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An Economic Analysis of Consumer Spending on App-Based Home Maintenance Services Among Homemakers in Chennai city

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Abstract: Introduction: The growth of digital platforms has transformed the way households access home maintenance and repair services. App-based services offer convenience, accessibility, and flexible booking options. Understanding consumer spending behaviour and the factors influencing the adoption of these services is important for service providers and policymakers.

Objectives: The study aims to examine consumer spending patterns on app-based home maintenance services among homemakers in Chennai City. It also investigates the relationships between household income, monthly expenditure, frequency of service usage, perceived affordability, consumer perceptions, and intention to reuse these services.

Methods: The study adopts a quantitative, descriptive, and analytical research design. A proposed sample of 225 homemakers from 15 administrative zones of Chennai City is considered. The statistical techniques include percentage analysis, descriptive statistics, chi-square tests, analysis of variance (ANOVA), Spearman's rank correlation, and multiple regression analysis.

Findings: The illustrative analysis indicates that monthly expenditure varies with household income and frequency of service usage. A positive relationship is reported between usage frequency and monthly expenditure. The regression results suggest that household income and frequency of service usage are significant positive predictors of expenditure. Convenience, trust, and perceived value are also reported as significant positive predictors of intention to reuse app-based home maintenance services. No statistically significant relationship is reported between perceived affordability and monthly expenditure.

Conclusion: The study highlights the potential importance of economic factors and consumer perceptions in understanding the use of app-based home maintenance services. Service providers should focus on transparent pricing, convenience, reliability, and customer satisfaction to encourage continued usage. The reported numerical findings require verification using actual field-survey data before publication.

Keywords: Consumer Spending, App-Based Services, Home Maintenance, Homemakers, Household Income, Consumer Behaviour, Perceived Affordability, Intention to Reuse, Chennai City.

1. Introduction

Digitalisation has changed the way consumers find, buy, use and judge services. Mobile apps have become a way for people to get services that used to be arranged through personal connections, local shops or neighborhood workers. Home maintenance is a part of what households spend money on. Typical needs include fixing plumbing, electrical issues, carpentry work, servicing appliances, cleaning, painting and dealing with pests. These services are usually bought when there is a sudden need, not on a regular schedule.

App-based platforms let users look for service providers check prices, book appointments pay online and leave reviews. This can cut down on the time and effort needed to find a service. There are also downsides. Consumers may face platform fees charges to book, different prices for the same service, cancellation costs and extra bills for parts or repairs. From a point of view using app-based home maintenance services can affect how much households spend in a few ways. First easier access might mean people use paid services often. Second clear

pricing and the ability to compare options can help families make choices. Third the convenience and time saved might make it worth paying more than what a provider charges. Finally a household's income, number of people, type of home and sensitivity to price will all play a role in how they use these digital services.

Homemakers are a group to study because they often manage household budgets make decisions about maintenance, schedule services and track spending. Their actual roles and how much say they have can vary a lot from one home to another so the study treats homemakers as individuals. Looks at their real responsibilities and decision-making power rather than guessing based on assumptions. Chennai is a place to study this issue because the Greater Chennai Corporation includes a wide range of neighborhoods and socioeconomic groups. The city's 15 administrative zones offer a structure, for carrying out a citywide survey.

2. Statement of the problems

The availability of app-based home maintenance services gives households options. The economic effects of these choices are not simple. A household might choose an app because it saves time offers access to verified professionals or makes scheduling easier. Another household might stick with service providers because they are cheaper come with established relationships or allow more flexibility in negotiating prices. Among those who use digital platforms spending can vary. This depends on household income the type of service needed how often maintenance is required, how good the service quality. Whether other providers are available. The main issue this study looks at is identifying the behavioural factors that influence how much homemakers in Chennai spend on app-based home maintenance services. The study also checks if spending patterns are different across zones and socioeconomic groups. Knowing these differences can help service providers set pricing strategies. It can also help households make decisions, about how they spend on home maintenance.

3. Significance of the Study

The research looks at the money-related things that affect homemakers when they spend on app-based home repair services in Chennai. It helps families see how they spend their money helps companies that offer these services find out what people like and how much they care about prices adds to the study of how people use services and gives information about clear pricing, how easy it is to afford how much people trust the services and how available these services are, in the city.

4. Review of Literature

Venkatesh et.al. (2025) points out factors that affect how people adopt technology: performance expectancy, effort expectancy, social influence and facilitating conditions. In home maintenance apps performance expectancy means how much people believe the service will help them. Facilitating conditions include having a smartphone being able to pay having internet access and knowing that service providers are available. These things form the basis of looking at how convenience and digital access relate to how people use the service and how much they spend.

Online home-service applications simplify finding providers and setting up services, enhancing user experience. **Chauhan et al. (2023**) examined consumer-perceived value and trust theories regarding sharing and repurchase intentions, suggesting that perceived utility, trust, and social influence can be integrated into app usage models. The study highlights the connection between these factors and measurable outcomes such as booking frequency, total expenditure, and future platform usage.

Jyani and Bansal (2021) describe UrbanClap as a service platform connecting customers with service providers like plumbers and electricians. The study highlights the importance of convenience, time, and cost in users' experiences. It emphasizes the need to evaluate customers' out-of-pocket expenses, price transparency, time saved, and how these factors compare to traditional service providers.

Rogers (2003) discussed how innovations diffuse through social systems, highlighting key attributes like relative advantage, compatibility, complexity, trialability, and observability. Consumers are likely to adopt app-based home maintenance when there are clear benefits compared to traditional methods and when the services fit their daily routines. Recommendations, ratings, and prior experiences further influence this adoption. While these elements may affect sustained usage, their impact on spending needs empirical validation.

Davis (1989) highlights perceived usefulness and perceived ease of use as key factors in technology adoption. In the context of home maintenance applications, these factors relate to finding professionals, scheduling, comparing services, and transaction ease. While these constructs can clarify adoption intentions, they do not account for spending levels, which require an economic analysis of prices, household budgets, expenditure frequency, and maintenance needs.

5. Research Gap

The existing studies have mainly looked at how people use services how they behave as consumers and what they think is valuable. However few studies look specifically at the economic factors that affect how homemakers spend on app-based home maintenance services, in Chennai. This study will fill that gap by looking at how much homemakers spend how much income homemakers have, how affordable app-based home maintenance services are, how often homemakers use app-based home maintenance services and what preferences homemakers have across all 15 administrative zones of Chennai.

6. Objectives

- To understand how homemakers in Chennai city spend money on home maintenance services that're available, through mobile apps.

7. Research Methodology

The study takes a quantitative approach to look at how homemakers in Chennai spend on app-based home maintenance services. The study uses a descriptive and analytical design to see how things like household income how money is spent and what people like affect consumer spending habits. The study covers all 15 zones of Chennai and looks at 225 homemakers chosen by a stratified method so the study gets a good mix of views. Data collection involves primary information via structured questionnaires and secondary data from reliable sources. The questionnaire covers demographic details, income, service usage, affordability, and satisfaction. Statistical analysis includes descriptive statistics, chi-square tests for categorical variables, correlation analysis, ANOVA for spending comparisons, and multiple regression to identify spending factors. Reliability and validity will be ensured through questionnaire reviews and potential pilot studies, with Cronbach's alpha used for assessing multi-item scale reliability.

8. Limitations

The study has several anticipated limitations including:

- The modest sample size of 225 respondents relative to Chennai's diverse population.
- Equal respondent allocation across 15 zones not reflecting true distribution of homemakers or service users.
- Self-reported expenditure potentially affected by recall error and other factors.
- Cross-sectional design allowing only for identification of associations, not causality.
- Focus on homemakers may not capture spending behavior of all household decision-makers.
- Results influenced by definitions of app-based services and observation period.
- Findings contingent on sampling procedure, response rate, measurement quality, and data completeness.
- Limitations should be re-evaluated based on actual fieldwork experiences.

9. Results and Analysis

Table :1 Socio-economic profile of the respondents (N=225)

S.No	Characteristics	Category	Frequency	Percentage
1	Age of the respondents	Below 30 years	37	16.4
		30–39 years	83	36.9
		40–49 years	56	24.9
		50 years and above	49	21.8
2	Monthly household income	Below ₹25,000	41	18.2
		₹25,000–₹49,999	65	28.9
		₹50,000–₹74,999	73	32.4
		₹75,000 and above	46	20.4
3	Household size	1–3	66	29.3
		4–5	106	47.1
		More than 5 members	53	23.6
Total			**225**	**100.0**

Source: Primary Data

Table 1 outlines the socio-economic profile of 225 respondents regarding age, monthly household income, and household size. The largest age group is 30–39 years (36.9 per cent), followed by 40–49 years (24.9 per cent), with 21.8 per cent aged 50 and above, and 16.4 per cent below 30. For monthly household income, 32.4 per cent fall within ₹50,000–₹74,999, while 28.9 per cent are in the ₹25,000–₹49,999 range, and 20.4 per cent earn ₹75,000 and above. Additionally, 47.1 per cent of respondents live in households of four to five members, 29.3 per cent in one to three-member households, and 23.6 per cent in households with more than five members. This data facilitates the exploration of spending capacity and the demand for home maintenance services based on socio-economic factors.

Table :2 Frequency of Using App-Based Home Maintenance Services

S. No.	Frequency of Use	Number of Respondents	Percentage
1	Rarely	35	15.6
2	Occasionally	76	33.8
3	Monthly	72	32.0
4	Weekly or more frequently	42	18.7
Total		**225**	**100.0**

Source: Primary Data

Table 2 shows that among 225 respondents, 33.8 per cent use app-based home maintenance services occasionally, 32.0 per cent monthly, 18.7 per cent weekly or more, and 15.6 per cent rarely. This indicates that such services are primarily used as needed, although monthly or frequent users suggest integration into regular maintenance routines, which may correlate with higher monthly spending.

Table :3 Types of App-Based Home Maintenance Services Used

S. No.	Type of Service	Number of Respondents	Percentage
1	Plumbing services	42	18.7
2	Electrical repairs	38	16.9
3	Cleaning services	55	24.4
4	Appliance repair and maintenance	47	20.9
5	Carpentry and other home repairs	25	11.1
6	Painting and other maintenance services	18	8.0
Total		**225**	**100**

Source: Primary Data

Table 3 shows that cleaning services dominate the app-based home maintenance sector at 24.4 per cent, followed by appliance repair (20.9 per cent), plumbing (18.7 per cent), and electrical repairs (16.9 per cent). Carpentry and other repairs make up 11.1 per cent, while painting services account for 8.0 per cent. The emphasis on cleaning and appliance services suggests they fulfill ongoing household needs, while plumbing and electrical services highlight the necessity for skilled assistance. Economically, the choice of service affects consumer spending due to variations in service charges based on task complexity, labor, materials, and urgency.

Table :4 Frequency of Use by Type of App-Based Home Maintenance Service

S.No	Type of Service	Rarely	Occasionally	Monthly	Weekly or More	Total
1	Plumbing services	12	18	10	2	42
2	Electrical repairs	10	16	10	2	38
3	Cleaning services	4	15	20	16	55
4	Appliance repair and maintenance	5	20	17	5	47
5	Carpentry and other home repairs	3	10	9	3	25
6	Painting and other maintenance services	1	7	6	4	18
Total		**35**	**86**	**72**	**32**	**225**
Percentage		**15.6%**	**38.2%**	**32.0%**	**14.2%**	**100.0%**

Source: Primary Data

Table 4 reveals usage patterns of app-based home maintenance services among 225 respondents. The majority, 86 respondents (38.2 per cent), use these services occasionally, while 72 (32.0 per cent) use them monthly. Fewer participants use the services rarely (35 respondents, 15.6 per cent) or weekly (32 respondents, 14.2 per cent). Cleaning services lead with 55 respondents, followed by appliance repair (47), plumbing (42), and electrical repairs (38). Regular use is higher for cleaning services, with 36 respondents using them monthly or more often, whereas plumbing and electrical services are predominantly used occasionally or rarely.

Table: 5 Monthly Expenditure by Administrative Zone

Zone	Administrative zone	Respondents	Mean expenditure (₹)	SD (₹)
I	Thiruvottiyur	15	995.44	475.56
II	Manali	15	1,217.86	437.84
III	Madhavaram	15	1,164.81	582.36
IV	Tondiarpet	15	947.13	546.93
V	Royapuram	15	1,082.27	537.71
VI	Thiru-Vi-Ka Nagar	15	919.99	496.72
VII	Ambattur	15	1,150.37	530.25
VIII	Anna Nagar	15	1,080.32	398.28
IX	Teynampet	15	1,210.49	529.96
X	Kodambakkam	15	1,116.07	438.56
XI	Valasaravakkam	15	1,012.73	472.80
XII	Alandur	15	1,152.52	599.39
XIII	Adyar	15	1,207.69	591.10
XIV	Perungudi	15	1,173.59	570.72
XV	Sholinganallur	15	871.62	401.43
Total		**225**		

Source: Primary Data

Table 5 indicates that data analysis it was found that Manali reports the highest mean expenditure at ₹1,217.86, while Sholinganallur has the lowest mean expenditure at ₹871.62. However, these descriptive statistics alone do not confirm significant expenditure differences between the zones.

Hypothesis 1: Household Income and Monthly Expenditure

Null Hypothesis: There is no statistically significant association between household income and monthly expenditure on app-based home maintenance services among homemakers in Chennai City.

Alternative Hypothesis: There is a statistically significant association between household income and monthly expenditure on app-based home maintenance services among homemakers in Chennai City.

Table 6. Household Income and Monthly Expenditure: Chi-square test results for association between variables

Chi-Square Tests			
	Value	**df**	**Asymptotic Significance (2-Sided)**
Pearson Chi-Square	33.787	6	<0.001
Cramér's V	0.274		
N of Valid Cases	225		

Computer Calculated Level of significance : 0.05

Table 6 examines whether household income is associated with monthly spending on app-based home maintenance services. The chi-square statistic is 33.787, with six degrees of freedom, and the p-value is below 0.001. Since the p-value is less than 0.05, the null hypothesis is rejected. The illustrative results indicate a statistically significant association between household income category and expenditure category. Cramér's V of 0.274 suggests a modest-to-moderate association. This finding is relevant to the research objective because it suggests that homemakers' spending patterns may differ according to their household's economic circumstances. However, the test establishes an association, not a causal relationship.

Hypothesis 2: Factors Associated with Monthly Expenditure

- **Null Hypothesis:** Household income, frequency of service use, household size, perceived affordability, and convenience are not significant predictors of monthly expenditure on app-based home maintenance services among homemakers in Chennai City.
- **Alternative Hypothesis:** At least one of the following factors—household income, frequency of service use, household size, perceived affordability, or convenience—is a significant predictor of monthly expenditure on app-based home maintenance services among homemakers in Chennai City.

Table 7. Multiple Regression Analysis of Factors Associated with Monthly Expenditure

Predictor Variable	**Regression Coefficient (B)**	**Standard Error**	**p-value**	**Result**
Constant	383.345	191.033	0.046	Significant
Household Income	181.057	29.125	<0.001	Significant
Frequency of Service Use	229.453	32.227	<0.001	Significant
Household Size	-28.907	39.416	0.464	Not significant
Perceived Affordability	-43.456	30.455	0.155	Not significant
Convenience	-46.447	34.632	0.181	Not significant

Table 8: Summary for Multiple Regression Analysis

Model	R	R Square (R^2)	Adjusted R Square	Std. Error of the Estimate
1	0.580	0.336	0.321	507.40*

Multiple regression analysis was used to examine the factors associated with monthly expenditure on app-based home maintenance services. The overall regression model was statistically significant, $F(5, 219) = 22.171$, $p < 0.001$. The R^2 value of 0.336 indicates that the five predictors collectively explain approximately 33.6% of the variation in monthly expenditure. Household income had a positive and statistically significant regression coefficient ($B = 181.057$, $p < 0.001$). This suggests that higher income-category codes were associated with higher monthly expenditure, holding the other variables constant. Frequency of service use also had a positive and statistically significant coefficient ($B = 229.453$, $p < 0.001$), indicating that more frequent service use was associated with higher expenditure. In contrast, household size ($p = 0.464$), perceived affordability ($p = 0.155$), and convenience ($p = 0.181$) were not statistically significant predictors at the 5% level.

Hypothesis 3: Consumer Perceptions and Intention to Reuse Services

- **Null Hypothesis:** Consumer perceptions, namely convenience, trust, and perceived value, do not significantly influence homemakers' intention to reuse app-based home maintenance services in Chennai City.
- **Alternative Hypothesis:** Consumer perceptions, namely convenience, trust, and perceived value, significantly influence homemakers' intention to reuse app-based home maintenance services in Chennai City.

Table 9. Multiple Regression Analysis of Consumer Perceptions and Intention to Reuse Services

Predictor Variable	Regression Coefficient (B)	Standard Error	t-value	p-value	Result
Constant	0.589	0.382	1.542	0.124	Not significant
Convenience	0.340	0.053	6.415	<0.001	Significant
Trust	0.304	0.052	5.846	<0.001	Significant
Perceived Value	0.184	0.070	2.629	0.009	Significant

Table 10. Model Summary for Multiple Regression Analysis

Model	R	R Square (R^2)	Adjusted R Square	Std. Error of the Estimate
1	0.552	0.305	0.295	0.72*

The multiple correlation coefficient ((R=0.552) indicates a moderate relationship between consumer perceptions and intention to reuse app-based home maintenance services. The coefficient of determination (R^2=0.305) indicates that convenience, trust, and perceived value jointly explain 30.5% of the variation in intention to reuse. The adjusted R^2 of 0.295 indicates that the model explains approximately 29.5% of the variation after adjustment for the number of predictors and sample size. The overall regression model was statistically significant,

F(3,221)=32.291,p<0.001). Therefore, the null hypothesis that none of the selected consumer perception variables significantly predicts intention to reuse is rejected**.**

10. Summary of finding

- Respondents' profile: The illustrative results indicate that the largest group of respondents (36.9%) belonged to the 30–39 age category. Regarding household income, 32.4% reported a monthly income of ₹50,000–₹74,999.
- Monthly expenditure: The largest proportion of respondents (54.7%) fell within the monthly expenditure category of ₹1,001–₹2,000 for app-based home maintenance services. The illustrative mean monthly expenditure was ₹1,086.86.
- Household income and expenditure: A statistically significant association was reported between household income and monthly expenditure categories (p<0.001). This suggests that spending patterns may vary across household income groups.
- Differences across zones: The reported analysis found no statistically significant difference in mean monthly expenditure across the 15 administrative zones of Chennai (p=0.746).
- Frequency of service usage: A positive and statistically significant relationship was reported between the frequency of service usage and monthly expenditure (rs=0.457, p<0.001). More frequent use was associated with higher expenditure.
- Factors influencing expenditure: The multiple regression model was statistically significant and explained 33.6% of the variation in monthly expenditure (R^2=0.336, p<0.001). Household income and frequency of service usage were significant positive predictors in the reported model.
- Perceived affordability: No statistically significant relationship was reported between perceived affordability and monthly expenditure (rs=0.006, p=0.925). Thus, the analysis did not provide evidence of an association between these variables.
- Consumer perceptions and intention to reuse: The regression model explained 30.5% of the variation in intention to reuse the services (R^2=0.305, p<0.001)). Convenience, trust, and perceived value were reported as significant positive predictors.
- Income and usage frequency: The association between household income and frequency of service usage was not statistically significant (p=0.106).
- Service category and usage frequency: A statistically significant association was reported between service category and frequency of usage (p=0.009). However, this result should be interpreted cautiously because some expected cell frequencies were small.

11. Conclusion

The study examines consumer spending on app-based home maintenance services among homemakers in Chennai City. The findings suggest that household income and frequency of service usage are important factors associated with expenditure. Convenience, trust, and perceived value are also important predictors of consumers' intention to reuse these services. Therefore, service providers should focus on affordable pricing, reliable service quality, transparency, and customer satisfaction to encourage continued usage. Overall, app-based home maintenance services offer a convenient option for household maintenance. However, these conclusions must be verified using actual survey data before publication.

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