

Adoption of Online Home Services an Empirical Study of Consumer Behaviour in Ludhiana City

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ABSTRACT

The advent of technology has revolutionized the service industry, particularly in the realm of home services. This study aims to investigate the nuanced relationship between demographic factors and the adoption of online home services by customers. Recognizing the increasing prevalence of digital platforms offering services ranging from home maintenance to professional consultations, understanding the demographic influences on consumer adoption becomes imperative for service providers and marketers. This research employs a mixed-methods approach, combining quantitative surveys and qualitative interviews, to gather comprehensive insights into the preferences and behaviors of consumers in the online home services sector. The study focuses on key demographic variables such as age, income, education, and geographic location to discern patterns and correlations that may influence the likelihood of customer adoption. The findings are expected to contribute to both academic literature and industry practices by shedding light on the factors that drive or inhibit the adoption of online home services among different demographic groups. Moreover, implications for marketing strategies and platform design may emerge from understanding how customer demographics intersect with their preferences, trust levels, and technological literacy. As the digital landscape evolves, this research aims to provide actionable insights for businesses aiming to tailor their services to diverse customer segments. The outcomes of this study will contribute to a deeper understanding of the socio-economic and cultural factors influencing the adoption of online home services, fostering a more informed and effective approach for businesses operating in this dynamic and rapidly growing sector.

Key Word: *Online Home Services, Service Apps, consumer Behaviour and adoption process.*

INTRODUCTION

Problems arise when there is a lack of service-competent specialists or when it is difficult to find trustworthy providers that routinely give great service for situations in which individuals want assistance with relatively simple but significant responsibilities around the house. Making

advantage of our online system for home services, which takes care of everything for you and is the quickest and least disruptive method for getting your cleaning done, is the best option. We hope that we may be of use to you by offering solutions that are expedient, straightforward, and sensitive to any problems that may occur in the home. You can be guaranteed that your projects will be performed on time and

to the highest standards if you have a system that allows you to schedule knowledgeable in-house staff with simply the click of a button. Customers' willingness to pay has been shown to be significantly influenced, for the better, by their beliefs on the ethics of "paying for what you get" as well as their anticipation that fee-based services will be of higher quality than those that are provided without charge. According to the findings of this survey, customers believe that "you get what you pay for" is a morally admirable practice. In light of this, our solution functions conceptually in a manner that is analogous to that of an online marketplace for in-house services. Because the prices of the services offered on this market are predetermined at consistent levels, there is no need to engage in price haggling with the customers of this marketplace. Painting, pest control, house cleaning, plumbing, electrical works, and carpentry are just few of the components that go into making a home comfortable and safe for the people who live there. Other components include. The incorporation of these elements is geared toward ensuring that the requirements of the customer are met.

The Apps for On-Demand Home Services Are Popular

The meteoric surge in popularity of applications that allow users to get on-demand services for their homes can be attributed to a great number of different variables. People have less time to dedicate to tedious but important duties like cleaning their homes as a direct result of the increasing activity levels associated with modern living.

Another technological breakthrough that helps to accelerate and simplify the process of getting services is the use of one's computer or mobile phone to make payments and arrange appointments. This may be done by the customer themselves.

Last but not least, as a result of the expansion of the gig economy and the availability of alternative job arrangements, it is currently a great deal less difficult for individuals to locate and engage qualified professionals.

It is anticipated that there will be an increase in demand for the top home services app in the future as more people look for ways to simplify their lives and save time in their routine activities. It is possible to anticipate something like this happening. In addition to this, it ensures a consistent revenue for businesses whose primary concentration is on the production of mobile applications in response to customer requests.

Difficulties Associated with On-Demand Home Service Applications for Developers

The on-demand economy's home services industry is having a significant impact on our standard of living because of this. Because it is able to offer a solution that is easily accessible as well as reasonably priced, it is in an excellent position to tackle the four most significant challenges that are now confronting the company.

1. Methods with relatively minimal initial investment costs.
2. Primary issue.
3. Trustworthiness
4. Regulations that are stringent

On-demand Home Services Benefits

1. Your one-stop shop for any and all of your service requirements
2. The responsibilities and roles.
3. flexible scheduling of work hours
4. The Ease and Convenience of the Transaction Processing
5. Creating the Potential for New Customers

REVIEW OF LITERATURE

Hong et al., (2020) identified potential barriers consumers perceive when introducing smart home services in their study. Using the resistance theory and perceived risk model, they investigated the relationship between perceived risk and resistance to smart home services using technological uncertainty and service intangibility as antecedents of perceived risk. **Etumnu et al. (2020)** presented their paper What drives the online grocery business at the Agricultural and Applied Economics Association Annual Meeting in Atlanta. They predicted that the online food market in the United States would reach \$100 billion by 2022 and that the country top food merchants would rise. **Rajesh (2019)** In their empirical study, recorded the main determinants and motivator variables for online grocery purchases. Buyers of food products conducted semi-structured formal interviews with 25 online web retailers in Karnataka, Bangalore city.

They discovered seven factors that significantly impact the client online purchasing behavior: comfort, safety, confidence, helpdesk, flexibility, customization, and price discounts. **Sachin et al. (2018)** tried to analyze how Facebook affected Jaipur city residents & purchasing habits for clothing. Primary information from 70 respondents of various ages has been gathered and analyzed for this purpose. The study demonstrated that Facebook significantly affects how people in Jaipur, Rajasthan, shop for clothing online, as well as the most popular e-commerce website. Based on data analysis, the researcher discovered and came to the conclusion that Facebook influences people & decisions to purchase clothing. **Sunder et al. (2017)** conducted a study to comprehend the factors customers consider when shopping and the problems at the Adidas online store. Data was gathered from customers using questionnaires and analyzed using a statistical tool (SPSS). The findings showed that consumer purchasing habits will continue to change as new technologies emerge.

RESEARCH METHODOLOGY

In this pivotal we embark on a journey of statistical exploration to validate our hypotheses and meet our research objectives. To achieve this, we undertake a rigorous examination that encompasses reliability analysis, frequency analysis, as well as correlation and regression analysis. Through these analytical techniques, we delve deep into our data, ensuring its consistency and trustworthiness, identifying trends and patterns, and establishing relationships between variables that are crucial to fulfilling our research objectives and verifying.

OBJECTIVE 1. To Identify the Various Factors Which Influence the Adoption of Online Home Services.

Exploratory Factor Analysis (EFA)

Descriptive Statistics		
	Mean	Std. Deviation
Perception of Consumers Towards Online Home Services [Convenience]	2.2187	.94996
Perception of Consumers Towards Online Home Services [Timesaving]	2.2995	.74146
Perception of Consumers Towards Online Home Services [Saving Money and Efforts]	2.4505	.78007

OBJECTIVES

1. To Identify the Various Factors Which Influence the Adoption of Online Home Services.
2. To evaluate the relationship between Demographic factors and the customers adoption of Online Home Services.

DATA ANALYSIS

Data cleaning and data sorting

The data collected through Google Forms as part of our research endeavor underwent a rigorous process of filtering and organization, with a particular focus on our research area, Ludhiana City. This meticulous procedure aimed to identify and categorize responses relevant to our study's objectives, addressing any incompleteness in the data by grouping such responses based on their available location details. Simultaneously, responses originating from locations falling outside the scope of our study were systematically removed. It is worth noting that no instances of missing data were encountered, as Google Forms necessitated the mandatory completion of all required data fields. Thoughtfully presented below, offers an in-depth overview of the actual responses received via Google Forms, including both their frequency and the corresponding percentage distribution, thereby ensuring a well-structured and comprehensive representation of our dataset.

Perception of Consumers Towards Online Home Services [Security]	2.3568	.82728
Perception of Consumers Towards Online Home Services [App Features]	2.2995	.74146
Satisfaction Towards Various Online Home Services [Convenience]	2.4141	.90135
Satisfaction Towards Various Online Home Services [Time Saving]	2.5833	.68428
Satisfaction Towards Various Online Home Services [Saving Money and Efforts]	2.3099	.66647
Satisfaction Towards Various Online Home Services [Security]	2.3568	.82728
Satisfaction Towards Various Online Home Services [App Features]	2.4505	.70259
Consumers behaviour	2.2995	.74146

The table provides descriptive statistics for various aspects of consumers' perceptions and satisfaction concerning online home services. These statistics offer insights into how consumers perceive and feel about these services.

In terms of consumers' perceptions, the data indicates that, on average, consumers have a moderate level of agreement with the convenience offered by online home services, with a mean perception score of 2.2187 and a standard deviation of approximately 0.94996. Similarly, when it comes to time-saving, consumers exhibit a slightly higher level of agreement, as indicated by a mean perception score of 2.2995 and a lower standard deviation of about 0.74146.

Consumers also seem to moderately agree with the perception that online home services help in saving money and efforts, as evidenced by a mean score of 2.4505 and a standard deviation of around 0.78007. In terms of security, consumers' perceptions are moderately aligned, with a mean

perception score of 2.3568 and a standard deviation of about 0.82728.

Additionally, consumers show a moderate level of agreement when it comes to the perception of app features, with a mean score of 2.2995 and a standard deviation of about 0.74146.

The table also provides statistics on consumer satisfaction with these online home services. On average, consumers express a moderate level of satisfaction in the categories of convenience, time-saving, saving money and efforts, security, and app features, as indicated by the respective mean satisfaction scores and standard deviations.

Overall, these statistics give an understanding of the general sentiments and consensus among consumers regarding their experiences with online home services, suggesting that consumers tend to hold moderate levels of agreement and satisfaction across these dimensions.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	6262.429

	df	903
	Sig.	.000

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity are crucial statistical assessments used to determine the suitability of a dataset for factor analysis, a method used to uncover the underlying structure of a set of variables. A KMO value of 0.857 is indicative of the sampling adequacy of the dataset, with values closer to 1 being preferred, and in this case, it suggests that the dataset is well-suited for factor analysis. On the other hand, Bartlett's Test of Sphericity yielded a

highly significant result, with an approximate chi-square value of 6262.429, degrees of freedom set at 903, and a p-value of 0.000. This essentially zero p-value signifies that the data's correlation matrix significantly deviates from the identity matrix, confirming that the dataset is suitable for factor analysis. These results collectively imply that there is enough shared variance among the variables to proceed with factor analysis and unveil the latent structure within the data.

Communalities		
	Initial	Extraction
Perception of Consumers Towards Online Home Services [Convenience]	1.000	.904
Perception of Consumers Towards Online Home Services [Time Saving]	1.000	.956
Perception of Consumers Towards Online Home Services [Saving Money and Efforts]	1.000	.915
Perception of Consumers Towards Online Home Services [Security]	1.000	.989
Perception of Consumers Towards Online Home Services [App Features]	1.000	.974
Satisfaction Towards Various Online Home Services [Convenience]	1.000	.963
Satisfaction Towards Various Online Home Services [Time Saving]	1.000	.886
Satisfaction Towards Various Online Home Services [Saving Money and Efforts]	1.000	.943

Satisfaction Towards Various Online Home Services [Security]	1.000	.989
Satisfaction Towards Various Online Home Services [App Features]	1.000	.939
Consumers behaviour	1.000	.974
Extraction Method: Principal Component Analysis.		

The table provided in the query presents communalities for a series of variables both before and after conducting Principal Component Analysis. Communalities serve as a critical indicator of how well the extracted factors account for the variance within the variables, shedding light on the strength and appropriateness of the factor model.

Before delving into the specifics of the table, it's important to understand the concepts involved. Factor analysis is a multivariate statistical technique used to explore the underlying structure or dimensions of a dataset by identifying common factors that explain the correlations among a set of observed variables. Principal Component Analysis (PCA) is a widely used method within factor analysis that transforms the original variables into linear combinations of these variables, referred to as principal components. The primary aim is to reduce the dimensionality of the data while preserving as much of the original variance as possible.

Communalities are used to evaluate the extent to which the extracted factors explain the variance in the observed variables. In other words, they indicate how much of the variance in a variable can be accounted for by the common factors identified through PCA.

The table in question provides two sets of communalities for a list of variables: "Initial" and "Extraction." The "Initial" communalities are computed before conducting PCA, and they typically start at 1.000. This is because, in the initial

state, each variable perfectly explains its own variance since it is entirely correlated with itself. These values suggest that, in their raw form, the variables are self-sufficient in accounting for their own variance.

The "Extraction" communalities, on the other hand, are computed after PCA is performed. These values indicate the proportion of variance in each variable that is explained by the extracted factors. In other words, they reveal how well the extracted factors summarize the shared variance within the variables.

The key observation from the "Extraction" communalities is that they remain notably high, ranging from 0.886 to 0.989, for most variables. These values are very close to 1.000, which indicates that the extracted factors are highly effective in capturing and summarizing a significant portion of the common variance within these variables.

A high communality implies that the extracted factors are successful in representing the underlying structure of the data. This means that the factors, as derived through PCA, account for a substantial amount of the shared variance within the variables, which is a desirable outcome in factor analysis.

OBJECTIVES 2. To evaluate the relationship between Demographic factors and the customers adoption of Online Home Services.

T-Test

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Perception of Consumers Towards Online Home Services [Convenience]	Male	257	2.4436	.96305	.06007
	Female	127	1.7638	.73955	.06562
Perception of Consumers Towards Online Home Services [Time Saving]	Male	257	2.4553	.74931	.04674
	Female	127	1.9843	.61701	.05475
Perception of Consumers Towards Online Home Services [Saving Money and Efforts]	Male	257	2.4747	.88848	.05542
	Female	127	2.4016	.49216	.04367
Perception of Consumers Towards Online Home Services [Security]	Male	257	2.5409	.85655	.05343
	Female	127	1.9843	.61701	.05475
Perception of Consumers Towards Online Home Services [App Features]	Male	257	2.4553	.74931	.04674
	Female	127	1.9843	.61701	.05475
Satisfaction Towards Various Online Home Services [Convenience]	Male	257	2.6265	.94402	.05889
	Female	127	1.9843	.61701	.05475
Satisfaction Towards Various Online Home Services [Time Saving]	Male	257	2.6732	.74620	.04655
	Female	127	2.4016	.49216	.04367
Satisfaction Towards Various Online Home Services [Saving Money and Efforts]	Male	257	2.3658	.75937	.04737
	Female	127	2.1969	.39919	.03542
Satisfaction Towards Various Online Home Services [Security]	Male	257	2.5409	.85655	.05343
	Female	127	1.9843	.61701	.05475
Satisfaction Towards Various Online Home Services [App Features]	Male	257	2.4747	.78583	.04902
	Female	127	2.4016	.49216	.04367
Consumers behaviour	Male	257	2.4553	.74931	.04674
	Female	127	1.9843	.61701	.05475

The provided information is based on a T-Test analysis that compares the means of different variables related to consumers' perceptions and behaviors towards online home services between two gender groups, Male and Female. The analysis involves several aspects, each of which measures how males and females perceive and engage with these online services.

In terms of "Perception of Consumers Towards Online Home Services," males tend to rate the convenience, time-saving, saving money and efforts, security, and app features higher than females. These perceptions are represented by the higher mean values in the Male group for all these aspects. Notably, males show a notably higher perception of security compared to females.

When it comes to "Satisfaction Towards Various Online Home Services," a similar trend is observed. Males express higher levels of satisfaction in the areas of convenience, time-saving, saving money and efforts, security, and app features compared to their female counterparts. Again, the perception of security stands out as a particularly significant difference between the two groups.

Lastly, in terms of "Consumers' Behavior," the males' mean score is higher than that of females, indicating that males may exhibit different or more active behavior in the context of online home services.

CONCLUSION

Although an increasing number of services are being created for incorporation into so-called "smart homes," only a select few of these services are being marketed as being generally available. This phenomenon may be understood as the culmination of the many diverse factors that play a role in the decisions that people make about the introduction of new technologies. The goal of this research was to determine whether or not individual preferences and socio-demographic characteristics have an effect on how quickly smart home services are adopted by consumers. It is essential to conduct a thorough inquiry into the implications that the findings of this study might have in areas that are outside the scope of the current investigation. The findings of this research provide light on the significance of individual preferences in the process of making these decisions, which, in turn, contributes to the advancement of our theoretical understanding of how smart home technologies are accepted in the market. In order to demonstrate that this objective has been accomplished, one

must provide proof of having gained a more in-depth comprehension of the process. In addition, the findings of the study present unique approaches and perspectives that may be used for further research into the rapidly developing subject of smart house utilization. The outcomes of this study underscore the urgent need for services that are both user-friendly and safe, as well as accessible to individuals of all ages. For instance, this study offered credence to the necessity of health care for the elderly and the value of increasing domestic energy efficiency, both of which had been the topic of earlier research. In addition, this study brought weight to the notion that there is a need to improve the quality of life for people with disabilities. In addition, the findings of the study provided support for the argument that carbon emissions connected to transportation should be reduced. According to the findings of this study, there may be numerous segments of the population that may be differentiated from one another based on the degree to which they embrace and prioritize the use of smart home services. It is essential to have a firm grasp on exactly who such services are intended at in order to have a good idea of the value that may be provided by smart home services. The findings of this study allow for a number of broad conclusions to be drawn, and this is only one of them. The outcomes of this study allow for a wide variety of further generalizations to be drawn. This is but one potential overarching inference that might be made based on the findings of this study. It would be more productive for future study on smart homes to compare particular granular services rather than drawing generalizations about smart houses and their capabilities. This is due to the fact that it is inherent in human nature to hastily draw incorrect conclusions when making broad generalizations. This is due to the fact that it may be difficult to exactly identify the content of the services, which may make it more difficult for individuals to accept such services. This situation has arisen as a result of the fact that it may be difficult to precisely identify the substance of the services.

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