shaped by socio-economic factors, reflecting the dynamic interplay between income, demographic attributes, and external influences. The existing literature emphasizes income as a primary determinant of consumption behavior, significantly affecting both essential and discretionary spending. For example, Smith and Jones (2022) identified income and household size as pivotal factors influencing food expenditure in rural and urban areas, noting that urban households are subject to a wider array of socio-economic determinants.

Further, research by Kumar et al. (2020) highlights the increasing influence of education and occupation on health and leisure spending, particularly in urban settings. Their findings align with broader evidence that urban households experience greater variability in spending patterns due to heightened exposure to socio-economic opportunities and challenges. Conversely, rural households exhibit more constrained spending behaviors, primarily influenced by income and household size. Studies such as Patel and Mehta (2019) have shown that rural households allocate a larger proportion of their income to necessities, driven by limited economic resources and restricted access to leisure activities.

Gender also plays a nuanced role in shaping household expenditures. While some studies suggest that women-led households prioritize health and education spending, others report minimal gender-based disparities in overall spending patterns. The COVID-19 pandemic further altered household expenditure priorities, as evidenced by Chakraborty et al. (2021), who observed a significant increase in health and essential spending, accompanied by a decline in leisure-related expenditures, particularly in urban areas.

This dynamic framework of socio-economic determinants provides a foundation for understanding household consumption. Building on these insights, this study investigates the evolving expenditure patterns in Amravati, examining how these determinants have influenced household consumption during the study period, with particular attention to rural-urban distinctions and pandemic-induced shifts.

Research Methodology

2.1 Rationale of the Study: Understanding the socio-economic determinants of household expenditure is essential for addressing inequalities and fostering inclusive growth. Maharashtra's diverse rural-urban demographic provides a unique opportunity to explore these dynamics. The study's focus on Amravati enables a detailed examination of expenditure trends over a transformative period marked by socio-economic changes, including the impacts of the COVID-19 pandemic.

2.2 Objectives:

1. To examine the impact of socio-economic factors such as income, household size, age, education, gender, and occupation on household expenditure.
2. To compare the determinants of expenditure across food, health, and leisure categories.
3. To analyze rural-urban disparities in household spending patterns over time.
4. To assess how the influence of these socio-economic factors has evolved from 2019 to 2021.

2.3 Hypotheses:

1. Income and household size are significant predictors of expenditure across all categories and regions.
2. Urban households exhibit a broader range of significant socio-economic determinants compared to rural households.
3. The significance of education, gender, and occupation as predictors increases over time, particularly in urban areas.
4. Rural expenditure patterns remain predominantly income-driven, with limited diversification in determinants.

2.4 Data and Tools: The study uses secondary data from the Consumer Pyramid Household Survey (CPHS), which provides detailed information on household expenditure patterns. The analysis focuses on three years: 2019, 2020, and 2021. Statistical tools such as ANOVA and correlation analysis are employed to evaluate the significance and strength of socio-economic predictors. Model fit is assessed using R^2 values.

2.5 Limitations of the Study:

1. The study relies on secondary data, limiting the scope for exploring unrecorded socio-economic factors.
2. Regional focus on Amravati may not fully capture variations across Maharashtra.
3. The analysis does not account for qualitative factors such as cultural influences or personal preferences.

4. The impact of external shocks, such as the COVID-19 pandemic, is indirectly analyzed and may not fully explain shifts in expenditure patterns

Results and Discussion

The analysis of household expenditure in Amravati between 2019 and 2021 reveals notable differences in spending patterns across food, health, and leisure categories, with rural and urban households exhibiting distinct socio-economic influences. The findings are summarized in Table 1 and elaborated below

Socio-Economic Determinants of Household Expenditure -- Amaravati

Table 1 Expenditure Trends in Amaravati (2019-2021) –

Year	Category	Household Type	Statistical Summary (ANOVA p, R ² , R)	Significant Predictors	Non-significant Predictors	Hypothesis Results	Insights
2019	Food	Rural	p < 0.05, R ² ~ 0.27, R = 0.515	Income, Age, Education	Gender, Occupation	Reject H0: Income, age, and education are significant predictors of food expenditure.	Moderate fit; income, age, and education significantly impact food spending.
		Urban	p < 0.05, R ² ~ 0.59, R = 0.765	Income, Education, Household Size	Age, Gender, Occupation	Reject H0: Income, education, and household size influence food expenditure.	Strong fit; diverse socio-economic impacts on urban food expenditure.
	Health	Rural	p ~ 0.04, R ² > 0.05, R = 0.198	Income, Education, Household Size	Age, Gender, Occupation	Reject H0: Income, education, and household size influence health expenditure.	Weak fit; limited explanatory power, weak model.
		Urban	p ~ 0.11, R ² < 0.05, R = 0.328	Income, Age, Household Size	Education, Gender, Occupation	Reject H0: Income and household size influence health expenditure.	Low fit; socio-economic factors minimally influence health spending.
	Leisure	Rural	p ~ 0.06, R ² > 0.05, R = 0.251	Income	Age, Gender, Occupation, Education, Household Size	Accept H0: No significant model fit for leisure spending.	Very weak fit; high variability with minimal influence from income.
		Urban	p ~ 0.19, R ² < 0.05, R = 0.438	Income, Education	Age, Gender, Occupation, Household Size	Partially Accept H0: Income and education influence leisure spending.	Limited fit; socio-economic factors impact urban leisure spending.
2020	Food	Rural	p ~ 0.62, R ² < 0.05, R	Income,	Age, Gender,	Reject H0:	Strong fit;

			= 0.787	Household Size	Occupation, Education	Income and household size are significant predictors of food expenditure.	income and household size drive rural food expenditure.
		Urban	$p \sim 0.39, R^2 < 0.05, R = 0.625$	Income, Education, Household Size	Age, Gender	Reject H0: Income and household size are significant predictors of food expenditure.	Fair fit; income and household size remain key urban drivers of food expenditure.
	Health	Rural	$p \sim 0.25, R^2 < 0.05, R = 0.500$	Income, Household Size	Age, Gender, Occupation, Education	Reject H0: Income and household size influence health expenditure.	Moderate fit; socio-economic factors moderately influence health spending.
		Urban	$p \sim 0.32, R^2 < 0.05, R = 0.567$	Income, Education, Household Size	Age, Gender, Occupation	Reject H0: Income, education, and household size influence health expenditure.	Improved fit; socio-economic factors like income and education impact health spending.
2020	Leisure	Rural	$p \sim 0.06, R^2 > 0.05, R = 0.251$	Income	Age, Gender, Occupation, Education, Household Size	Accept H0: Leisure spending unrelated to socio-economic factors in rural areas.	Very weak fit; limited socio-economic influence on discretionary spending.
		Urban	$p \sim 0.09, R^2 < 0.05, R = 0.298$	Income, Education	Age, Gender, Occupation, Household Size	Accept H0: Leisure spending unrelated to socio-economic factors in urban areas.	Limited fit; socio-economic factors influence leisure spending in urban areas.
2021	Food	Rural	$p \sim 0.64, R^2 < 0.05, R = 0.797$	Income, Household Size	Age, Gender, Occupation, Education	Reject H0: Socio-economic factors are significant in rural food expenditure.	Strong fit; economic and household size factors shape rural food expenditure.
		Urban	$p \sim 0.39, R^2 < 0.05, R = 0.625$	Income, Age, Household Size	Gender, Occupation	Reject H0: Income, age, and household	Good fit; socio-economic factors impact urban

						size influence urban food expenditure.	food expenditure.
	Health	Rural	$p \sim 0.28, R^2 < 0.05, R = 0.524$	Income, Age, Household Size	Occupation, Education, Gender	Reject H0: Socio-economic factors influence health expenditure.	Moderate fit; income, age, and household size influence rural health spending.
		Urban	$p \sim 0.32, R^2 < 0.05, R = 0.567$	Income, Age, Occupation, Household Size	Education, Gender	Reject H0: Socio-economic factors influence health expenditure in urban areas.	Improved fit; socio-economic factors like income and education impact urban health spending.
	Leisure	Rural	$p \sim 0.06, R^2 > 0.05, R = 0.251$	Income	Age, Gender, Occupation, Education, Household Size	Accept H0: No significant model fit for leisure spending.	Weak fit; discretionary spending driven minimally by income.
		Urban	$p \sim 0.19, R^2 < 0.05, R = 0.438$	Income, Age, Household Size	Gender, Occupation, Education	Reject H0: Income and household size influence non-food spending in urban areas.	Moderate fit; income and household size drive discretionary spending in urban areas.

(Source: Analysis based on data collected from CPHS- March 2019, 2020, 2021)

From table No 1 above, the following things can be interpreted **Pre-COVID (2019)**

Food Expenditure:

In both rural and urban areas of Amaravati, income and household size were significant predictors of food expenditure. Rural households showed a moderate model fit, indicating that food expenditure patterns were stable and primarily directed towards essentials. This suggests a more conservative approach to spending, as rural households likely prioritize necessary food items over discretionary purchases. On the other hand, urban households displayed a stronger model fit, indicating that socio-economic factors, such as higher income and diverse educational backgrounds, influenced their food expenditure patterns. This aligns with the findings from Pinkovetskaia and Silva (2022), who argued that urban areas exhibit greater variability in consumption due to socio-economic diversity.

Health Expenditure:

Health expenditure in rural areas had minimal socio-economic influence, with a weak model fit ($R^2 \sim 0.10$). This indicates that health spending was unpredictable and driven more by sporadic, urgent needs rather than regular, income-based patterns. In urban areas, income and age were weak predictors, suggesting that health expenditure in cities was similarly not heavily influenced by regular socio-economic factors. Nandini (2024) also noted that health spending, especially in urban areas, is often driven by immediate needs rather than routine income-related patterns, which is consistent with the findings in Amaravati.

Non-Food Expenditure (Recreation, Restaurants, Vacations):

Non-food expenditure was minimal in rural areas, and socio-economic factors showed weak significance, reflecting a

cautious approach to discretionary spending. This is typical of rural households that tend to prioritize basic needs over leisure spending, as suggested by Pinkovetskaia & Silva (2022). Urban households exhibited a moderate model fit, with income and education emerging as the key drivers of non-food spending. This indicates that urban households, particularly those with higher incomes and educational levels, were more likely to allocate resources to discretionary items such as recreation and dining out, even without significant economic growth Desai (2019).

During COVID-19 (2020)

Food Expenditure:

Both rural and urban households saw an improvement in the model fit for food expenditure, suggesting that the economic instability caused by the pandemic led to a stronger reliance on essential food items. Income and household size continued to be key predictors of food expenditure across both areas. Urban households still showed the influence of education, reflecting a trend where higher educational levels helped families navigate consumption choices during economic stress. Desai et al. (2021) also observed that during the pandemic, food expenditure focused more on essentials due to fluctuations in income levels.

Health Expenditure:

Rural areas continued to show weak socio-economic influence on health expenditure, with income playing a minor role. In urban areas, however, health expenditure showed some improvement in model fit, with income becoming a slightly stronger predictor. This is consistent with findings from Desai et al. (2021), who highlighted the role of the pandemic in driving immediate health-related expenditures, particularly in urban settings where healthcare access and concerns were more prominent. The weak fit in rural areas suggests that health expenditure remained largely driven by unexpected health needs.

Non-Food Expenditure:

Rural non-food expenditure remained minimal, with limited socio-economic influence, and education had a minor effect. This indicates that rural households continued to prioritize essentials over discretionary spending. In urban areas, however, the model fit improved, and income and education remained significant predictors. This suggests that higher-income and better-educated urban households were still able to spend on non-essential items, although to a reduced extent compared to pre-pandemic times. This is consistent with Suryanarayana and Silva (2022), who noted that discretionary spending can persist among higher-income households, even during times of economic stress.

Post-COVID Recovery (2021)

Food Expenditure:

The model fit for food expenditure improved in both rural and urban areas, reflecting a return to more varied food spending patterns influenced by socio-economic factors. Income, age, and household size became significant predictors in both rural and urban settings, with gender emerging as an additional factor in urban households. This suggests a return to more stable economic conditions, with broader socio-demographic impacts, particularly in urban areas. The emerging significance of gender in urban food expenditure highlights the evolving socio-economic dynamics as households adapted to post-pandemic recovery.

Health Expenditure:

Rural areas showed an increased model fit for health expenditure, with income, age, and household size becoming significant predictors. This suggests that, post-pandemic, rural areas placed a greater emphasis on health, possibly due to increased health awareness and better access to healthcare. Urban health expenditure was moderately influenced by age and occupation, reflecting heightened health awareness as socio-economic conditions began to stabilize. Desai et al. (2021) found similar shifts during recovery periods, where health priorities became more pronounced.

Non-Food Expenditure:

Rural non-food expenditure remained weakly influenced by socio-economic factors, with income being the primary driver. This suggests that rural households continued to be cautious with discretionary spending, even as the economy began to recover. In urban areas, however, non-food expenditure showed a stronger model fit, with income, age, and household size being significant predictors. This indicates that as economic stability returned, urban households regained interest in leisure and recreation, signaling a broader recovery in discretionary spending. Suryanarayana and Silva (2022) observed similar trends in urban areas, where recovery led to a resurgence in leisure spending.

Key Insights and Hypothesis Results

- **Food Expenditure:** Income and household size were consistent predictors across all years, with education and gender playing additional roles in urban areas, particularly post-pandemic. Hypothesis Result: Rejected; socio-economic factors significantly influence food expenditure in both rural and urban settings.
- **Health Expenditure:** Rural health expenditure showed minimal socio-economic impact, except post-pandemic, where socio-economic factors began to play a larger role. Urban health expenditure remained weakly influenced by age and income. Hypothesis Result: Accepted in rural (2019–2020); Rejected in rural (2021) and urban (2019–2021).
- **Non-Food Expenditure:** Rural spending remained conservative and driven primarily by income, while urban spending reflected stronger ties to income, education, and age, particularly post-pandemic. Hypothesis Result: Accepted in rural for limited socio-economic impact; Rejected in urban due to significant predictors.

Conclusion

The study highlights the dynamic and multi-faceted nature of household expenditure patterns, shaped by a complex interplay of socio-economic factors. While rural households are predominantly income-driven, urban households display greater variability and sensitivity to factors like education, gender, and occupation.

Key trends over the study period include the steady broadening of socio-economic influences on urban households and the relatively stable, income-driven patterns in rural areas. The COVID-19 pandemic further accentuated these differences, underscoring the adaptability of urban households in reallocating spending toward essentials during times of uncertainty.

Policy Implications

1. **Targeted Interventions:** Policies aimed at enhancing rural access to education and healthcare can help diversify spending patterns and reduce disparities.
2. **Urban Inclusivity:** Support for vulnerable urban populations through employment and education programs can address the variability and inequalities in spending behavior.
3. **Pandemic Preparedness:** Strengthening social safety nets can mitigate the adverse impacts of external shocks on household consumption.

This research underscores the importance of region-specific and category-specific strategies to address the socio-economic disparities in household expenditure, promoting inclusive and equitable growth. Future studies could build on these findings by incorporating qualitative factors like cultural influences and exploring the long-term impacts of external shocks.

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