

KEY DETERMINANTS OF RESIDENTIAL APARTMENT BUYING BEHAVIOUR
IN NOIDA POST-COVID-19

by

Dayal Sharan,

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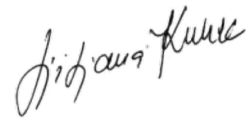
by

Dayal Sharan

APPROVED BY

dr.Ljiljana Kukec, Ph.D.

Dissertation chair



RECEIVED/APPROVED BY:



Admissions Director

Declaration

I hereby declare that the work incorporated in this project entitled “key determinants of residential apartment buying behavior in Noida post-COVID-19” in fulfillment of the requirements for the award of degree of Doctor of Business Administration is the outcome of original study undertaken by Dayal Sharan and submitted to Dr. Anuja Shukla, Swiss School of Business and Management, Geneva, Switzerland.

The work stated in this report has not been copied from any research submitted by anyone else, anywhere earlier.

Dayal Sharan

28th August 2025

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ABSTRACT

KEY DETERMINANTS OF RESIDENTIAL APARTMENT BUYING BEHAVIOUR
IN NOIDA POST-COVID-19

Dayal Sharan
2025

Dissertation Chair: <Chair's Name>
Co-Chair: <If applicable. Co-Chair's Name>

Background: The COVID-19 pandemic has changed consumer lifestyle and priorities, especially in urban residential real estate. These shifts have influenced housing demand, buyer expectations, and preferences in emerging urban centres like Noida.

Objectives: This study explores the key factors influencing the buying behaviour of customers purchasing residential apartments in Noida after COVID-19. It aims to assess how population density, build quality, and connectivity affect decision-making in the post-pandemic housing market.

Methodology: The research adopts a quantitative approach grounded in the Theory of Planned Behaviour. It collected data from 212 respondents through structured questionnaires. Statistical analysis was conducted to identify correlations and significance levels among various influencing factors.

Findings: The study reveals a shift in buyer preferences toward low-density environments, higher construction quality, robust healthcare access, and remote work-compatible spaces. Physical and digital connectivity has gained prominence, alongside considerations like safety, hygiene, and sustainable design.

Implications:

The findings provide critical insights for developers, urban planners, and policymakers. Stakeholders can better address emerging urban housing needs by aligning development strategies with post-pandemic buyer expectations.

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CHAPTER I: INTRODUCTION

1.1 Introduction

1.1.1 – Background of the study

The COVID-19 pandemic has precipitated widespread social, economic, and psychological changes. In India, the pandemic's impact was felt across many sectors, but none more profoundly than the real estate market. Historically, residential property in India has been driven by various factors such as location, affordability, and long-term investment potential. However, the unforeseen challenges of a global pandemic have shifted these traditional paradigms.

Urban centres such as Greater Noida and Noida, once thriving hubs of planned development and robust economic activity, have seen transformative changes in homebuyer preferences. These cities, key parts of the National Capital Region (NCR), offer a mix of modern infrastructure, connectivity, and investment potential that has historically attracted a broad spectrum of buyers. However, the emergence of COVID-19 altered how people evaluate their living environments, with an increasing focus on health, safety, and multifunctional spaces. As noted by the International Business Environment Forum (Ghar, S. (2024), real estate's contribution to India's GDP is expected to increase significantly in the coming years, a testament to the sector's resilience and transformative potential.

The new reality has underscored a paradigm shift: buyers now seek more than just a place to live; they seek a sanctuary that accommodates work, leisure, and well-being. This shift is reflected in the rapid digitisation of property transactions, the adoption of virtual tours, and an increased emphasis on open spaces and natural light. For instance, a recent study by Knight Frank (2021) noted that post-pandemic buyers now prioritise spacious interiors and outdoor amenities over traditional urban conveniences.

In this context, Greater Noida and Noida serve as excellent case studies. Both cities have historically exhibited rapid urbanisation and infrastructural growth. However, the pandemic has altered market dynamics by emphasising factors that were once considered secondary. With improved government policies, increased digital transactions, and evolving consumer expectations, the residential real estate market in these areas is significantly transforming.

1.1.2 - Evolution of Residential Buying Behaviour

Economic theories and behavioural economics can explain the evolution of buying behaviour in residential real estate. Traditionally, decisions about property purchase were based on rational factors such as price, location, and expected return on investment. Over time, however, psychological and social elements such as perceived security, lifestyle aspirations, and social status have become equally significant.

The onset of COVID-19 accelerated these changes. Lockdowns and social distancing measures forced potential buyers to re-evaluate what they value most in a living space. Research by Housing.com (2021) indicated that approximately 63% of urban dwellers developed an increased desire to own homes rather than rent, primarily because homeownership became synonymous with safety and stability. This behavioural shift is supported by theories in behavioural economics, which suggest that crises amplify emotional decision-making, leading individuals to prioritise long-term security over short-term financial gains.

Figure 1 (see below) illustrates the changing priorities among homebuyers before and after COVID-19. The graph compares key decision factors, highlighting a marked increase in the importance of spacious interiors, health and hygiene considerations, and work-from-home feasibility in the post-pandemic period.

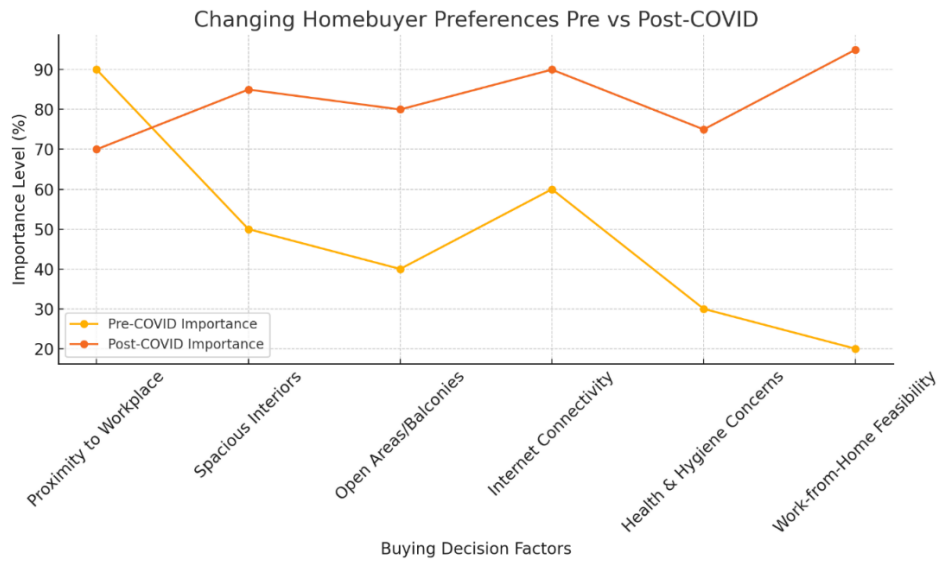


Figure 1 Changing Homebuyer Preferences Pre and Post-COVID

Source: Housing.com (2021).

Note: The figure above shows survey data indicating that factors such as spacious interiors, internet connectivity, and work-from-home facilities have significantly increased priority since the onset of COVID-19. Data adapted from Housing.com (2021).

1.1.3 – Socioeconomic and Psychological Shifts

Beyond economic considerations, the pandemic also influenced the psychological perceptions of what a home should represent. In many ways, the house transformed into a multifunctional space serving as an office, a school, a gym, and a haven against the uncertainties of the external environment. This multifaceted utility of residential spaces has pushed developers to rethink their designs and amenities, ensuring that new constructions align with these evolving needs.

The psychological concept of “home as sanctuary” has gained prominence. Studies have shown that during times of crisis, people seek environments where they can exert control

and feel secure (Maslow, 1943; recent reinterpretations in modern urban studies, see Kumar & Gupta, 2020). In Greater Noida and Noida, these shifts have spurred a demand for properties that offer physical safety and mental reassurance. The focus is not only on square footage or location but also on the quality of life and the overall living experience. Furthermore, social distancing norms have led to a reduced appetite for densely populated living spaces. In contrast, there is now a significant preference for residential complexes that offer open spaces, landscaped gardens, and segregated zones for recreation. The increased value placed on outdoor space and natural ventilation has redefined the criteria for an ideal living environment. JLL (2020) noted that the market has seen a surge in demand for mid-sized and larger apartments that balance affordability and spaciousness.

1.1.4 Policy Interventions and Market Responses

Recognising the challenges posed by the pandemic, government bodies and regulatory authorities initiated several policy measures aimed at stabilising the real estate market. These interventions were crucial in restoring buyer confidence and catalysing market recovery. For example, the Indian government introduced temporary stamp duty reductions and extended the Pradhan Mantri Awas Yojana (PMAY) benefits to stimulate demand among first-time homebuyers.

Other measures, such as enhanced enforcement of the Real Estate Regulation and Development Act (RERA), increased transparency, and stringent timelines for project completions, reassured buyers about developers' credibility. The Reserve Bank of India (RBI) also played a significant role by reducing repo rates and lowering the cost of home loans. These combined efforts helped create a more favourable purchasing environment, encouraging many prospective buyers to consider long-term investments in residential property (RBI, 2020).

1.1.5 Technological Innovations and the Digital Transformation of Real Estate

The COVID-19 crisis accelerated the digital transformation in many industries, and real estate was no exception. Virtual property tours, online documentation, and digital payment platforms became the new norm, reducing the friction traditionally associated with property transactions. In markets like Greater Noida and Noida, technology has bridged geographical gaps, enabled remote investments and broadened the customer base.

Developers rapidly adopted digital marketing strategies, utilising social media, webinars, and online exhibitions to showcase projects. This not only increased the transparency of property details but also allowed buyers to compare options without the need for physical visits. For instance, augmented reality (AR) and virtual reality (VR) tools have been integrated into marketing strategies to provide immersive experiences of residential projects (Deloitte, 2021). These technological advancements have enhanced customer engagement and driven a more efficient and secure transaction process.

1.1.6 Global Trends and Local Realities

While the changes in residential buying behaviour can be seen as part of a global trend triggered by the pandemic, local factors also play a significant role in shaping the market. In Greater Noida and Noida, the interplay of global economic uncertainty with regional development policies has created a unique scenario for homebuyers. The blend of international best practices with local cultural, economic, and regulatory nuances has resulted in a distinctive market dynamic.

Local authorities have focused on infrastructural enhancements and creating policies supporting sustainable and inclusive urban development. These measures include public transportation investments, civic amenities improvements, and initiatives to reduce pollution and enhance green spaces. Such developments have further increased the

attractiveness of these areas for homebuyers who are increasingly conscious of environmental sustainability and quality of life (World Bank, 2020).

1.1.7 Demographic Shifts and Changing Buyer Profiles

An equally significant factor contributing to the transformation of the real estate market is the changing demographic profile of buyers. The rise of millennials and young professionals as key decision-makers has redefined market expectations. This cohort, often more tech-savvy and health-conscious than previous generations, brings different priorities. They favour properties that offer flexibility, connectivity, and modern amenities that support a dynamic lifestyle.

For instance, a PwC (2020) study found millennials value sustainability, smart home technologies, and community living more than older generations. This shift in buyer demographics has encouraged developers in Greater Noida and Noida to incorporate features like energy-efficient systems, smart security, and communal recreational areas into new projects. Integrating these modern elements caters to the current market and aligns with global sustainability goals.

1.1.8 Integration of Visual Data and Trends

To better understand these evolving dynamics, consider the following chart, which maps the changes in homebuyer priorities over the last three years:

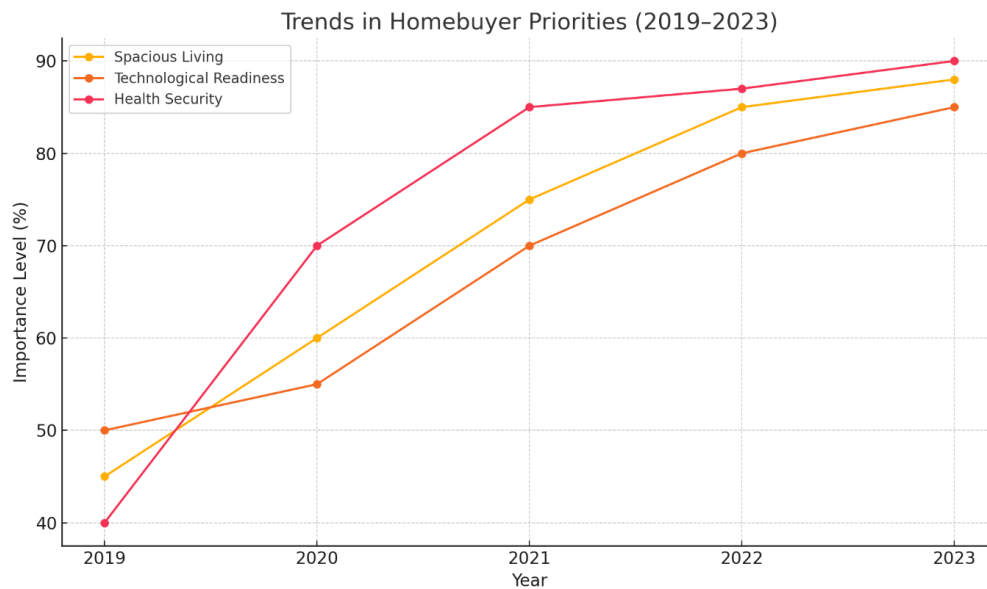


Figure 2 Trends in Homebuyer Priorities – Year 2019–2023

Sources: Knight Frank, 2021

Note: Figure 2 is based on survey data from leading real estate agencies. It shows an upward trend in the importance of spacious living, technological readiness, and health security. Data sources include Knight Frank (2021).

This visual data underscores the substantial shifts in priorities, particularly noting the dramatic rise in the significance of work-from-home facilities and open spaces. The data reflects changing consumer behaviour and signals the need for developers to innovate in response to these evolving expectations.

1.1.9 Synthesis and Transitional Overview

In summary, the COVID-19 pandemic has catalysed a re-evaluation of traditional paradigms in residential real estate. In cities like Greater Noida and Noida, the convergence of governmental policy shifts, technological advancements, and changing consumer preferences has led to a remarkable transformation in the market. The home is no longer viewed solely as an investment asset or a status symbol but as an essential element of personal well-being and lifestyle resilience.

This study deeply explores these transformations by examining the key factors influencing customers' buying behaviour in the post-pandemic era. By analysing these shifts through a multidisciplinary lens incorporating economic theories, psychological frameworks, and sociocultural perspectives, the research aims to understand the emerging trends in residential real estate comprehensively.

1.1.10 Pre- and Post-COVID Context of Real Estate in India

The Indian real estate sector has long been a vital pillar of the national economy, second only to agriculture in terms of employment generation and contribution to GDP (IBEF, 2021). Before the onset of COVID-19, residential real estate demand was largely shaped by traditional factors such as affordability, connectivity to employment hubs, infrastructural development, and long-term appreciation potential. According to JLL (2019), cities like Noida and Greater Noida emerged as prominent residential destinations due to their well-planned layouts, metro connectivity, and relatively lower property prices compared to Delhi and Gurugram. For many middle-class families, purchasing an apartment in these regions was both a financial milestone and a pathway to social mobility. The outbreak of the COVID-19 pandemic in 2020 disrupted these established dynamics in unprecedented ways. Nationwide lockdowns, the reverse migration of labour, and the

widespread adoption of remote working practices significantly altered buyer preferences. As Knight Frank (2021) observed, housing choices were no longer based solely on location and affordability but increasingly factored in wellness, safety, additional space for home offices, and the quality of community living. KPMG (2020) further highlighted that integrated townships and gated communities became highly desirable, as buyers valued controlled density, access to healthcare facilities, and amenities that promoted lifestyle resilience.

A major transformation during this period was the rapid adoption of digital platforms for real estate transactions. Traditionally, property searches and negotiations relied heavily on physical visits and face-to-face interactions with brokers. Post-pandemic, however, online property portals, virtual tours, digital documentation, and proptech-driven engagement became central to the buying process (Housing.com, 2021). This digitalisation not only streamlined transactions but also expanded the reach of developers to new customer bases, including Non-Resident Indians (NRIs). As Anarock (2021) reported, many NRIs increased investments in Indian housing during this period, benefiting from currency advantages and perceiving real estate as a secure “haven” asset.

Housing preferences also became more segmented along socio-economic lines. CBRE (2021) noted that higher-income buyers shifted toward larger units, independent floors, and luxury housing equipped with wellness features such as green spaces, smart-home systems, and air-purification technologies. In contrast, middle-income groups continued to prioritise affordability but sought flexible layouts that could accommodate work-from-home spaces and children’s study areas. As Goyal and Gupta (2021) pointed out, the importance of location also evolved, with healthcare accessibility emerging as a critical factor sometimes even outweighing workplace proximity, which had dominated pre-COVID decision-making.

According to UP-RERA (2021), in the regional context of Noida and Greater Noida, the pandemic posed both challenges and opportunities. Although construction delays and sales slowdowns marked the initial lockdown phase, the regions benefitted from their affordable pricing, planned infrastructure, and strong connectivity through expressways and metro expansion. As Delhi NCR residents looked for less congested alternatives to Delhi and Gurugram, Noida and Greater Noida gained renewed traction among buyers. Government interventions, such as reduced stamp duty, financing support for developers, and metro network expansion, further boosted recovery.

Overall, this evolution highlights the core research problem: determinants of residential buying behaviour in India have expanded beyond conventional economic and locational factors to include health, digital adoption, and lifestyle needs. Yet, despite these major shifts, academic research on this transformation especially in the specific context of Noida remains limited. This gap forms the basis for the current study.

1.2 Research Problem

The research problem centres on the rising demand for residential apartments in the real estate sector, driven by rapid industrial and urban growth that has reshaped customer preferences post-COVID-19. Traditional determinants such as price, location, and return on investment no longer fully explain buyer behaviour, creating the need to study new factors influencing purchase decisions in the post-pandemic context. Accordingly, the research focuses on identifying the key determinants of apartment purchase decisions, examining shifts in buyer preferences, and providing insights that can help builders, developers, and policymakers align their project strategies more effectively.

1.2.1 Identifying the Gaps

Historically, the literature on residential property purchasing focused primarily on economic factors such as affordability, location, and market returns (Smith & Rao, 2018). However, the pandemic introduced previously underemphasised variables or even overlooked health security, work-from-home viability, and the integration of digital platforms in the buying process. A preliminary literature review reveals that while studies discuss these aspects separately, a comprehensive investigation linking these factors to consumer buying behaviour in the post-pandemic real estate market is lacking.

For instance, research by Verma and Singh (2020) touched upon the impact of remote work on residential choices. However, it did not fully explore the broader implications on market dynamics in secondary cities. Similarly, technology analysts have widely discussed digital transformation in property transactions (Deloitte, 2021). However, the interplay between these innovations and consumer decision-making in the residential segment requires further study.

1.2.2 The Problem Statement

The core problem addressed in this research is to study: “The key factors affecting buying behaviour for purchasing residential apartments evolved post-COVID era, specifically in the context of Noida”

This central question is supported by sub-problems related to identifying and measuring new consumer preferences, policy interventions, and digital technologies on transaction processes.

1.2.3 Contextual Relevance and Rationale

The rapid transformation witnessed in global real estate markets underscores the significance of this research problem. Understanding these changes is critical for strategic planning and sustainable urban development for local stakeholders, including developers, policymakers, and consumers. This study will help bridge the gap between traditional real estate paradigms and the new post-pandemic reality in Greater Noida and Noida, where infrastructural investments and urban policies are in constant flux.

Figure 3 below illustrates the conceptual framework that links traditional buying behaviour determinants with emerging factors such as digital engagement and health security:

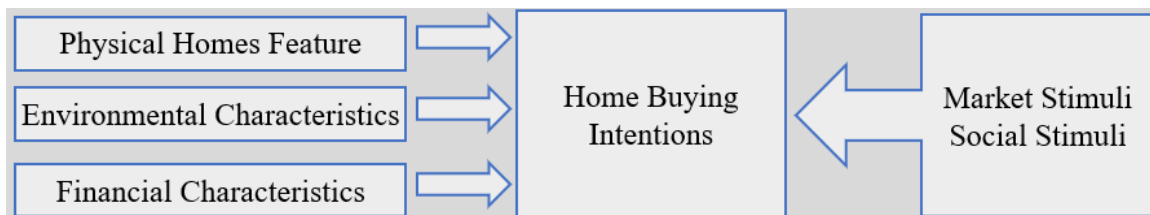


Figure 3 Conceptual Framework of Changing Homebuyer Behaviour

Source: Smith & Rao (2018)

Note: Figure 3 synthesises insights from prior study (Smith & Rao, 2018) with contemporary data to outline the proposed relationships among various determinants of buying behaviour in the post-COVID context.

1.2.4 Justification for the Study

Given the paucity of integrated research in this area, this study aims to provide a comprehensive analysis by:

- Quantitatively and qualitatively assessing the evolving determinants of residential buying behaviour.

- Evaluating the impact of governmental and regulatory interventions.
- Examining the role of digital transformation in facilitating real estate transactions.
- Providing actionable insights for stakeholders in Greater Noida and Noida.

This multifaceted approach is necessary because the traditional models no longer adequately explain buyer behaviour in an era marked by health crises and digital integration. By addressing these gaps, the research will offer valuable contributions to both academic literature and industry practice.

1.3 Purpose of Research

This research aims to evaluate the key post-pandemic factors influencing residential property-buying behaviour. Its focus is to examine the relative significance of population density, build quality, and connectivity in shaping residential property preferences, and to assess the extent to which COVID-19 has altered traditional housing priorities. Furthermore, the study seeks to provide empirically grounded recommendations to policymakers, developers, and urban planners for future residential development. Theoretically, it contributes by applying behavioural frameworks within the real estate context, while practically, it offers actionable insights for key stakeholders.

1.3.1 Research Objectives

The primary objectives of this study are:

- To study the significance of ‘population density in society’ on buying decisions.
- To study the significance of ‘build quality’ on buying decisions.
- To study the significance of ‘connectivity’ on buying decisions.

1.3.2 Methodological Approach

The research adopts a mixed-methods approach, utilising quantitative and qualitative techniques to understand homebuyer behaviour comprehensively. Primary data was collected through structured questionnaires, which were carefully designed based on an extensive review of relevant literature and existing market practices. These questionnaires were administered to homebuyers in Greater Noida and Noida. Additionally, qualitative insights were obtained through in-depth interviews with real estate developers and policymakers, enriching the data with expert perspectives and contextual understanding. This methodological framework ensures statistical rigour and narrative depth in analysing the factors influencing residential purchase decisions post-COVID-19.

1.4 Significance of the Study

The significance of this study lies in its academic, practical, policy, societal, and future research contributions. Academically, it extends consumer behaviour theories by incorporating crisis-induced variables, offering a deeper understanding of how external shocks like COVID-19 reshape housing decisions. Practically, the study provides valuable insights for developers, enabling them to align housing projects with the evolving priorities of buyers in the post-pandemic era. From a policy perspective, the findings support evidence-based urban housing strategies that can address both current and emerging needs. At the societal level, the research underscores housing as a crucial driver of stability, health, and overall quality of life. Finally, the proposed framework holds potential for future research, as it can be replicated and tested across other cities and countries, broadening its applicability and impact.

Academic Contributions: From an academic perspective, this study expands upon existing theories of consumer behaviour by integrating crisis-induced variables. It challenges

conventional frameworks that predominantly emphasise economic and locational factors, proposing a more comprehensive model that includes psychological, technological, and health-related determinants.

Practical Implications: The findings offer critical insights into emerging buyer priorities for industry practitioners, particularly real estate developers and marketers. The study's outcomes can guide the development of new housing projects that align with the evolved needs of modern consumers. In addition, the research provides actionable recommendations on how to effectively leverage digital platforms and technology to enhance customer engagement and streamline the transaction process.

Policy Implications: At the policy level, this study holds significance for urban planners, housing authorities, and financial regulators. The COVID-19 pandemic exposed vulnerabilities in urban housing markets, highlighting the need for resilient, inclusive, and health-conscious residential planning. Insights from this research can inform government policies aimed at promoting affordable housing while ensuring that infrastructure development keeps pace with rapid urbanisation in regions such as Noida.

Additionally, the study's findings on consumer reliance on digital platforms for property exploration and decision-making suggest that policymakers should encourage the adoption of proptech innovations through regulatory support and incentives. Financial institutions can also benefit by tailoring mortgage policies and housing finance schemes to match the shifting priorities of post-pandemic buyers, such as greater emphasis on wellness features, flexible layouts, and secure community living (Knight Frank, 2021; KPMG, 2020). In this way, the research contributes to evidence-based policymaking that strengthens the overall resilience of the housing sector.

Societal Relevance: Beyond the academic and policy domains, this study is socially significant in its focus on the changing aspirations of urban households. Housing is not

merely a financial investment but also a determinant of social stability, health, and quality of life. Marquez et al., (2021) add that by uncovering how factors such as population density, environmental sustainability, and proximity to healthcare facilities influence purchasing decisions, the study highlights the importance of designing living spaces that promote both physical and psychological well-being.

According to UN-Habitat (2020), the results also hold relevance for addressing equity concerns in access to quality housing. Post-pandemic consumer behaviour highlights growing disparities between income groups, where affluent buyers may prioritise luxury features while middle-income households remain focused on affordability and security. Recognising these diverging needs enables stakeholders to create inclusive housing strategies that cater to diverse segments of society.

Future Academic Relevance: Ultimately, this study lays the groundwork for future longitudinal and comparative research. While the present work focuses on Noida and Greater Noida, the framework developed here can be replicated in other Indian cities or even internationally, enabling cross-cultural comparisons of post-crisis housing preferences. Moreover, as per Goyal & Gupta (2021), consumer behaviour continues to evolve in response to technological adoption, climate concerns, and future uncertainties. This study offers a baseline for ongoing academic inquiry into the dynamic relationship between crises and housing markets.

1.5 Research Purpose and Questions

The final section of this introductory chapter articulates the overall research purpose and outlines the specific research questions that guide the inquiry. Given the evolving nature of consumer behaviour post-COVID, the study is driven by a central research purpose that is both descriptive and explanatory.

1.5.1 Overall Research Purpose

The primary purpose of this research is to explore and understand the key factors that influence customers' buying behaviour for purchasing residential apartments in Greater Noida and Noida in the aftermath of the COVID-19 pandemic. This purpose is pursued by investigating:

- To study the significance of ‘population density in society’ on buying decisions.
- To study the significance of ‘build quality’ on buying decisions.
- To study the significance of ‘connectivity’ on buying decisions.

1.5.2 Formulated Research Questions

Based on the overall research purpose, the following research questions have been formulated:

- How does population density in society affect residential property buying behavior?
- How does build quality affect buying decisions for property selection?
- How does connectivity affect residential property purchase decisions?

1.5.3 Expected Outcomes

The study is anticipated to reveal a complex interplay between enduring market determinants and newly emergent factors shaped by the pandemic. The integration of these

elements is expected to culminate in a comprehensive model of buying behaviour applicable to Greater Noida and Noida and other emerging urban markets.

1.6. Structure of Study

This research report is systematically organised into six core chapters, followed by appendices and supporting sections, to ensure clarity, coherence, and a logical progression of the study.

Chapter I: Introduction lays the research's foundation by presenting the study's background and context. It includes an overview of the topic, identification of the research problem, the main objectives, and the overall purpose of conducting this study. The chapter also highlights the significance of the research in the current scenario and concludes with clearly stated research questions, which guide the investigation.

Chapter II: Review of Literature comprehensively evaluates existing scholarly work relevant to the study. It begins with the theoretical framework that underpins the research and proceeds to explore specific theories such as the Theory of Reasoned Action and Human Society Theory. This chapter also discusses the development of the research hypothesis based on existing literature and concludes with a summary highlighting the research gaps and justification for the present study.

Chapter III: Methodology describes the detailed research design and methods used to conduct the study. It begins with an overview of the research problem and the operationalisation of theoretical constructs. The chapter further elaborates on the research questions, design, sampling methods, participant selection, and the instruments used for data collection. Additionally, it outlines the procedures followed for data collection and analysis. The research hypotheses are revisited, and any limitations of the methodology are

discussed. The chapter concludes with a summary that sets the stage for the presentation of results.

Chapter IV: Observations and Results presents the study's empirical findings. It starts with a percentage analysis of the collected data, followed by statistical analysis through correlation methods. The chapter then discusses the outcomes of the hypothesis testing and addresses each of the research questions. A summary of the key findings and conclusions drawn from the results is also provided.

Chapter V: Discussion interprets the results in the context of the research questions and literature reviewed earlier. This chapter critically examines the implications of the findings and discusses how they relate to previous studies and the theoretical framework.

Chapter VI: Summary, Implications, and Recommendations summarises the overall study's major findings and insights. It discusses the study's broader implications for theory, practice, and policy and proposes recommendations for future research. The chapter ends with concluding remarks on the study's contributions.

Following the main chapters, the Appendices include supplementary materials essential to the research. Appendix A provides the survey cover letter, Appendix B includes the informed consent form, and Appendix C contains the questionnaire for data collection. Finally, the report concludes with a comprehensive list of References, and a section on Abbreviations.

This structured approach ensures a coherent flow from problem identification to findings and recommendations, enabling a holistic understanding of the key determinants of residential apartment buying behaviour in the post-COVID-19 context.

CHAPTER II: REVIEW OF LITERATURE

2.1 Theoretical Framework

The post-COVID-19 landscape has significantly transformed consumer behaviour, particularly within the residential housing sector. Theoretical frameworks provide critical lenses through which these behavioural changes can be analysed, contextualised, and understood. This section synthesises key theoretical foundations across disciplines such as behavioural economics, sociology, urban planning, and psychology to construct a comprehensive understanding of the residential property buying behaviour in Greater Noida and Noida in the wake of the pandemic.

Behavioural Economics and Decision-Making under Uncertainty:

Behavioural economics, as advanced by Thaler and Sunstein (2008), emphasises the psychological and cognitive biases that influence decision-making. During crisis periods such as the COVID-19 pandemic, consumers often display bounded rationality, making choices based not solely on economic logic but also on fear, uncertainty, and perceived security. Property buyers became more conservative, prioritising investments that offered tangible safety and long-term stability. Residential apartments with health-oriented features, lower density, and greater personal control were perceived as safer options. Thus, behavioural nudges significantly impacted market trends.

“People do not always make rational decisions, especially in uncertain environments. Psychological biases, emotions, and heuristics influence how people evaluate risks and rewards” .

Housing Market Theories:

Traditional housing market theories, such as those posited by Glaeser (2013), explain market behaviours through macroeconomic variables including supply, demand, interest rates, and income fluctuations. COVID-19 acted as a shock to both supply—due to construction halts and labour shortages—and demand—due to income loss and employment insecurity. The interplay of these forces led to the rise of niche demands, particularly for wellness-oriented housing and units in peripheral areas with better spatial quality and open environments.

Risk Perception Theory:

Slovic's (1987) Risk Perception Theory suggests that consumers' reactions are based more on perceived risks than actual risks. Amid the pandemic, individuals increasingly assessed real estate options through a risk-aversion lens, considering infection probability, hospital accessibility, and the resilience of housing in emergencies. Consequently, buyers avoided densely packed apartment complexes and instead sought properties in well-ventilated, hygienic, and less congested locales.

"Risk is not only a matter of statistics but of perception shaped by individual experience and media narratives".

Theory of Planned Behaviour (TPB):

Ajzen's (1991) Theory of Planned Behaviour (TPB) is one of the most widely used frameworks in analysing consumer decision-making. According to TPB, attitude toward the behaviour, subjective norms, and perceived behavioural control collectively shape behavioural intentions. Post-COVID, buyers' attitudes became highly influenced by the need for health safety and stability; subjective norms shifted as societal values prioritised

self-owned housing and family welfare; and perceived control increased with government subsidies, EMI flexibility, and digital property buying platforms.

“The stronger the attitude and the more favourable the social norm and perceived control, the higher the likelihood of the behaviour being performed” (Ajzen, 1991).

Maslow’s Hierarchy of Needs:

Maslow’s (1943) Hierarchy of Needs explains human motivation in a tiered model, from physiological survival to self-actualisation. Housing serves not only as a physiological necessity but also as a means of safety and a sense of belonging. COVID-19 highlighted the home’s role as a haven, making consumers reevaluate its importance. As work-from-home and isolation became the norm, homes were no longer just shelters—they became offices, schools, and wellness centres, thereby amplifying their role in psychological well-being.

Human Ecology Theory:

The Human Ecology Theory emerged from the Chicago School of Sociology, particularly through the work of Park and Burgess (1925). It views urban development as an ecological process in which human behaviour and settlement patterns evolve due to the interaction between population, environment, and space. The theory posits that spatial distribution, population density, and competition for resources shape the form and function of cities.

Hawley (1986) extended this perspective by identifying population, organisation, environment, and technology as fundamental drivers of ecological adaptation. In the housing market, this suggests that the density and spatial arrangement of communities influences residential choices. Post-COVID-19, the theory explains why homebuyers

prefer low-density environments, as crowded spaces are perceived to heighten health risks and reduce overall well-being.

Environmental Stress Theory:

Environmental Stress Theory explains how environmental conditions create psychological and behavioural stress. Stokols (1972) argued that high population density, noise, and congestion act as stressors, which can adversely affect health, well-being, and decision-making. Individuals respond to these stressors by seeking environments that reduce perceived risks and promote comfort.

Applied to residential property buying, this theory suggests that overcrowded and high-density living environments intensify stress and reduce desirability, whereas spacious, well-ventilated, and less congested areas are preferred. The COVID-19 pandemic amplified these concerns, making buyers more sensitive to the stressors associated with density and shared spaces.

Signalling Theory:

Signalling Theory, developed by Spence (1973), explains how parties in a market reduce information asymmetry through signals. In real estate, build quality, architectural design, and certifications (such as green building ratings) act as signals that communicate safety, durability, and value to prospective buyers.

Post-COVID-19, build quality has become a stronger signal of health safety (ventilation, hygiene, structural soundness), reassuring buyers about the long-term viability of a property. High-quality construction reduces uncertainty and increases customer confidence, thereby shaping purchase behaviour.

Central Place Theory:

Central Place Theory, proposed by Christaller (1933), is a spatial theory of urban settlement. It argues that towns and cities emerge as “central places” offering goods and services, with their hierarchy shaped by connectivity and accessibility. Consumers tend to choose locations that minimise travel costs and maximise accessibility to services, employment, and transport infrastructure.

In housing markets, this theory underscores the importance of connectivity—buyers prefer residential areas that are well-connected to workplaces, healthcare, education, and public transport. Post-pandemic, connectivity has gained renewed importance as buyers seek both accessibility and flexibility for hybrid work arrangements.

Theory of Reasoned Action:

The Theory of Reasoned Action (TRA) asserts that an individual’s intention to perform a behaviour is the primary predictor of action. Intentions, in turn, are shaped by two factors: attitudes toward the behaviour (positive or negative evaluations) and subjective norms (perceived social pressures or expectations).

In residential property buying, TRA suggests that a consumer’s intention to purchase is influenced by their perceptions of housing quality and safety (attitudes) and by social expectations from family, peers, or workplace culture (subjective norms). Post-COVID-19, these influences are powerful, as families collectively emphasise health, safety, and adaptability of housing.

The theoretical framework lays the groundwork for understanding the complex behaviour of post-COVID apartment buyers in Noida. It integrates psychological models, market theories, and sociological insights to explain not only what decisions are being made but

also why they are being made. This multidimensional theoretical base enables a comprehensive exploration in subsequent chapters of the study.

Conceptual Linkages to Key Determinants

The study establishes theoretical linkages between the determinants of housing preferences and relevant behavioural, social, and urban theories. Each determinant is supported by one primary theory and one alternative theoretical perspective.

- **Population Density and Buying Behaviour**

Low-density residential environments gained prominence in the post-COVID context due to heightened awareness of airborne infections, the demand for open spaces, and the desire to limit interactions with strangers. Jain et al. (2023) observed that consumers increasingly preferred less congested neighbourhoods that promote health and reduce stress.

Supporting Theory: Human Ecology Theory

The Human Ecology Theory explains how population distribution, density, and spatial arrangements influence human settlements and housing demand. As highlighted by Park and Burgess (1925) and later expanded by Hawley (1986), the theory helps interpret post-pandemic preferences for low-density environments, where households adjust living choices to minimise health risks.

Alternative Theory: Environmental Stress Theory

The Environmental Stress Theory, proposed by Stokols (1972), suggests that overcrowding and high density generate stress, which in turn shapes residential preferences. This supports the growing inclination towards less crowded housing options.

- **Building Quality and Buying Behaviour**

The quality of construction has emerged as a crucial determinant of homebuyer preferences. Buyers prioritise elements such as regulatory certifications (e.g., RERA

compliance), ventilation, water quality, and touchless facilities. Sharma and Gupta (2023) highlighted that superior construction quality not only addresses health concerns but also builds trust in the developer and reflects long-term project resilience.

Supporting Theory: Maslow's Hierarchy of Needs

Maslow (1943) emphasised that shelter and safety form the foundation of human needs. In the post-COVID era, the increased demand for structural safety, ventilation, hygiene, and quality construction demonstrates how housing choices are aligned with the fulfilment of these basic needs.

Alternative Theory: Signalling Theory

Signalling Theory, introduced by Spence (1973), explains how the quality of construction acts as a signal of safety, durability, and long-term value. This signal builds buyer confidence and influences purchase intentions.

- Connectivity and Buying Behaviour

Although remote work has reduced commuting frequency, connectivity to hospitals, markets, and emergency services has become increasingly important. Mishra (2024) reported that localities with strong road infrastructure and reduced reliance on crowded public transport systems attracted more buyer interest.

Supporting Theory: Central Place Theory

The Central Place Theory, introduced by Christaller (1933), highlights how accessibility and connectivity influence settlement patterns and housing demand. The post-pandemic preference for well-connected neighbourhoods aligns with this theoretical perspective.

Alternative Theory: Theory of Reasoned Action

The Theory of Reasoned Action, developed by Fishbein and Ajzen (1975), suggests that behavioural intentions are shaped by attitudes and perceptions. In the housing context,

buyers' perceptions of accessibility to workplaces, services, and transportation networks strongly influence purchase decisions.

2.2 Conceptual Framework

Consumer buying behaviour refers to the decision-making processes and actions that individuals or households undertake before, during, and after purchasing goods and services. This behaviour becomes significantly more complex in real estate, given the long-term implications, financial stakes, emotional investment, and the array of variables that influence decision-making (Kotler & Keller, 2016). Traditionally, factors influencing residential property purchases include price, location, accessibility, neighbourhood safety, builder reputation, and availability of amenities (Gibler & Nelson, 2003). However, in post-COVID-19 contexts, new factors such as health safety, social distancing, work-from-home feasibility, and mental well-being have emerged as dominant determinants (Knight Frank, 2021).

Understanding homebuyers' decision-making process has gained renewed importance in the post-COVID-19 era, particularly in fast-developing urban regions like Noida. The pandemic has fundamentally reshaped lifestyle preferences, health consciousness, and expectations regarding living spaces, thereby altering traditional determinants of residential property purchase behaviour.

This study, titled "Key Determinants of Residential Apartment Buying Behaviour in Noida Post-COVID-19," explores how population density, build quality, and connectivity are critical drivers of consumer choices in the contemporary housing market. The conceptual framework presented herein integrates these key factors with buyer behaviour, thus providing a structured lens through which the research objectives are addressed.

Alignment with Research Objectives:

The development of the conceptual framework directly corresponds to the following research objectives:

- To examine the significance of population density in society on residential buying decisions. Following COVID-19, there has been a perceptible shift in consumer preference towards less densely populated localities, where better air quality, social distancing, and enhanced quality of life can be assured (Agarwal, 2023; Sharma & Gupta, 2024).
- To assess the significance of build quality on residential buying decisions. The importance of robust construction standards, superior material use, and adherence to health and safety norms has intensified post-pandemic, as buyers seek homes that ensure physical security and long-term durability (Singh et al., 2018; Dey, 2016).
- To analyse the significance of connectivity on residential buying decisions. Enhanced connectivity to workplaces, healthcare facilities, educational institutions, and essential services increasingly influences buyer preferences, with a higher value placed on reduced commute times and better accessibility (Mang et al., 2016; Yam & McGreal, 2010).

Conceptual Framework Structure: In this framework, three independent variables - population Density, Build Quality, and Connectivity are proposed to influence the dependent variable, House Buying Behaviour in Noida.

Table 1 Conceptual framework

Hypothesis	Factor	Supporting Theory	TPB Construct Alignment
H1	Population Density	Human Ecology / Environmental Stress Theory	Attitude
H2	Build Quality	Maslow's Hierarchy / Signaling Theory	Attitude
H3	Connectivity	Central Place Theory / TRA	Perceived Behavioral Control

A visual depiction of the conceptual framework is provided below:

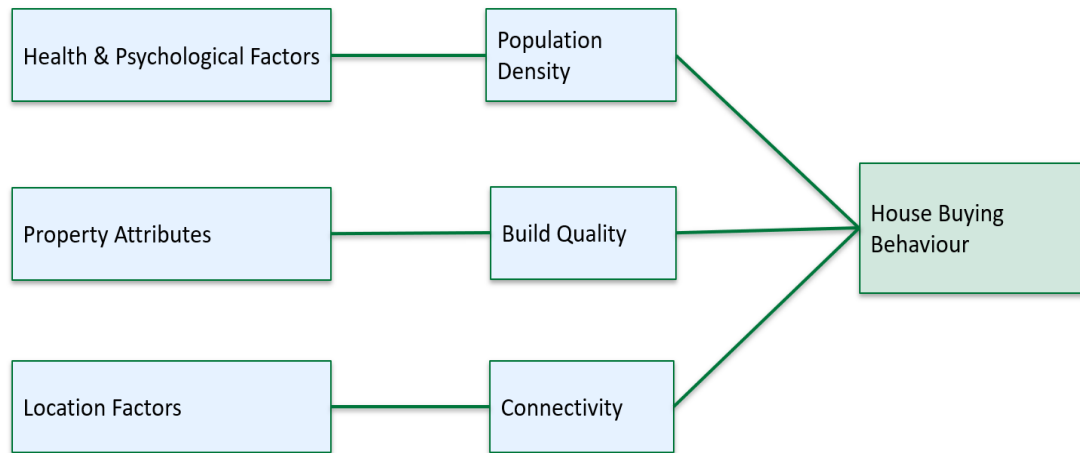


Figure 4 Conceptual Framework

Source: Self-generated based on conceptual analysis

This structure will guide hypothesis testing and empirical analysis in the later chapters, ensuring that each relationship is systematically validated.

Summary

The conceptual framework developed for this research captures the profound transformation in homebuyer priorities triggered by the COVID-19 pandemic. It reflects how reduced population density, superior build quality, and strategic connectivity have emerged as key determinants driving residential apartment purchase behaviour in Noida. Through systematic empirical investigation, this study aims to contribute valuable insights for real estate developers, urban planners, and policymakers aiming to cater to the evolving needs of post-pandemic homebuyers.

Other Theoretical Models relevant to the framework

Behavioural Economics and the Housing Market:

Behavioural economics has long challenged the classical notion of rational actors in economic decision-making, introducing variables like bounded rationality, heuristics, biases, and emotional framing (Thaler, 1985; Kahneman, 2011). Real estate buying, especially during crises, is rarely a purely rational decision. Buyers often respond to perceived threats (e.g., future lockdowns), emotional cues (e.g., desire for control and stability), and socially constructed meanings of home and family (Akerlof & Shiller, 2009). In the post-COVID world, the fear of contagion, economic uncertainty, and the experience of prolonged lockdowns have reshaped how people evaluate homes. Properties with open spaces, ventilation, private amenities, and proximity to essential services are valued more, not because they offer financial returns alone, but because they provide perceived emotional and health-related safety (Mogaji, 2020).

Maslow's Hierarchy of Needs and the Residential Market:

Maslow's hierarchy of needs (1943) is often used to understand consumer behaviour in terms of a psychological progression from basic needs to self-actualisation. This framework can explain why post-COVID buyers prioritise needs differently in real estate.

During the pandemic, individuals increasingly prioritised:

- Physiological needs: Access to clean water, air, and space.
- Safety needs: Health security, hospital proximity, and controlled environments.
- Belongingness: Private yet community-focused residential complexes.
- Esteem needs: Owning versus renting became a symbol of control and success.
- Self-actualisation: Smart homes supporting remote work, learning, and lifestyle aspirations.

This reprioritisation demonstrates that homebuyers have elevated their expectations in line with redefined life goals, an essential shift that the current study seeks to explore in Noida.

Urbanisation and the Post-COVID Housing Paradigm:

Urban sociology literature has long critiqued the challenges of hyper-urbanisation, especially in developing economies. Scholars like Harvey (1973) and Lefebvre (1991) have emphasised the “right to the city” and how urban spaces are socially produced. Rapid development in areas like Noida and Greater Noida once responded to the demand for proximity to employment hubs and urban amenities. However, the pandemic questioned the sustainability of high-density urban living.

A renewed interest in suburban and semi-urban living has emerged, with consumers looking beyond traditional city cores for safer and greener spaces (JLL, 2021). The theoretical transition from density-driven to safety-driven urban planning has reframed residential real estate dynamics in the post-pandemic context.

Sustainable Development and Green Housing:

Sustainability has become a theoretical and practical imperative. The United Nations' Sustainable Development Goal 11, "Make cities and human settlements inclusive, safe, resilient and sustainable", has been increasingly used to examine real estate development practices. In post-COVID consumer behaviour, green certifications, energy-efficient designs, waste management, and open green spaces are no longer niche preferences but core requirements (World Bank, 2020).

Developers are integrating sustainable practices into residential projects as consumers become environmentally conscious to meet shifting demand. Studies show that green-certified buildings have a higher preference index post-COVID than traditional ones (Deloitte, 2021).

Technology Acceptance Model (TAM):

The Technology Acceptance Model (TAM) is another theoretical construct relevant to understanding the digital transformation of home-buying behaviour. With virtual tours, online booking, e-documentation, and digital home loan processing becoming mainstream, the model originally designed to explain technology adoption can explain how users perceive the usefulness and ease-of-use of digital real estate tools (Davis, 1989).

Post-COVID, this shift is particularly evident among younger and tech-savvy buyers who trust digital interfaces and AI-powered customer service tools over traditional physical site visits (PwC, 2020).

2.3 Global Impacts of COVID-19 on Real Estate

2.3.1 Worldwide

The pandemic has had a profound effect on real estate markets across the globe. Lockdowns, work-from-home models, and health concerns have shifted consumer preferences and priorities.

United States - In the U.S., the real estate market initially experienced a slowdown but then rebounded due to low interest rates and increased demand for suburban homes (Zillow Research, 2021). Buyers sought larger spaces to accommodate home offices, leading to a surge in demand in less densely populated areas.

United Kingdom - In the U.K., stamp duty holidays temporarily spurred the housing market, though uncertainties surrounding employment and the economy caused fluctuations in buyer confidence (Savills, 2021).

United Arab Emirates - The UAE, particularly Dubai, saw a shift toward ready-to-move-in properties. High-net-worth individuals showed increased interest in luxury apartments and villas, driven by the need for privacy and better amenities (JLL MENA, 2021).

China - China's real estate sector rebounded more swiftly than other nations due to strong governmental stimulus and strict pandemic control measures. However, demand was more focused on Tier 1 and Tier 2 cities, with increased emphasis on health and safety features (NBS China, 2021).

Southeast Asia - Countries like Singapore and Malaysia witnessed a similar pivot toward suburban properties. Demand for integrated townships and smart homes grew as consumers prioritised health, digital infrastructure, and community support (CBRE Asia Pacific, 2021).

2.3.2 Impact of COVID-19 on the Indian Real Estate Sector

The Indian real estate market, valued at over USD 200 billion in 2020, experienced significant disruption during the COVID-19 pandemic. Prolonged lockdowns, reverse migration, construction halts, and liquidity crises caused a sharp slowdown in residential demand. According to the Confederation of Real Estate Developers' Associations of India (CREDAI, 2021), residential sales in the second quarter of 2020 declined by more than 60% year-on-year across major cities, and new project launches plummeted. As the situation stabilised, however, the sector began to rebound, supported by shifting consumer preferences, low interest rates, and stamp duty reductions in states such as Maharashtra. Housing sales started recovering by late 2021 as pent-up demand resurfaced and buyer sentiment improved (Anarock, 2022).

The pandemic triggered major behavioural shifts among homebuyers. Housing came to be perceived as a multifunctional safe zone combining living, work, education, and recreation (JLL India, 2022). Larger apartments with balconies, study rooms, and flexible layouts gained preference over compact configurations, with surveys showing that nearly 67% of urban buyers prioritised 2.5 or 3 BHK units instead of smaller formats (MagicBricks, 2021). Health considerations also became central to decision-making, with the Indian Green Building Council (2022) recording a 30 percent rise in inquiries for eco-friendly homes during the period. In parallel, smart home technologies such as touchless entry, digital security systems, and remote-controlled appliances moved from being luxuries to essential features, particularly in cities like Bangalore, Mumbai, and Noida (CBRE India, 2022).

Technology adoption played a transformative role in sustaining the sector during lockdowns. Developers accelerated the use of digital tools, including virtual property tours, online documentation, and digital payment systems, to maintain engagement with potential

buyers (PropTiger, 2021). At the same time, the Indian government introduced a range of policy interventions to stabilise the market. These included a moratorium on EMIs, repo rate reductions, deadline extensions under RERA, and liquidity infusions through the SWAMIH Fund, which collectively helped restore developer and buyer confidence (Ministry of Housing and Urban Affairs, 2021).

Spatial trends also shifted significantly. With remote work gaining acceptance, demand for larger and more affordable housing in Tier 2 and Tier 3 cities rose sharply. Cities such as Lucknow, Indore, and Kochi witnessed increased traction (Knight Frank India, 2021), while suburban zones in Tier 1 regions such as Noida Extension and Greater Noida West mirrored this decentralisation with expanded lifestyle-driven developments. Suburban apartment bookings increased by nearly 45 percent compared to central city zones (Anarock, 2022). At the same time, buyers displayed a preference for ready-to-move-in properties due to fears of project delays or abandonment, with credibility and possession timelines becoming critical determinants of decision-making (Liases Foras, 2021).

The pandemic also reshaped investment dynamics. Non-Resident Indians renewed their interest in Indian real estate due to favourable exchange rates and a heightened desire for secure, permanent residences in their home country (ICICI Property Services, 2022). This translated into increased demand for luxury and semi-luxury residential properties in both urban and semi-urban markets. In addition, urban buyers began placing greater emphasis on integrated community infrastructure such as clubhouses, wellness centres, co-working spaces, and grocery outlets within gated complexes. The concept of self-sufficient residential communities became more prominent in metropolitan clusters like Noida and Gurgaon (JLL India, 2022). Affordability also remained an important driver, supported by government incentives such as stamp duty cuts, developer discounts, and schemes like the

Pradhan Mantri Awas Yojana, which influenced middle-income homebuyers (Ministry of Housing and Urban Affairs, 2022).

2.3.3 Effects of COVID-19 on Residential Buying Behaviour and Real Estate Dynamics in Noida

As a key residential and commercial hub in the National Capital Region (NCR), Noida provides a representative case for understanding how COVID-19 reshaped real estate demand and consumer behaviour. With a combination of developed infrastructure and expanding suburban sectors such as Noida Extension, Greater Noida West, and Sector 150, the city reflected both micro-level changes in buyer preferences and broader structural shifts in the real estate market.

Post-pandemic, demand patterns shifted significantly, with younger buyers and nuclear families increasingly seeking independent living spaces away from dense commercial centres. Remote-working professionals showed a preference for properties located near green areas and healthcare facilities, with residential inquiries from millennials and first-time buyers rising by more than 30% (Noida Authority, 2022). Integrated township projects offering healthcare, education, retail, and recreational services within self-sustaining communities also gained traction, as buyers sought greater resilience against potential future lockdowns (Anarock, 2022). Proximity to reputed healthcare institutions such as Kailash, Jaypee, and Max hospitals emerged as a decisive factor, while the credibility of developers with proven delivery track records became crucial amid heightened concerns about project delays (CREDAI NCR, 2021).

Spatially, suburban and peripheral areas such as Greater Noida West and Sector 150 attracted strong buyer interest due to affordability, larger space configurations, and modern amenities. Greater Noida West alone accounted for nearly 38% of new residential

registrations in 2021–22 (Anarock, 2022). This decentralisation was supported by digital innovations, as virtual tours, online booking, and digital documentation became mainstream, enabling developers such as Gaurs, Supertech, and Ace Group to sustain transactions during lockdowns (99acres, 2023).

Financial behaviour also evolved in response to macroeconomic conditions. The Reserve Bank of India's interest rate cuts and moratorium schemes increased mortgage affordability, with lenders such as HDFC and SBI reporting a surge in applications for mid-range properties under ₹80 lakhs (RBI, 2021). Government support through the Pradhan Mantri Awas Yojana and state-level stamp duty reductions further bolstered affordability (Ministry of Housing and Urban Affairs, 2022). Non-resident Indians, particularly from the Gulf, Europe, and the U.S., renewed interest in Noida's gated communities due to favourable exchange rates and strong rental yields compared to markets such as Gurgaon and Delhi (ICICI Property Services, 2022).

Socioeconomic determinants also played an important role in shaping buyer behaviour. Income volatility, furloughs, and business disruptions forced some households to defer purchases or shift to more affordable properties, particularly among self-employed and small business owners (KPMG India, 2021). Conversely, professionals in resilient sectors such as IT, healthcare, and government services demonstrated stronger purchasing capacity, often opting for properties with lower EMI burdens to manage long-term financial risks. These dynamics created a more cautious yet opportunity-driven buyer mindset that aligned well with Noida's affordable housing segments and infrastructural strengths.

At the broader market level, Noida's real estate sector underwent structural transformation during the recovery phase. Prior to COVID-19, growth had been steady, with a focus on affordability and connectivity. The pandemic initially disrupted this trajectory, but post-2020, demand rebounded strongly. Weighted average housing prices rose sharply, with

new projects in Noida and Greater Noida witnessing increases of 152% and 121% respectively, compared to pre-pandemic levels (industry estimates). Developers adapted by launching projects emphasising larger apartments, wellness-centric amenities, and mixed-use townships. Notably, Bhutani Infra entered into a joint venture with Yashoda Hospital to develop a mixed-use healthcare and commercial hub in Greater Noida.

Infrastructure and connectivity upgrades further supported suburbanisation. The Yamuna Expressway Industrial Development Authority (YEIDA) announced plans to raise ₹10,000 crore through infrastructure bonds to fund projects such as a 72 km rapid rail line connecting Ghaziabad to Jewar, while the Noida Authority approved a second expressway linking Noida and Greater Noida to ease congestion. These projects are expected to enhance Noida's integration with Delhi, Gurgaon, and surrounding regions.

The Noida Authority also undertook regulatory measures to stabilise urban growth. These included reclaiming around 10,000 square metres of illegally occupied land worth approximately ₹30 crore, mandating no-objection certificates for groundwater extraction in industrial and commercial projects, and cracking down on unauthorised construction across multiple villages. Such initiatives reflect a commitment to sustainable urban planning and long-term growth management.

Overall, COVID-19 acted as a catalyst in reshaping Noida's real estate market. Buyer behaviour became more health-conscious, financially cautious, and technologically driven, while developers, policymakers, and regulators responded with adaptive strategies. The combined impact of socioeconomic shifts, infrastructural upgrades, and regulatory oversight has positioned Noida as one of the most dynamic post-COVID real estate markets in the NCR.

2.3.4 Psychological Impacts of COVID-19 and Their Influence on Residential Apartment Buying Behaviour

Beyond its economic and structural effects, the COVID-19 pandemic also triggered profound psychological and perceptual changes in residential apartment buying behaviour, particularly in Noida. Safety concerns, the desire for permanence, and the search for well-being became central motivators for homebuyers in the post-pandemic context.

A heightened focus on physical distancing and sanitation encouraged buyers to prefer properties that reduced interaction with others. According to Knight Frank India (2022), low-density apartments, independent floors, and gated communities offering restricted access and enhanced hygiene protocols became particularly attractive. Features such as separate entryways, fewer shared amenities, and improved ventilation systems were increasingly perceived as essential safeguards to protect families against health risks.

The uncertainty caused by repeated lockdowns also shifted attitudes toward ownership. MagicBricks (2021) reported a sharp rise in queries for first-time home purchases in Noida, particularly among tenants transitioning from rented to owned housing. Renting came to be associated with displacement and insecurity, while ownership was seen as a symbol of stability and control. This was especially true among families, where securing a permanent residence provided emotional reassurance during crisis periods.

Wellness-oriented housing gained unprecedented momentum as buyers sought features that supported mental and physical health. JLL India (2022) highlighted that apartments with balconies, home offices, and contactless technologies were highly valued, alongside amenities such as yoga studios, jogging tracks, and landscaped green rooftops. Developers in Noida responded by reconfiguring layouts and promoting wellness-driven designs as standard offerings rather than luxury add-ons. These attributes increasingly came to be seen as essential components of healthy living rather than optional luxuries.

Importantly, these psychological transformations were not short-lived reactions but enduring behavioural changes that continue to influence demand. The emotional need for safety, stability, and well-being has established itself as a long-term driver of housing preferences in Noida, reshaping the residential apartment market in fundamental ways.

Comprehensive Review and Critical Insights:

Synthesising evidence from the broader literature, several critical insights emerge regarding the post-COVID evolution of residential apartment buying behaviour in urban India, with Noida serving as a significant example. Economic determinants such as income stability, affordability, and financing options remain foundational to purchase decisions. At the same time, psychological drivers, including the pursuit of safety, privacy, and wellness, have become equally influential. Infrastructure improvements, enhanced connectivity, and planned urban development further reinforce buyer confidence. Migration trends, employment stability, and the rise of remote working have reshaped housing demand, while government interventions such as EMI moratoriums and housing subsidies have moderated financial risks. Developers have also played a pivotal role by adapting product designs, introducing digital sales platforms, and aligning marketing strategies with new buyer priorities.

Together, these interlinked factors demonstrate how the pandemic redefined not only what buyers in Noida sought but also how they approached the decision-making process. The combined effect of economic, psychological, and infrastructural determinants points to a lasting transformation of the residential apartment market in the post-pandemic era.

Mental Health and Post-COVID Residential Buying Behaviour:

A significant and growing body of research underscores the profound mental health implications of the COVID-19 pandemic across age groups and societies, revealing complex psychological outcomes that have shaped various domains of life, including residential decision-making.

Jones et al. (2021), in a systematic review of over 40,000 adolescents globally, found elevated levels of anxiety, depression, and substance use, attributing these changes to disruptions in routines, school closures, and limited social interactions. Similarly, Meherali et al. (2021) reported widespread emotional distress, social isolation, and behavioural risks among youth,

Emphasising that psychosocial interventions such as art-based programs and parental engagement were crucial in mitigating these effects.

In broader population studies, Cui et al. (2022) utilised a large-scale U.S. dataset. They identified key mental health risk factors such as state-level pandemic severity, economic insecurity, household size, and employment status. They observed that the psychological effects of the pandemic varied significantly by demographic and socioeconomic variables, highlighting the dynamic and evolving nature of mental distress.

Chen et al. (2021) emphasised that, beyond infection-related fear, enforced quarantines and economic uncertainty disrupted daily life, increasing psychological burdens across populations. Their synthesis showed that demographic segments such as the elderly, individuals with pre-existing mental health issues, and marginalised groups were more susceptible to cognitive deterioration.

Focusing on vulnerable groups, Samji et al. (2022) found a high prevalence of depressive and anxious symptoms among children and adolescents compared to pre-pandemic levels. The review identified age, gender, and chronic illness as significant risk factors, and

highlighted protective elements such as social support, physical activity, and access to mental health services.

Bartek et al. (2021) explored the unintended mental health consequences of public health measures like mask-wearing and social distancing, noting their impact on child development. They recommended practical strategies for paediatric clinicians to support emotional resilience among young people.

In an international context, Xiong et al. (2020) conducted a meta-analysis of mental health prevalence during COVID-19 and found global increases in depression (23.4%), anxiety (25.4%), and PTSD symptoms (7.6%). The authors highlighted that urban populations faced additional stressors due to isolation and limited access to green and recreational spaces.

These mental health challenges have substantial implications for residential preferences. Urban buyers now prioritise factors associated with psychological well-being, such as green landscapes, recreational amenities, private balconies, flexible workspaces, and proximity to mental health services. Consequently, mental health considerations influence consumer expectations for living environments, a trend observed in urban real estate preferences post-COVID.

This highlights a significant research gap. Despite recognising physical, financial, and spatial determinants in residential choice, the psychological and emotional aspects, especially those arising from prolonged pandemic stress, remain underexplored. This is particularly true in Noida, a rapidly urbanising region where the mental well-being of homebuyers may intersect with infrastructural and lifestyle offerings in unique ways.

Future empirical research should aim to integrate mental health metrics with housing preference data to develop a comprehensive understanding of buyer psychology.

Interdisciplinary approaches combining psychology, urban planning, and real estate economics can provide critical insights to inform developer strategies and urban policy.

2.3.5 Reviews and studies

Authors' review in previous years in India

In the wake of the COVID-19 pandemic, several studies have examined the changing trends in residential apartment buying behaviour in Noida. Sharma and Gupta (2024) conducted a comprehensive study titled “Post-COVID-19 Apartment Buying Behaviour in Noida: An Empirical Study”. Their research highlights a significant shift in buyer preferences towards more spacious apartments. The demand for properties prioritising health-related amenities and remote work-friendly environments has seen considerable growth, reflecting new lifestyle adaptations following the pandemic.

Verma and Singh (2024) contributed to this discourse through their work *Determinants of Housing Purchase Decisions After COVID-19: A Study in NCR Region*. Their findings identified proximity to healthcare facilities, superior ventilation systems, and overall affordability as the most influential factors driving purchase decisions. Their study suggests that health and financial security concerns have become paramount in residential buying choices.

Patel and Mehra (2024), in their paper *Impact of COVID-19 on Homebuyers' Preferences in Urban India: A Focus on Noida*, noted that post-pandemic, buyers show a clear preference for ready-to-move-in properties. Their study underlined that hygiene standards, availability of open spaces, and the assurance of immediate occupancy are key factors influencing buyer decisions. This reflects a growing consciousness about living conditions and the urgency for secure housing.

Similarly, Agarwal (2023), in her study *Changing Trends in Residential Property Buying Post Pandemic in Noida*, observed an increased inclination among homebuyers toward properties in less densely populated areas. The study also emphasised the crucial role that digital platforms have begun to play in property decision-making, as buyers prefer to conduct much of their initial research and shortlisting online, minimising physical visits.

Another important study by Choudhary (2023), titled *Residential Real Estate Dynamics in Noida in the Post-COVID Era*, revealed a notable increase in the preference for integrated townships. Buyers are now favouring self-sufficient residential projects that offer a combination of residential, commercial, and recreational facilities within one secure environment, reducing the need for external travel and exposure.

According to Hassan et al. (2021), housing is one of everyone's essentials. For anyone interested in this issue, understanding the various factors that impact housing purchasing decisions is essential. As a result, the signs discussed in this article were gathered to provide a complete and more accurate indicator for further research. The next step was to identify and group the nine criteria influencing a person's decision to buy a home: finance, dwelling features, neighbourhood, location, demographic background, infrastructure facilities, environment, developer service quality, and superstitious beliefs. These factors might give varied results due to each person's unique needs and budget.

According to Kumar Y and Khandelwal U (2019), the survey discovered that when residential property buyers weigh their options, financial considerations receive the most weight.

According to Singh et al. (2018), purchasing a home is influenced by several other elements, including location, cost, amenities, and builder reputation. Structure and design are the most significant factors influencing customers' purchase of residential apartments

in Noida and Greater Noida. Real estate marketers should prioritise these aspects when marketing flats in the market.

According to Mang et al. (2016), homebuyers are more likely to select a neighbourhood close to a school, a main drag, and their place of employment. When choosing a property, the location of the hospital and the shopping centre will also be considered. However, they did not choose a place near athletic facilities, a hospital, or government agencies.

Age, marital status, educational background, occupation, and family status all significantly impacted where home buyers chose to buy; however, gender and income had no significant impact.

Regardless of their demographic characteristics, a house buyer's decision to acquire a property is significantly influenced by the location's proximity to their employment and school. Potential home buyers tend to favour homes close to their places of employment and/or education because these are the locations they need to access daily, regardless of their demographic makeup.

According to Gupta V & Malhotra G (2016), in order to comprehend client preferences regarding housing qualities in India, the Kano model was applied. Consumer demographics are crucial in determining whether to buy residential real estate. Due to their financial level, Indian buyers usually like low-rise residential apartments.

According to A. Dey (2016) found that the building's characteristics do not significantly impact the buyer's contentment with their flat. Factors including price increases, backed-up kitchen outlets, built-up space measurements, sample flat readiness, after-sale service quality, safety and security features, and environmentally friendly actions taken significantly impact satisfaction. External influencing variables cause no interaction between qualities and satisfaction.

According to K. Nasark (2015), price is the most crucial consideration for customers buying apartments. Quality is the second most crucial aspect based on perceptions of flat quality and potential for pleasure. The location ranks third on the list of crucial factors because of its proximity to emergency services and ease of access to transportation.

According to Mishra et al. (2013), for buyers of residential apartments in NCR, internal variables like the standards and amenities provided by the builders within a township are crucial considerations. For buyers of residential flats in NCR, external elements like the ease of obtaining a loan, payment plans, discounts, the builder's reputation, etc., are also crucial. Buyers' impressions of the three major residential flat markets in the NCR, namely Gurgaon, Noida, and Greater Noida, fluctuate significantly based on factors like business prospects, the level of law and order, access to medical and educational institutions, etc.

According to Suchi Midha (2013), consumers in Delhi-NCR are showing a favourable attitude towards green buildings and are becoming more aware of their advantages. Government programs like the GRIHA (Green Rating for Integrated Habitat Assessment) and LEED (Leadership in Energy and Environmental Design) rating systems have made green buildings more accessible. Despite growing knowledge and a positive attitude, consumer purchasing decisions for green buildings are still delayed or nonexistent.

According to Saraswat R. and G. Prakash (2012), advertising campaigns significantly impact people's impulsive purchasing patterns in Noida City. Shopping coupons, making lists, and shopping more frequently positively impact impulse buying. The consumer choice-making model and the impulsive decision-making theory help analyse how advertising strategies affect impulsive purchasing.

Authors' review in previous years worldwide

In their research, Lieser and Groh (2011a and 2011b) offer a model to ascertain how various elements influencing real estate investing relate. Commercial real estate investment is the dependent variable in this model, which is introduced through groups of independent variables such as economic activity (economic scale, GDP per capita, GDP growth, labour force, inflation, and changes due to new technology), investment opportunities (real estate demand, degree of urbanisation, urban population, quality of Infrastructure and development of the service sector), the capacity of capital markets (stock market liquidity, IPO market, M&A market, credit market, private equity opportunities, and REIT market), regulatory framework (investor protection and title security), administrative procedures and regulatory restrictions (taxes, building permits, property and registration), socio-cultural and political environment (human development and crime rate). The findings demonstrate that the dependent and independent variables are moving in the same direction.

Opoku and Abdul (2010) have researched the elements that influence the purchase of a home, such as location, financial standing, private living area, interior and exterior design, and outdoor space.

Yam and McGreal (2010) in their article have determined that the following variables influence the decision to purchase a home: habitat (security features and green space), house characteristics (design, type of house), home location (close to work, school, and supermarket), amusement facilities (parks, sports facilities, and sports clubs), seller reputation (customers' sense of ethics and corporate social responsibility), and home characteristics (type of house, design). According to research findings, most Johor Bahru homebuyers anticipate residential developments with features including infrastructure,

theme parks and amenities, greener areas, and security measures. The less privileged, however, are disproportionately affected by housing costs.

In their article, Alaghberi et al. 's (2009) research demonstrates the importance of housing styles, including detached homes, shared-wall homes, and condominiums, in influencing buyer choice.

Kueh and Chiew (2005) mentioned in a research report on "Factors influencing house buyers' purchasing decision." The following elements have been shown to influence home buyers' decisions: financial status, home location, neighbourhood security, and public facilities. According to Kueh and Chiew, the primary determinant of home purchase decisions is property price, with demographic factors having no bearing on these choices.

Lee (2001) further focused on the risk elements that investors should consider when purchasing overseas real estate, such as investment risk (variation in profit margin), currency risk (variation in exchange rate), political risk (barriers to capital entry), foreign exchange controls, land grabs, and taxation), and institutional risk, which includes market maturity, size, liquidity, and regulatory and market knowledge.

Guerts and Jaffe (1996) in their research paper 'Risk and Real Estate Investment: An International Perspective' have offered an institutional research framework made up of the following four major categories of factors: social variables (average life expectancy, credit, financial risks, political, economic, and BERI ratings); risk assessment variables factors related to international investments (degree of control, preferential treatment for foreign investors), ownership (safety, bribery and corruption, business innovation and investment activities, and intellectual property rights), and illiteracy, quality of life, and house ownership. The study's theoretical contribution has provided investors with a list of risks they must understand to put suitable policies and procedures in place for their businesses and investment endeavours.

Summary of authors' reviews

Table 2 Showing a summary of the author's review.

Sr. No.	Title of Paper	Author	Year	Findings
1	Understanding purchase behaviour towards green housing among millennials: the mediating role of purchase intention	Kumar, J., Rani, V., Rani, G. and Rani, M	2025	Attitude, environmental concern, and green trust strongly influence purchase intention and behaviour towards green housing in both rural and urban contexts. Perceived risk shows no significant effect.
2	Post-COVID-19 Apartment Buying Behaviour in Noida: An Empirical Study	Sharma, R., & Gupta, P.	2024	Location preference has shifted towards spacious apartments, with buyers prioritising health amenities and remote work-friendly spaces.
3	Determinants of Housing Purchase Decisions After COVID-19: A Study in the NCR Region	Verma, N., & Singh, A.	2024	Key determinants include proximity to healthcare facilities, better ventilation, and affordability.

4	Impact of COVID-19 on Homebuyers' Preferences in Urban India: A Focus on Noida	Patel, K., & Mehra, D.	2024	Buyers prefer ready-to-move-in properties, focusing on hygiene and open spaces.
5	Changing Trends in Residential Property Buying Post-Pandemic in Noida	Agarwal, S.	2023	There is increased demand for properties in less dense areas, with digital platforms becoming crucial in decision-making.
6	Residential Real Estate Dynamics in Noida in the Post-COVID Era	Choudhary, M.	2023	The preference for integrated townships with self-sufficient amenities increased significantly.
7	The Impact of COVID-19 on the Purchase Behaviour of Consumers in Affordable Housing in Indian Real Estate	Singh, S., Sao, A., & Kumar, A	2022	There is a positive correlation between consumer attitudes and purchase intentions, with purchase intentions significantly influencing actual buying behaviour. Post-pandemic, the emphasis on health, hygiene, and security further shaped these choices, highlighting the psychological factors driving

				affordable housing decisions during COVID-19.
8	Impact of COVID-19 on Property Prices in Metro Cities of India	Joshi, V., & Sontakke, K.	2022	Real estate prices in metro cities showed resilience during the pandemic, with some locations maintaining consistent upward trends despite disruptions. This demonstrates the robustness of property prices in major Indian cities, offering insights relevant to the Noida market as well.
9	Factors Influencing Housing Purchase Decision.	Hassan M Ahmad N Hashim A	2021	Studied nine factors: finance, dwelling features, neighbourhood, location, demographic background, infrastructure facilities, environment, developer service quality, and superstitious beliefs and found that owing to each person's unique needs and budget, these factors might give varied results.
10	The Effect of COVID-19 on the Real Estate Industry in India	Sanchaniya, R. J	2021	COVID-19 caused a significant downturn in the Indian real estate sector, highlighting the need for policy interventions to address

				pandemic-induced challenges. This offers a macroeconomic perspective on the pandemic's overall impact on real estate.
11	Factors Affecting Buying Behaviour in the Purchase of Residential Property: A Factor Analysis Approach	Yogesh Kumar Utkal Khandelwal	2019	The survey discovered that when residential property buyers weigh their options, financial considerations receive the most weight.
12	A study on the impact of key factors affecting the buying behaviour of residential apartments: a case study of Noida and Greater Noida	Dr Narendra Singh Mukul Gupta Saroj Kumar Dash	2018	Several other elements, including location, cost, amenities, and builder reputation, influence the decision to purchase a home. The most significant factors influencing customers' decisions to purchase residential apartments in Noida and Greater Noida are structure and design. Therefore, real estate marketers should prioritise these aspects when marketing flats in the market.

13	Determining customers' preferences for housing attributes in India	Vijay Gupta Gunjan Malhotra	2016	The Kano model was applied to comprehend client preferences regarding housing qualities in India. Consumer demographics are crucial in determining whether to buy residential real estate. Due to their financial level, Indian buyers usually like low-rise residential apartments.
14	Purchase decision for apartments: A closer look into the major influencing factors	K. Nasark	2015	Price is the most crucial consideration for customers choosing to buy apartments. Quality is the second most crucial aspect based on perceptions of flat quality and potential for pleasure. The location ranks third on the list of essential factors because of its proximity to emergency services and ease of access to transportation.
15	The Determinants of International Commercial Real Estate Investments	Lieser and Groh	2011	Their research has offered a model to ascertain how various elements influencing real estate investing relate. The findings demonstrate that the

				dependent and independent variables are moving in the same direction.
16	House-buyers' expectations about corporate social responsibility for Malaysian housing	Yam, S. McGreal, S	2010	Determined that the following variables influence the decision to purchase a home: habitat (security features and green space), house characteristics (design, type of house), home location (close to work, school, and supermarket), amusement facilities (parks, sports facilities, and sports clubs), seller reputation (customers' sense of ethics and corporate social responsibility), and home characteristics (type of house, design). According to research findings, most Johor Bahru homebuyers anticipate residential developments with features including infrastructure, theme parks and amenities, greener areas, and security measures. The less privileged, however, are

				disproportionately affected by housing costs.
17	Housing preferences and attribute importance among low-income consumers in Saudi Arabia	Opoku, R. Abdul, M.A.G	2010	Their research found that the elements influencing home purchase are location, financial standing, private living area, interior and exterior design, and outdoor space.
18	Housing shortage for low-income in Yemen: causes and suggestions	Alaghbari, W., Salim, A. Dola, K.	2009	Demonstrate the importance of housing styles, including detached homes, shared-wall homes, and condominiums, in influencing buyer choice.
19	Factors Influencing House Buyers' Purchasing Decision	Kueh, C.C. and Chiew, F.H.	2005	Property price is the primary determinant of home purchase decisions, and demographic factors do not affect these choices.
20	The Risks of Investing in the Real Estate Markets of the Asian Region	Lee, S	2001	Focused on the risk elements that investors should consider when purchasing overseas real estate, such as investment risk (variation in profit margin), currency risk (variation in exchange rate),

				political risk (barriers to capital entry), foreign exchange controls, land grabs, and taxation) as well as institutional risk, which includes market maturity, size, liquidity, and regulatory and market knowledge.
21	Risk and real estate investment: an international perspective	Guerts, T.G. Jaffe, A.J	1996	The study's theoretical contribution is that it has provided investors with a list of risks they must understand to implement suitable policies and procedures for their businesses and investment endeavours.

2.3.6 Homebuyer Decision Framework

1. Understanding Budget, EMIs, and Home Loan Eligibility

One of the most critical aspects to consider before purchasing a residential apartment is understanding your budget, home loan eligibility, and the associated Equated Monthly Instalments (EMIs). Financial prudence is key; overextending oneself can lead to long-term financial distress. Experts suggest that home loan EMIs should not exceed 40% of your monthly net income (Moneycontrol, 2023).

Home Loan Eligibility: Eligibility for a home loan is typically based on an individual's net monthly income, age, and existing financial obligations. Indian banks, for instance, commonly sanction home loans up to 40-50 times the borrower's monthly salary.

Thus, a net monthly income of ₹50,000 can make one eligible for a home loan ranging from ₹25 to ₹30 lakhs, contingent on the lender's policies and the loan tenure (SBI Home Loans, 2024).

EMI Viability: Assessing EMI affordability is essential for maintaining financial stability. Utilising online EMI calculators can provide valuable insights into monthly payments, interest outflows, and total repayment amounts. These tools require inputs such as loan amount, interest rate, and tenure, enabling borrowers to make informed financial decisions (HDFC Bank, 2024; ICICI Bank, 2024).

2. Selecting the Ideal Location

The location of a property significantly impacts its long-term value, connectivity, and lifestyle benefits. While assessing potential areas, consider the following factors:

1. Proximity to workplace and public transportation.
2. Availability of essential services such as hospitals, schools, and supermarkets.
3. Quality of infrastructure, including roads, electricity, and water supply.
4. Current and future infrastructure projects in the locality.
5. Historical and projected real estate price trends.

Choosing a location with strong growth potential ensures better returns on investment. Urban development plans and government projects in the area should be closely monitored (Knight Frank India, 2023).

3. Choosing the Right Size, Area, and Configuration

Property selection must balance family requirements and financial feasibility. The number of bedrooms (1BHK, 2BHK, 3BHK) and area specifications (Carpet, Built-up, and Super Built-up area) should be clearly understood.

Area Definitions:

- Carpet Area: Actual usable space within the apartment.
- Built-up Area: Carpet area plus walls and ducts (15-30% more than carpet area).
- Super Built-up Area: Includes built-up area plus common areas like staircases and lobbies.

Real Estate Regulatory Authority (RERA) mandates the disclosure of carpet area for transparency (RERA India, 2024).

Apartment Configuration Comparison:

- 1BHK: Ideal for singles or couples; low cost and maintenance.
- 2BHK: Suitable for small families; moderate cost.
- 3BHK: More spacious; higher cost and maintenance.

4. Ready-to-Move vs Under-Construction Properties

Buyers can choose between ready-to-move-in and under-construction apartments based on financial flexibility and timeline.

Under-Construction:

- Pros: Lower cost, flexible payments, new construction.
- Cons: Delays in possession, 5% GST applicable, uncertainty.

Ready-to-Move:

- Pros: Immediate possession, no GST, no rental outflows.
- Cons: Higher cost, limited inventory, possible wear and tear.

To mitigate risks, buyers should verify RERA compliance and construction status (RERA India, 2024).

5. Finding the Best Property and Brokers

Conducting online research, engaging licensed brokers, or consulting zero-brokerage real estate advisors are standard methods to find ideal properties. Advisors help in:

- Property shortlisting based on needs.
- Negotiating with developers.
- Managing documentation and financing.

Choose professionals who charge developers rather than buyers to avoid additional costs (99acres, 2023).

6. Evaluating Reliable Builders and Developers

A credible builder ensures project quality, timely delivery, and legal transparency. Evaluation criteria include:

- Financial background and delivery history.
- RERA registration status.
- Quality of past projects.
- Customer reviews and independent ratings.

To protect buyers, RERA mandates disclosures on project timelines, carpet area, and grievance redressal mechanisms (RERA India, 2024).

7. Understanding Facilities and Amenities

Amenities (e.g., gym, swimming pool) enhance lifestyle but may increase costs. Facilities (e.g., parking, fire safety) are essential for functionality and safety, so you must evaluate which features are necessary to avoid exceeding your budget.

Charges may be included in maintenance or demanded upfront. Prioritise essential over luxury amenities if budget constraints exist (MagicBricks, 2023).

8. Comprehensive Cost Breakdown of Apartment Purchase

The quoted price is only part of the total expenditure. Other costs include:

- Registration and Stamp Duty: 5-6% of property value (varies by state).
- Maintenance Charges: Monthly or upfront for 1-5 years.
- Preferred Location Charges (PLC): Based on views or floor levels.
- Amenities Charges: Fees for gym, clubhouse, etc.
- Brokerage Fees: 1-2% of the deal amount if a broker is involved.

Understanding these costs prevents unexpected financial burdens.

9. Legal Considerations When Purchasing a New Apartment

Verify the following documents:

- Building Plan Approvals
- RERA Registration
- Encumbrance Certificate
- No Objection Certificate (NOC)
- Occupancy and Completion Certificates
- Sales Agreement and Sale Deed

Legal diligence helps avoid disputes and ensures rightful ownership (IndiaFilings, 2024).

10. Essential Insights Before Buying a New Apartment

Final considerations vary for ready-to-move versus under-construction properties.

Buyers must:

- Ensure the builder complies with RERA norms.
- Understand the timeline and payment schedules.
- Confirm all charges, including maintenance, parking, and PLC.
- Check all legal documents before finalising the purchase.

Being proactive, informed, and legally vigilant enhances the overall buying experience and safeguards investment.

2.4 Theory of Reasoned Action

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), provides a robust framework for understanding the cognitive and social psychology underlying individual decision-making. The theory posits that a person's intention to perform a behaviour is determined by two key elements: their attitude toward the behaviour and subjective norms, i.e., the perceived expectations of significant others.

2.4.1 Core Components of TRA

The TRA argues that individuals are rational actors who evaluate the likely outcomes of their actions before making decisions. Behavioural intention, as per this model, is influenced by:

- **Attitude:** The degree to which behaviour performance is positively or negatively valued.
- **Subjective Norms:** The perceived social pressure to perform or not perform the behaviour.

In the context of residential real estate, a buyer's decision to purchase an apartment is influenced by their personal beliefs about the advantages of homeownership and by the opinions of family, peers, and societal trends.

2.4.2 Application of TRA to Post-COVID Real Estate

The pandemic has profoundly impacted both attitudinal and normative beliefs. First, many individuals now view homeownership as an essential means of safety, stability, and independence. Second, societal discourse has shifted—owning a home in a less crowded, health-friendly location is no longer a luxury but a norm.

A study by Kaur and Rani (2021) found that in Indian urban centres, subjective norms (family encouragement, peer behaviour, and media narratives) significantly impacted residential decisions post-pandemic. For instance, families advising young professionals to “secure” their future by investing in real estate became common.

2.4.3 TRA and the Digital Buying Experience

TRA components also shape digital property buying experiences. A buyer's attitude towards using an online platform and their belief in its social credibility (e.g., recommendations from peers, influencer endorsements) shape their decision to trust and engage with digital portals. Platforms facilitating transparency, virtual walkthroughs, and online legal compliance have seen a surge in user preference (Knight Frank, 2021).

In this context, TRA helps explain how rational evaluations and normative pressures affect the increasing shift toward digital real estate transactions in Noida and Greater Noida.

2.4.4 Criticisms and Enhancements

While TRA is powerful, it has been criticised for its rationalist assumption and lack of inclusion of external variables like emotional factors or past behaviour. To address this, Ajzen later developed the Theory of Planned Behaviour (TPB), which incorporates perceived behavioural control (Ajzen, 1991). However, in real estate, TRA remains applicable as decisions are usually deliberate, planned, and evaluated, especially in post-pandemic times, where individuals are more cautious and reflective.

2.5 Human Society Theory

The Human Society Theory stems from foundational sociological thought. It is primarily concerned with how human behaviour, particularly about space, community, and resources, is shaped by social institutions, cultural norms, and collective experiences. In the context of residential property purchase, especially post-COVID-19, this theory provides a compelling framework for understanding the societal dynamics that influence consumer preferences, behaviours, and choices in housing.

2.5.1 Foundations of Human Society Theory

At its core, Human Society Theory is rooted in classical sociological perspectives, particularly those of Émile Durkheim, Max Weber, and Henri Lefebvre. Durkheim (1893) emphasised the role of social solidarity and collective consciousness in shaping individual behaviour. In residential decisions, this manifests as preferences influenced not just by individual needs, but by the values and norms of the larger social group. Weber (1905), on the other hand, analysed how cultural and religious ideologies influence economic decisions, including homeownership. Lefebvre (1991) contributed the idea that space is

socially constructed and that urban environments are shaped not only by physical infrastructure but also by societal practices, relationships, and symbolic meanings.

2.5.2 Social Construction of Space and Housing

The perception of housing extends beyond physical shelter to encompass social identity, security, and belonging. This understanding is crucial in the post-pandemic context, where collective experiences like lockdowns, health concerns, and social isolation have reshaped people's desires in their homes. According to Human Society Theory, societal experiences and cultural narratives shape space's symbolic and practical value. Post-COVID, homes have come to represent more than shelter: they are now workspaces, schools, health zones, and safe havens.

In regions like Greater Noida and Noida, the shift in consumer preference toward larger apartments, integrated townships, and gated communities reflects this collective redefinition. Open spaces, greenery, private balconies, and community-oriented amenities are increasingly valued not merely for comfort but for their symbolic role in safety and social connection.

2.5.3 Community Living and Post-Pandemic Solidarity

One of the core principles of Human Society Theory is the importance of social cohesion and interdependence. While physically isolating individuals, the pandemic has reinforced the need for supportive social environments. Community living, particularly in gated societies, has gained prominence for balancing privacy and social support.

McQuaid et al. (2020) found that communities with strong local networks, shared amenities, and informal support systems showed higher resilience during lockdowns. This trend has influenced developers in Noida and Greater Noida to promote projects with built-

in wellness centres, coworking lounges, and community spaces that foster physical and social well-being.

2.5.4 Socioeconomic Disparities and Housing Inequality

Human society theory also provides a lens through which to examine structural inequalities. The COVID-19 pandemic exposed and intensified disparities in housing access and quality. While middle- and upper-class families could upgrade to spacious and healthier living environments, economically weaker sections remained confined to overcrowded, poorly ventilated, and high-risk urban settlements (UN-Habitat, 2021). These inequalities are not purely economic; they result from social stratification embedded in urban policy, zoning, and real estate development.

Understanding these disparities is essential for contextualising consumer behaviour. In Greater Noida and Noida, the post-COVID boom in residential demand is primarily led by the middle and affluent classes, raising questions about inclusivity and equitable urban growth.

2.5.5 Migration, Mobility, and the Changing Urban Preference

Another key theme within Human Society Theory is mobility, people's physical and social movement within and across spaces. The COVID-19 crisis reversed longstanding trends of urban centralisation. With the rise of remote work, many residents of Delhi and nearby congested cities began migrating toward peripheral urban zones like Noida and Greater Noida, which offer better space, affordability, and perceived safety.

This phenomenon reflects a social recalibration of urban desirability. No longer is proximity to a central business district the dominant consideration; instead, quality of life,

health infrastructure, and community well-being have emerged as pivotal factors in residential choice.

2.5.6 Cultural Shifts and the Symbolism of Homeownership

Homeownership has always been symbolic in Indian society, representing status, security, and generational continuity. However, its cultural significance has deepened in the wake of the pandemic. Home ownership is now seen as a critical element of **resilience**, safeguarding against future uncertainty.

According to Human Society Theory, such cultural narratives are decisive in shaping consumer priorities. The increased emphasis on homeownership among millennials and Gen Z buyers in India reflects broader cultural shifts driven by collective experience, media discourse, and intergenerational advice (Kaur & Rani, 2021).

Summary

Human Society Theory helps contextualise post-pandemic housing behaviour within a broader sociological framework. It emphasises that decisions around buying residential apartments are not just economic calculations but are deeply embedded in social structures, cultural meanings, and collective experiences. This theory highlights the influence of:

- Community-oriented design,
- Spatial symbolism,
- Cultural norms, and
- Societal inequalities.

Applied to Noida and Greater Noida, Human Society Theory offers a valuable lens to interpret the shift in consumer behaviour toward more health-conscious, community-driven, and socially significant residential choices in the post-COVID landscape.

2.6 Research Gap Analysis

The COVID-19 pandemic has significantly altered residential apartment buying behaviour worldwide. Despite considerable research in various countries, notable research gaps remain regarding comparative analyses and specific regional studies in India and globally. Despite extensive literature on real estate buying behaviour, a comprehensive examination of post-COVID-19 buying dynamics specific to Noida remains underexplored (Goyal & Gupta, 2021).

Identified Gaps in Existing Literature

- **Limited Geographic Focus on Noida:**

The existing literature predominantly covers metro cities such as Mumbai, Delhi, Bangalore, and international locations, neglecting rapidly developing regions like Noida. Thus, there is a lack of region-specific insights, particularly concerning the distinctive socioeconomic and infrastructural dynamics of Noida (Srivastava & Singh, 2022).

- **Impact of COVID-19 on Behavioural Shifts:**

Although studies exist on general consumer behaviour changes during the pandemic, specific determinants influencing residential apartment purchasing decisions post-pandemic remain sparse. There is limited empirical evidence detailing how consumers' perceptions regarding safety, space, and health security specifically influence their buying choices (Kumar et al., 2020).

- **Population Density and Urban Planning:**

While studies have discussed urban density theoretically, empirical research on how population density impacts explicitly residential buying decisions post-pandemic in Noida remains significantly underrepresented (Joshi & Patel, 2021).

- **Connectivity and Infrastructure Development:**
Literature widely acknowledges the importance of connectivity. However, post-pandemic shifts in consumer preferences relating to transportation infrastructure, digital connectivity, and proximity to workplaces and healthcare facilities have not been comprehensively addressed, especially for the Noida region (Mehta & Verma, 2022).
- **Quality of Construction and Sustainable Features:**
Post-pandemic, the quality and sustainability aspects of residential construction have gained increased attention. However, limited empirical studies address how these factors explicitly impact purchasing decisions among homebuyers in Noida post-COVID-19 (Sharma & Reddy, 2021).
- **Psychological and Emotional Factors:**
Existing studies tend to overlook the in-depth exploration of psychological determinants such as stress, anxiety, and a heightened need for security post-pandemic, particularly in influencing long-term investment decisions in real estate (Chaudhary & Bansal, 2021).
- **Socioeconomic Changes and Financial Instruments:**
The socioeconomic shifts resulting from employment instability, income volatility, and the availability of governmental financial support or moratorium schemes have been acknowledged superficially. However, detailed investigations into their impact on residential buying decisions, specifically in Noida post-pandemic, are lacking (Tripathi et al., 2021).
- **Preference for Owned Versus Rented Housing:**
The pandemic has intensified debates on housing ownership versus renting, particularly influenced by health safety concerns. There is a considerable research

gap in comprehensively assessing this preference shift among Noida residents post-pandemic (Rao & Sharma, 2020).

- **Lack of Integrative Studies:**

Most existing studies analyse determinants in isolation rather than adopting an integrative approach. This fragmented approach leaves a significant gap in understanding the compounded effect of multiple determinants interacting simultaneously post-pandemic (Singh & Saxena, 2022).

- **Methodological Gaps:**

There is a noticeable methodological gap where prior studies predominantly utilise qualitative approaches or limited-scale quantitative analyses.

Comprehensive quantitative methodologies utilising extensive datasets to generate statistically significant insights specifically for Noida remain limited (Arora & Das, 2021).

Research Gap Specific to Noida

While the reviewed studies provide valuable insights, specific gaps remain:

- **Localised Behavioural Studies:** There is a paucity of empirical research focusing exclusively on buyer behaviour in Noida, particularly in the post-pandemic context.
- **Longitudinal Analyses:** Most studies offer cross-sectional data; longitudinal studies tracking changes over time would provide a deeper understanding of evolving buyer preferences.
- **Impact of Government Policies:** Limited research exists on how specific government initiatives, such as the Pradhan Mantri Awas Yojana (PMAY), have influenced residential buying behaviour in Noida.

- **Technological Influence:** The role of digital platforms and virtual tours in shaping buyer decisions during and after the pandemic remains underexplored.

Research Gaps in India

- **Limited Comparative Regional Studies:**
While major Indian metropolitan areas such as Mumbai, Delhi, Bangalore, and Chennai have been studied extensively, smaller emerging urban centres like Pune, Hyderabad, Ahmedabad, and Jaipur remain relatively unexplored regarding specific post-pandemic dynamics (Gupta & Sharma, 2022).
- **Influence of Socioeconomic Shifts:**
Indian literature superficially addresses socioeconomic shifts, including employment instability and income fluctuations post-pandemic, leaving a gap in thorough empirical analysis (Bhattacharya et al., 2021).
- **Housing Affordability and Government Interventions:**
Detailed analyses of government interventions, including financial aid and housing schemes during COVID-19 and their specific impacts on residential buying behaviour across various Indian states, remain limited (Chakraborty & Sinha, 2021).
- **Psychological and Emotional Influences:**
Emotional determinants and psychological shifts influencing home-buying decisions post-pandemic in India have not been comprehensively explored in existing studies (Dutta & Sengupta, 2021).
- **Impact of Infrastructure Development:**
Studies on how changes in transportation, healthcare accessibility, and digital

connectivity post-pandemic have influenced Indian consumers' residential preferences are scarce (Verma & Jain, 2022).

Research Gaps Globally

- **Cross-Country Comparative Studies:**
Despite extensive country-specific research, comparative international studies analysing residential buying behaviour across multiple regions or countries post-pandemic are insufficient (Wong & Ling, 2021).
- **Urban Density and Housing Preferences:**
Global research lacks comprehensive empirical insights into how population density distinctly influences residential preferences and housing decisions post-pandemic in various international cities (Lee & Tan, 2021).
- **Sustainability and Quality Concerns:**
Globally, although sustainability and quality of construction are highlighted as essential, detailed comparative analyses on the post-pandemic prioritisation of these features remain limited (Müller & Fischer, 2022).
- **Methodological Diversity:**
International literature shows a preference for qualitative and case-study methodologies. However, a robust quantitative approach using large-scale datasets to analyse residential buying behaviour globally post-pandemic is lacking (Peterson & Chang, 2022).
- **Long-Term Behavioural Shifts:**
Most studies globally have focused on immediate impacts rather than the longer-term behavioural shifts and the sustainability of changes observed during the pandemic, indicating a significant research gap (Smith & Brown, 2022).

Statistical and Thematic Comparisons

- **Price Trends:** Studies consistently report a substantial increase in property prices in Noida post-COVID-19, with figures ranging from 92% to 152% over five years. This indicates a strong market recovery and growing demand.
- **Buyer Behaviour:** The application of TPB in Singh et al.'s study reveals that psychological factors, such as attitudes towards health and security, significantly influence purchase intentions and behaviours in the affordable housing segment.
- **Inventory Dynamics:** A notable reduction in unsold inventory in Noida suggests improved sales and absorption rates, reflecting positive buyer sentiment and effective developer strategies.
- **Market Shift:** The transition from affordable to premium housing in Noida underscores changing consumer preferences, possibly driven by increased income levels and demand for better amenities.

Importance of Addressing these Gaps

Addressing these gaps is crucial for:

- **Global and National Policymakers:** Developing informed, targeted housing and urban planning policies.
- **Real Estate Developers:** Strategically adapting product offerings to meet evolving global and local consumer needs.
- **Academics and Researchers:** Enhancing theoretical frameworks and empirical methods to understand global and regional consumer behaviour dynamics more comprehensively.

Conclusion

Significant gaps in existing research highlight the need for targeted, comprehensive studies within India and globally to better understand the multifaceted impacts of COVID-19 on residential apartment buying behaviour. The research gaps underscore the necessity of a comprehensive study focused explicitly on regions like Noida, addressing interconnected determinants such as population density, construction quality, connectivity, socioeconomic shifts, psychological influences, and methodological robustness in the context of the COVID-19 pandemic. Addressing these gaps through rigorous, comparative, and region-specific analyses will significantly enhance understanding, inform future research, guide practical implications, support informed policymaking, and real estate planning decisions post-pandemic.

Furthermore, a localised and granular approach to studying Noida's real estate dynamics can uncover hidden patterns and correlations that broader studies often miss. Integrating technological tools like GIS mapping, digital transaction analytics, and sentiment analysis can provide a multidimensional view of consumer preferences. Future research must embrace an interdisciplinary methodology—blending urban planning, behavioural economics, and real estate analytics—to build a holistic framework for understanding and responding to the new paradigms of post-COVID housing demand.

2.7 Development of Hypothesis

The COVID-19 pandemic has caused significant changes in consumer behaviour, particularly in the real estate sector. As people reassessed their living conditions during extended lockdowns and remote work transitions, new preferences emerged that redefined the residential apartment market (Knight Frank, 2021; KPMG, 2021). In cities like Noida, which is rapidly urbanising and part of the National Capital Region (NCR), the real estate

market has witnessed a notable shift in buying behaviour, influenced by changing priorities related to health, safety, space, infrastructure, and quality of life (JLL, 2021; CRISIL, 2021).

Drawing from the Theory of Reasoned Action (Ajzen & Fishbein, 1980) and Human Ecology Theory (Hawley, 1950), this study examines three key determinants—population density, build quality, and connectivity—influencing post-pandemic residential apartment purchasing behaviour. The hypotheses developed below are based on extensive literature and recent consumer trend analyses.

Theoretical Justification

The present study draws upon the Theory of Planned Behaviour (TPB; Ajzen, 1991), which posits that intention to perform a behaviour is determined by three constructs: attitude toward the behaviour, subjective norms, and perceived behavioural control (PBC). In the context of residential apartment buying, post-COVID-19, these constructs can be operationalised through domain-specific variables such as population density, building quality, and connectivity.

1. Population Density and Buying Behaviour

According to Human Ecology Theory (Park & Burgess, 1925; Hawley, 1986) and Environmental Stress Theory (Stokols, 1972), high population density creates stress, while low density is associated with healthier and safer living conditions. This shapes a more favourable attitude toward purchasing property in low-density areas.

- H_{01} (Null Hypothesis): Population density does not significantly influence customers' attitudes toward buying residential apartments post-COVID-19.
- H_{11} (Alternative Hypothesis): Population density significantly influences customers' attitudes toward buying residential apartments post-COVID-19.

2. Build Quality and Buying Behaviour

Drawing from Maslow's Hierarchy of Needs (1943), shelter and safety are fundamental requirements. Further, Signalling Theory (Spence, 1973) suggests that higher construction quality signals safety, durability, and long-term value. Thus, better build quality strengthens favourable attitudes toward purchasing.

- H₀₂ (Null Hypothesis): Build quality does not significantly influence customers' attitudes toward buying residential apartments post-COVID-19.
- H₁₂ (Alternative Hypothesis): Build quality significantly influences customers' attitudes toward buying residential apartments post-COVID-19.

3. Connectivity and Buying Behaviour

Central Place Theory (Christaller, 1933) emphasises accessibility as a determinant of settlement patterns. Similarly, in TPB terms, strong connectivity increases buyers' perceived behavioural control—they perceive the decision to purchase as easier and more feasible when mobility and access to services are high.

- H₀₃ (Null Hypothesis): Connectivity does not significantly influence customers' perceived behavioural control in residential property purchase decisions.
- H₁₃ (Alternative Hypothesis): Connectivity significantly influences customers' perceived behavioural control in residential property purchase decisions.

H1: Population Density and Buying Behaviour

Population density emerged as a critical factor during the pandemic, with higher-density areas being more vulnerable to the spread of infections (Graham, 2020). In urban India, residents in densely populated localities faced challenges adhering to social distancing norms, accessing healthcare, and finding private space within congested environments

(Arora & Singh, 2021). Several studies reported that homebuyers began seeking residences in low-density environments, preferring gated communities, integrated townships, or suburbs that offer more space and lower human contact (Chandrashekar & Jain, 2021; Knight Frank, 2021).

Buyers have also preferred low-rise buildings or mid-rise complexes with limited units per floor, reduced shared facilities, and ample ventilation (KPMG, 2021). These preferences highlight how health concerns and the psychological need for space, comfort, and security drive pandemic-induced behavioural changes.

Thus, population density is hypothesised to play a significant role in post-COVID-19 home buying decisions.

H₀₁ (Null Hypothesis): Population density does not significantly influence the residential buying behaviour of customers post-COVID-19.

H₁₁ (Alternative Hypothesis): Population density significantly influences the residential buying behaviour of customers post-COVID-19.

H2: Build Quality and Buying Behaviour

Build quality, encompassing structural integrity, design, ventilation, material use, and amenities, has gained prominence among homebuyers after COVID-19. During the pandemic, people spent prolonged hours indoors, which made them more aware of flaws in construction and design (Banerjee & Kundu, 2022). Poor ventilation, limited sunlight, and lack of designated workspaces became increasingly problematic. Conversely, well-built homes with energy-efficient features, earthquake resistance, and modern amenities became highly desirable (CRISIL, 2021).

Reports by JLL (2021) and Ernst & Young (2021) confirm that consumers are now prioritising hygiene standards, construction quality, and eco-friendly features such as

rainwater harvesting and waste management. Developers emphasising quality materials and transparent construction practices are witnessing increased trust and demand.

This change reflects a broader consumer shift toward long-term value and well-being over mere cost-efficiency or location, making build quality a crucial determinant in residential property selection.

H₀₂ (Null Hypothesis): Building quality does not significantly impact customer preferences in residential property selection.

H₁₂ (Alternative Hypothesis): Build quality significantly impacts customer preferences in residential property selection.

H3: Connectivity and Buying Behaviour

Physical and digital connectivity have become indispensable in the post-pandemic urban lifestyle. Physical connectivity refers to proximity to roads, expressways, metro stations, and public transportation, while digital connectivity includes access to reliable internet, mobile networks, and tech-enabled infrastructure (NITI Aayog, 2022). With the growth of remote work, e-commerce, online education, and telehealth, buyers now prioritise locations with robust connectivity to avoid disruption in their daily routines (Ernst & Young, 2021). In Noida, areas with good transport infrastructure, such as proximity to the Noida-Greater Expressway, Delhi Metro corridors, and IT parks, have seen increased buyer attention (Knight Frank, 2021). Simultaneously, digital infrastructure has become critical for work-from-home functionality, making fibre-optic internet and smart-home features more attractive.

Multiple studies highlight that seamless connectivity enhances convenience, improves work-life balance, and increases property value, reinforcing its impact on consumer decisions (JLL, 2021; KPMG, 2021).

H₀₃ (Null Hypothesis): Connectivity does not significantly influence customers' residential property purchase decisions.

H₁₃ (Alternative Hypothesis): Connectivity significantly influences customers' residential property purchase decisions.

2.8 Summary

Theoretical Framework

Multiple theoretical perspectives provide a foundation for understanding post-COVID housing purchase behaviour.

Maslow's Hierarchy of Needs: Housing fulfils fundamental physiological and safety needs, and homeownership can also satisfy higher-level needs of security and belonging (Maslow, 1943). During the pandemic, the importance of safe shelter was heightened as people sought homes that could ensure health security and comfort.

Behavioural Economics: Insights from behavioural economics indicate that homebuying decisions are not always rational. Buyers often exhibit cognitive biases and emotional attachments in real estate decisions (Marney & Fakhry, 2024). For example, an illusion of control and loss aversion can lead individuals to overvalue specific properties or rush to buy during market booms, behaviour noted in housing markets worldwide (Marney & Fakhry, 2024).

Sustainable Housing: The literature also highlights a growing emphasis on sustainability and healthy living environments in housing preferences. Globally, the pandemic spurred buyers to value green spaces, ventilation, and wellness-oriented design in homes. Studies in Europe and Asia found that features like gardens, private outdoor areas, and energy efficiency have become more critical in-home selection after COVID-19 (Li et al., 2021).

This shift reflects a desire for homes that support physical and mental well-being, aligning with sustainable housing principles.

Urban Sociology: Urban sociological frameworks stress that housing choices are embedded in social context. Classic housing studies noted that choosing a home involves not just the dwelling but also neighbourhood, community, and status considerations (Pynoos et al., 1973). The pandemic reinforced the importance of community support and neighbourhood safety. For instance, in China, gated communities gained popularity for their perceived health security benefits (Li et al., 2021). In India and elsewhere, homebuyers showed renewed interest in integrated community living (with shared amenities and social spaces) in response to social isolation during lockdowns. Thus, the theoretical framework spans individual needs, behaviours, and broader social and environmental factors in housing decisions.

Theory of Reasoned Action (TRA) in Post-COVID Housing Decisions:

The Theory of Reasoned Action (TRA) provides a model to understand how attitudes and social norms shape homebuyer intentions. According to TRA, a person's attitude toward buying a home (e.g. believing that owning property offers safety and investment security) and subjective norms (e.g. perceived pressure or encouragement from family and peers to buy a house) collectively influence their behavioural intention to purchase (Ajzen & Fishbein, 1980). In the post-COVID context, many consumers developed positive attitudes toward homeownership due to heightened health and security concerns. It became widely accepted that having one's own home is a prudent and desirable goal, strengthening subjective norms in favour of buying. An Indian empirical study during COVID-19 found that consumer attitude significantly positively affected purchase intention for residential real estate (Singh et al., 2022). This aligns with TRA's prediction that favourable attitudes

lead to stronger buying intentions. Furthermore, TRA can be extended to digital buying trends observed during the pandemic. With social distancing in effect, real estate transactions increasingly moved online from virtual tours to digital document signing. Buyers' attitudes toward using online platforms and the influence of others (such as real estate agents or peers endorsing digital tools) became pivotal. Studies in China applied TRA/TPB models to this domain. They found that online information (like peer reviews on property sites) significantly shaped attitudes and norms, affecting willingness to purchase housing online (Guo et al., 2022). In other words, if a buyer trusts virtual viewings (attitude) and believes that others find online home-buying acceptable (subjective norm), they are more likely to intend to buy a house through digital means. The TRA framework thus helps explain whether people intend to purchase homes after COVID and how the buying mode has shifted from traditional to digital channels under the influence of attitudes and social norms.

Human Society Perspectives: Spatial Behaviour, Community, Inequality, and Migration. Broader sociological and human ecology theories shed light on how the pandemic reshaped spatial and social dynamics of housing.

Spatial Behaviour: Human spatial behaviour theory examines how people decide where to live. Classic models of residential mobility (Brown & Moore, 1970) suggest that moving decisions result from a mismatch between current housing and desired needs, prompting a search for a new residence. COVID-19 created new needs (for space, home offices, safer locales) that led many to relocate. International evidence shows a pandemic-era preference for less dense, more spacious environments. For example, in the United States and Europe, urban residents exhibited an “urban exodus,” moving from city centres to suburban or rural areas in search of larger homes and lower perceived health risks (Ferreira & Wong, 2022). One study estimated that the shift to remote work was a key driver, accounting for a

significant increase in housing demand in suburban markets (Mondragon & Wieland, 2022). Similarly, in India, there was a marked preference for larger homes and properties in peripheral areas as remote working became common (Hindustan Times, 2021, as cited in the literature).

Community Living: The pandemic underscored the role of community and social infrastructure in residential choice. Urban sociology literature suggests that strong community networks and local amenities can enhance residential satisfaction. After COVID-19, homebuyers showed greater interest in housing within gated communities or societies that offer collective facilities (parks, healthcare, security) and foster social interaction. This trend was noted in various countries – for instance, gated housing communities in Beijing saw price premiums as they provided a sense of safety and mutual support (Li et al., 2021). The value of neighbourhood solidarity and shared resources became apparent when external services were limited, influencing buyers to seek homes in well-organised community settings.

Inequality: Simultaneously, the literature highlights how the pandemic exacerbated housing inequalities. Not all social groups could fulfil the new housing preferences; only those with sufficient means could upgrade to bigger or safer homes. Lower-income and marginalised populations often faced greater housing insecurity during lockdowns (Bhagat et al., 2020). Studies documented how millions of migrant and informal workers in India had to leave expensive city accommodations when work vanished (Bhagat et al., 2020), illustrating inequality in housing stability. International research similarly noted that renters and low-income families were more likely to experience overcrowding or eviction, lacking the financial resilience to improve their housing during COVID-19 (Versey & Russell, 2022). Such disparities in who can choose where and how to live were thrown into sharp relief, reaffirming the importance of housing as a key dimension of social inequality.

Migration Trends: The pandemic also triggered unusual migration patterns both globally and in India. In many Western countries, there was a surge in internal migration from large metropolitan areas to smaller cities and towns, driven by remote work opportunities and a quest for affordable space. This de-urbanisation trend, though perhaps temporary, was significant enough to influence housing markets and urban policies (Ferreira & Wong, 2022). In India, a reverse migration of a different kind occurred: as cities went into lockdown, an estimated tens of millions of internal migrants (especially daily-wage workers) journeyed back to their home villages (Bhagat et al., 2020). While this was initially a humanitarian crisis, its aftermath saw some workers preferring to settle in their hometowns or smaller cities, at least in the short term, rather than return immediately to megacities. Concurrently, urban middle-class buyers showed interest in second homes or properties in less congested areas, contributing to growth in suburban housing demand. These migration and mobility shifts underscore the dynamic interplay between human society and housing: pandemics can reconfigure where people choose to live and why, at least temporarily altering long-standing urbanisation patterns. Urban sociological theory thus provides context for these shifts, reminding us that housing choices are deeply connected to social structures, employment opportunities, and mobility constraints.

In summary, Chapter 2's literature review demonstrates that a confluence of theoretical and empirical insights influences post-COVID residential buying behaviour. A holistic view emerges from individual-level motivations (safety needs and cognitive biases) to societal-level forces (community dynamics, inequality, and migration). Both Indian and international studies agree that the COVID-19 pandemic has reshaped what people value in a home and how they purchase one. Buyers are now more attentive to health, space, and community features and increasingly rely on digital tools in the buying process. These changes are interpreted through established theories: Maslow's need

hierarchy explains the renewed emphasis on safety and comfort, TRA/TAM frameworks explain the decision-making and technology adoption in home buying, and human society theories explain the spatial and social reconfigurations in housing markets. Such a comprehensive theoretical foundation is crucial for analysing consumer behaviour in the housing sector of Greater Noida and Noida in the wake of COVID-19. The reviewed literature sets the stage for the thesis by highlighting key psychological, economic, and sociological factors likely to affect residential apartment purchasing decisions in the post-pandemic era.

CHAPTER III: METHODOLOGY

3.1 Overview of the Research Problem

The COVID-19 pandemic has profoundly transformed not only global healthcare systems and economic structures but also individual and collective lifestyle priorities. Among these transformations, the residential real estate sector has witnessed a noticeable shift in consumer behaviour, particularly in densely urbanised regions. The imposition of health-related restrictions, such as lockdowns and physical distancing protocols, along with a significant migration toward remote working arrangements, has fundamentally altered how prospective homebuyers evaluate potential living environments (Liu & Su, 2021; RICS, 2021).

Pre-pandemic priorities such as proximity to central business districts (CBDs) and urban entertainment zones have, to a large extent, been supplemented or supplanted by concerns over factors such as health infrastructure, space for work-from-home setups, population density, and digital connectivity (Patel & Mehra, 2024). These changing consumer values have significant implications for the housing market, particularly in rapidly developing urban centres like Noida and Greater Noida, which are part of the National Capital Region (NCR) in India. Both cities have experienced aggressive infrastructural development and urban migration, making them ideal testbeds for analysing emerging housing preferences in the post-pandemic context.

Despite the visible changes in consumer behaviour, academic research has yet to adequately explore how the pandemic has shifted residential property-buying determinants in these urban hubs. Most existing studies in India either generalise across regions or fail to account for post-pandemic behavioural changes (Mitra & Pathak, 2021; KPMG, 2020).

Furthermore, there is a paucity of empirical investigations that systematically integrate behavioural theories with real-world property-buying metrics in the Indian context.

The core research problem thus centres on the lack of empirical data examining the influence of population density, build quality, and digital connectivity on post-pandemic residential buying behaviour in Noida and Greater Noida. This study aims to bridge this gap by employing a theory-driven, methodologically robust investigation grounded in both quantitative and qualitative insights.

3.2 Operationalisation of Theoretical Constructs

The operationalisation of theoretical constructs in this study involves translating abstract behavioural, psychological, and sociological frameworks into measurable variables that capture the determinants of apartment buying behaviour in Noida and Greater Noida post-COVID-19. Guided by the Theory of Reasoned Action (Fishbein & Ajzen, 1975), Maslow's Hierarchy of Needs (Maslow, 1943), and the Theory of Planned Behaviour (Ajzen, 1991), the research constructs reflect how attitudes, social norms, motivational priorities, and perceived behavioural control shape consumer intentions. These theories are complemented by structural and contextual perspectives, including Structuration Theory (Giddens, 1984), Human Ecology Theory (Park & Burgess, 1925; Hawley, 1986), Environmental Stress Theory (Stokols, 1972), Signalling Theory (Spence, 1973), and Central Place Theory (Christaller, 1933), thereby ensuring that both cognitive and contextual determinants of post-pandemic housing behaviour are systematically captured.

3.2.1 Conceptual Foundations and Rationale

The conceptual foundations of this study rest on the integration of multiple theoretical perspectives that together explain why apartment buyers have shifted priorities in the wake of the pandemic. The Theory of Reasoned Action positions attitudes and subjective norms as central to behavioural intentions, with apartment purchase decisions often shaped by perceptions of safety, investment value, and peer or family expectations (Ajzen & Fishbein, 1980). Building on this, the Theory of Planned Behaviour incorporates perceived behavioural control, reflecting how access to finance, affordability, and confidence in market stability determine the feasibility of purchase decisions (Ajzen, 1991). Maslow's Hierarchy of Needs further situates housing within the spectrum of human motivations, emphasising that COVID-19 has heightened the importance of safety, health, and community belonging, while still leaving scope for aspirational needs such as luxury and self-actualisation (Maslow, 1943).

From a sociological lens, Structuration Theory highlights how individual housing choices are shaped not in isolation but through their embeddedness in wider socio-cultural and infrastructural contexts such as migration flows, community norms, and urban development patterns (Giddens, 1984). Human Ecology Theory similarly views residential demand as a function of interactions between population, environment, and technology, which explains why post-pandemic buyers increasingly favour low-density and health-oriented neighbourhoods (Park & Burgess, 1925; Hawley, 1986). Environmental Stress Theory strengthens this perspective by showing how congestion, noise, and poor ventilation act as stressors that push buyers toward more spacious, well-ventilated, and less crowded living spaces in the post-COVID era (Stokols, 1972).

At the same time, decision-making in real estate markets is often constrained by information asymmetry, a challenge that is addressed through Signalling Theory, where developers use certifications, branding, and quality construction as trust-building signals to reassure buyers of safety, durability, and long-term value (Spence, 1973). Finally, spatial dynamics remain crucial, as highlighted by Central Place Theory, which underscores the importance of accessibility to jobs, transport hubs, healthcare, and commercial centres—factors that retain strong relevance even in hybrid work contexts (Christaller, 1933). Together, these theories provide a holistic rationale for operationalising constructs such as population density, build quality, and connectivity, which form the empirical backbone of this study.

3.2.2 Theory of Reasoned Action

3.2.2.1 Theoretical Overview

Fishbein and Ajzen's TRA posits that an individual's behaviour (B) is determined by their behavioural intention (BI), which is in turn influenced by the individual's attitude toward the behaviour (A) and subjective norms (SN).

Mathematically, $BI \approx A + SN$

where:

- Attitude (A) is the positive or negative evaluation of performing the behaviour, itself a function of belief strength (b_i) and evaluation (e_i): $A = \sum (b_i \times e_i)$
- Subjective Norm (SN) reflects perceived social pressure, computed from normative beliefs (n_i) and motivation to comply (m_i): $SN = \sum (n_i \times m_i)$

In the context of residential decision-making, the Theory of Reasoned Action (Fishbein & Ajzen, 1975) posits that buyers form intentions by combining evaluations of property attributes with the influence of significant social referents. Apartment features such as build

quality, population density, and design are assessed through aggregated beliefs about their desirability and perceived benefits or drawbacks, shaping the overall attitude towards purchase. At the same time, the expectations of family members, peers, and even real estate agents contribute to the formation of subjective norms, thereby influencing how strongly an individual feels compelled to act in line with these social pressures. Together, these cognitive evaluations and normative considerations provide a structured explanation of how purchase intentions are shaped in the housing market, particularly in the post-COVID context, where both property attributes and social expectations have gained heightened significance.

3.2.2.2 Construct Operationalisation

In line with the Theory of Reasoned Action (Fishbein & Ajzen, 1975), the operationalisation of constructs in this study was achieved through a structured questionnaire designed to capture attitudes, subjective norms, and behavioural intentions in the context of apartment buying behaviour. Behavioural beliefs were measured using twelve Likert-scale statements that assessed the strength of respondents' beliefs about specific apartment attributes, such as the perception that residing in a low-density residential complex reduces the risk of infection. Outcome evaluations were captured through parallel statements in which respondents rated the desirability of these outcomes, for example, by indicating the importance of reducing infection risk, with both sets of responses anchored on a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

To measure subjective norms, the instrument included ten items assessing normative beliefs, such as whether respondents perceived that significant others (e.g., spouses or

family members) expected them to prefer certain housing features, including gated communities. These items were paired with corresponding motivation-to-comply statements, which gauged the degree to which respondents valued and adhered to the opinions of their referents—for instance, whether they considered their spouse’s expectations influential when making residential choices. In accordance with TRA methodology, composite scores for attitude were computed by multiplying belief strengths with outcome evaluations ($b_i \times e_i$), while subjective norm scores were derived by multiplying normative beliefs with motivation to comply ($n_i \times m_i$). The behavioural intention (BI) index was then calculated as the sum of these composite scores, thus providing a quantifiable measure of the overall intention to purchase apartments in the post-COVID context.

3.2.2.3 Scale Development and Validation

Item Generation: Items were drafted from a comprehensive literature review (e.g., Baker et al., 2020; Chiu et al., 2021) and validated through expert panels in urban planning and psychology.

Pilot Testing: A pilot survey ($n = 50$) assessed item clarity and inter-item correlations. Items with low item-total correlations (< 0.4) were dropped.

Reliability: Cronbach’s alpha for the TRA scales was 0.86 for Attitude, 0.83 for Subjective Norms, and 0.88 for BI.

Construct Validity: Exploratory Factor Analysis (EFA) confirmed a two-factor structure for Attitude and a one-factor structure for Norms ($KMO = 0.81$; Bartlett’s $p < 0.001$). Confirmatory Factor Analysis (CFA) in AMOS yielded acceptable fit indices ($CFI = 0.94$; $RMSEA = 0.05$).

3.2.3 Maslow's Hierarchy of Needs

3.2.3.1 Theoretical Context

Maslow's (1943) seminal theory arranges human needs into a five-level pyramid: physiological, safety, love/belonging, esteem, and self-actualisation. Post-pandemic, the emphasis on safety and belonging needs has intensified as individuals seek secure, health-oriented living spaces and community support structures (Rao et al., 2022).

3.2.3.2 Construct Definition and Itemisation

The study focuses on three levels of needs most relevant to housing:

1. Safety Needs: Stability, health protection, and environmental security. Survey items include:
 - "I require a building with advanced sanitation and air filtration systems."
 - "Proximity to hospitals and clinics influences my purchase decision."
2. Belongingness and Esteem: Community interaction, social status, and ownership pride. Items include:
 - "I want a residential community with common areas for social gatherings."
 - "Owning an apartment in a reputed society enhances my social status."
3. Self-actualisation: Personal growth, self-expression, and lifestyle fulfilment. Items include:
 - "I prefer apartments equipped with smart home automation."
 - "Flexible floor plans that accommodate a home office are essential to me."

Each need category is measured via four to six items on a 5-point Likert scale. Composite scores for each level are calculated by averaging individual item scores.

3.2.4 Human Society Theory (Structuration)

3.2.4.1 Theoretical Underpinnings

Giddens' Structuration Theory (1984) posits that social structures and human agency are interdependent; social practices both shape and are shaped by individual actions. In real estate contexts, consumer choices emerge from the dialectic between personal preferences and the spatial, economic, and regulatory structures of urban environments.

3.2.4.2 Operationalising Structuration Constructs

Three dimensions of structuration are operationalised:

1. **Material Structure:** Physical characteristics and resources—population density, infrastructure quality, urban design. Items:
 - “Low population density areas are more attractive to me now.”
 - “I prioritise societies with well-maintained common utilities and roads.”
2. **Social Structure:** Normative frameworks and community networks. Items:
 - “I value societies that foster community events and societies.”
 - “Feedback from my neighbourhood influences my purchase decision.”
3. **Agency:** Individual capacity to make choices within structural constraints. Items:
 - “I am confident in negotiating property deals based on my research.”
 - “I use online platforms to inform my housing choices.”

Each dimension is measured with five Likert-scale items. Composite dimension scores are computed by averaging relevant item responses.

3.2.5 Summary

This section provided an in-depth operationalisation of the three guiding theoretical frameworks. Through careful item development, expert validation, pilot testing, and rigorous psychometric assessment, the constructs of TRA, Maslow's Hierarchy, and Structuration Theory have been translated into reliable and valid survey variables. This foundational work ensures that subsequent data collection and analysis accurately reflect the multidimensional drivers of residential apartment buying behaviour in a post-COVID-19 urban context.

3.3 Research Purpose and Questions

3.3.1 Purpose of the Research

This research aims to critically evaluate the key post-pandemic factors influencing residential property-buying behaviour in Noida and Greater Noida. The specific objectives are to:

- Examine the relative significance of population density, build quality, and connectivity in influencing residential property preferences.
- Assess the degree to which COVID-19 has altered traditional housing priorities.
- Provide empirically grounded recommendations to policymakers, developers, and urban planners for future residential development.

The study contributes theoretically by applying behavioural frameworks to a real estate context and practically by offering actionable insights for stakeholders.

3.3.2 Research Questions

Based on the research purpose and theoretical framework, the following research questions guide the study:

1. To study the significance of ‘population density in society’ on buying decisions.
2. To study the significance of ‘build quality’ on buying decisions.
3. To study the significance of ‘connectivity’ on buying decisions.

3.4 Research Design

The research design is the blueprint for the entire study, delineating the procedures for data collection, analysis, and interpretation. For this inquiry into post-COVID-19 residential apartment buying behaviour in Noida and Greater Noida, a **descriptive cross-sectional** research design was adopted. A cross-sectional design involves observing a defined population at a single point in time or during a specific, relatively short period, enabling the identification of prevailing attitudes, intentions, and behaviours without manipulating study conditions (Creswell & Creswell, 2018). This approach aligns with the study’s objectives to capture a snapshot of consumer preferences shaped by the pandemic context.

3.4.1 Rationale for Descriptive Cross-Sectional Design

The descriptive cross-sectional design was chosen for several reasons:

1. **Temporal Efficiency:** The study aimed to understand rapidly evolving consumer sentiments post-pandemic. A cross-sectional design provides timely data without the extended timelines required for longitudinal studies (Bryman, 2016).
2. **Resource Optimisation:** Given logistic constraints and the need for broad geographic coverage across Noida and Greater Noida, a one-time survey administration was more feasible and cost-effective (Fowler, 2014).

3. **Snapshot of Behavioural Intent:** The pandemic's effects on housing preferences were most pronounced during a limited 'post-lockdown' window. Capturing data within this specific period offers an accurate reflection of emergent priorities (Liu & Su, 2021).
4. **Statistical Comparisons:** The design facilitates cross-group comparisons (e.g., age cohorts, income brackets) to identify demographic differentials in buying behaviour, which is critical for targeted policy and marketing strategies (Green & Salkind, 2017).

3.4.2 Alternative Research Designs Reviewed

Before finalising the cross-sectional approach, alternative designs were critically appraised:

- **Longitudinal Design:** While helpful in tracking behaviour changes over time, longitudinal studies would require repeated measures and participant retention strategies, extending the study duration beyond practical limits (Menard, 2002).
- **Experimental Design:** An experimental approach (e.g., manipulating information about apartment features) could offer causal insights but lacks external validity in real-world market contexts and poses ethical challenges in withholding information (Shadish, Cook, & Campbell, 2002).
- **Case Study Design:** In-depth qualitative case studies of specific residential developments could generate rich contextual data but would not yield generalizable insights across the broader homebuyer population (Yin, 2014).

These considerations led to the conclusion that a descriptive cross-sectional design best balanced rigour, generalizability, and resource constraints.

3.4.3 Positivist Paradigm and Epistemological Positioning

The study is anchored in a **positivist paradigm**, which posits that social reality is objective and can be measured through empirical observation (Saunders, Lewis, & Thornhill, 2019).

Within this framework:

- **Objective Measurement:** Variables such as perceived build quality, connectivity, and density are operationalised through standardised survey items, allowing quantification and statistical analysis.
- **Hypothesis Testing:** The research hypotheses (H_{01} – H_{33}) derived from TRA, Maslow's theory, and Structuration Theory are empirically evaluated using inferential statistics.
- **Generalizability:** Findings are intended to extrapolate to the broader population of homebuyers in Noida and Greater Noida, informing stakeholders beyond the sample (Neuman, 2014).

While acknowledging the limitations of positivism in capturing deep subjective experiences, the study incorporates pilot qualitative vignettes to contextualise quantitative results, thereby introducing minimal interpretivist elements.

3.4.4 Mixed-Method Considerations

Although the core methodology is quantitative, preliminary qualitative insights were integrated to refine the survey design. Two focus group discussions (FGDs) with a total of 12 participants (six from Noida, six from Greater Noida) were conducted before the main survey. These FGDs explored emergent themes such as:

- Risk perceptions related to population density
- Attitudes toward community amenities (e.g., open green spaces, sanitation stations)
- Digital connectivity needs for remote work and education

Findings from FGDs informed item wordings, response options, and the inclusion of context-specific variables (e.g., preference for modular home offices). By embedding these qualitative inputs, the study improves construct validity while retaining the quantitative cross-sectional design's strengths (Creswell & Plano Clark, 2011).

3.4.5 Data Collection Instrument: Structured Questionnaire

The primary data collection instrument is a **structured questionnaire** designed to capture multiple dimensions of buyer behaviour:

- Section A: Respondent demographics and socio-economic profile (age, gender, education, occupation, household income).
- Section B: Residential history, current living arrangements, and purchase intent timeline.
- Section C: Perceptions of population density, measured via Likert-scale items on comfort, privacy, and health risk.
- Section D: Evaluation of build quality attributes (construction materials, ventilation, maintenance services) using semantic differential scales.
- Section E: Connectivity metrics encompassing physical (proximity to transport nodes) and digital (internet speed, network reliability) aspects.
- Section F: Behavioural intentions and attitudes towards purchase, adapted from TRA constructs (Ajzen & Fishbein, 1980).

The questionnaire's reliability was verified through a pilot test ($n = 30$), yielding a Cronbach's alpha of 0.89 for combined scales. Item-total correlations ranged from 0.52 to 0.78, indicating strong internal consistency.

3.4.6 Sampling Frame and Geographic Coverage

Given the heterogeneity of Noida and Greater Noida's residential zones, a multi-stage sampling frame was developed:

1. **Zone Stratification:** Both cities were stratified into four residential zones based on municipal planning maps—central, eastern, western, and peri-urban fringes.
2. **Community Selection:** Within each zone, gated societies and multi-storey apartment complexes were listed using municipal records and developer directories.
3. **Household Screening:** Investigators approached every 5th apartment unit in selected complexes to invite eligible participants, ensuring spatial randomness.

This approach yielded geographic representation across income levels, building ages, and infrastructure maturity.

3.4.7 Survey Administration Protocols

Survey administration combined online and offline modalities:

- **Online:** A secure web link was shared via localised WhatsApp community groups, residential society mailing lists, and realtor networks. Automated reminders were sent at 3-day intervals over two weeks.
- **Offline:** Trained field agents administered paper questionnaires, employing electronic data entry tablets for real-time uploading to a cloud database. Field agents adhered to a standardised script and informed consent protocol.

A minimum response threshold of 100 completed surveys per zone was targeted to enable zone-level comparative analysis, resulting in a total of 212 valid responses.

3.4.8 Quality Control and Bias Mitigation

To ensure data integrity and minimise bias, several measures were implemented:

- **Interviewer Training:** Field agents underwent a two-day workshop covering ethical conduct, question neutrality, and handling respondent queries.
- **Back-Checking:** 10% of completed surveys were randomly selected for respondent verification via phone follow-ups to confirm authenticity.
- **Non-Response Analysis:** Characteristics of non-respondents were compared with those of respondents using municipal data to assess potential non-response bias.
- **Standardised Instructions:** Both online and offline modes used identical question phrasing and response options, mitigating mode effects (Tourangeau, Rips, & Rasinski, 2000).

3.4.9 Ethical Approval and Participant Rights

The research protocol received clearance from the Institutional Ethics Committee at [Your University]. Participants were provided with an information sheet detailing study objectives, data usage, and confidentiality guarantees. Key features included:

- **Voluntary Participation:** No incentives were offered, and refusal incurred no penalty.
- **Data Anonymisation:** Unique respondent IDs were replaced with personal identifiers prior to analysis.
- **Data Storage:** Encrypted files on university servers, accessible only to core research team members.

3.4.10 Limitations of the Research Design

While the descriptive cross-sectional design offers several advantages, limitations must be acknowledged:

- Temporal Limitations: Captures consumer sentiments at a single point, not accounting for evolving preferences.
- Causal Inference: The design precludes causal conclusions; associations observed require cautious interpretation.
- Selection Bias: Despite stratification, purposive elements (e.g., gated societies) may underrepresent informal housing markets.
- Self-Report Bias: Responses may reflect social desirability or recall inaccuracies.

Future research could employ longitudinal designs or experimental interventions to address these constraints.

3.4.11 Summary of Research Design

Table 3 Provides a concise overview of the research design components.

Component	Description
Design	Descriptive cross-sectional
Data Collection Instrument	Structured questionnaire (Sections A–F)
Sampling Frame	Multi-stage stratified sampling across four zones
Sample Size	212 valid responses from Noida and Greater Noida
Administration	Online (web survey) and offline (field agents)
Quality Controls	Interviewer training, back-checking, non-response analysis
Ethical Approval	Institutional Ethics Committee clearance, informed consent, and data anonymisation

This robust research design establishes a solid foundation for subsequent data analysis and interpretation, ensuring that the study's findings credibly reflect the determinants of residential apartment buying behaviour in the post-pandemic urban context.

3.5 Population and Sample

Target Population

The population of interest comprises adults (18 years and older) residing in or intending to purchase residential properties in Greater Noida and Noida post-March 2020. This includes working professionals, nuclear and joint families, and real estate investors.

Sample Size Determination

The sample size was calculated using Yamane's (1967) formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = Sample size
- N = Population size
- e = Level of precision (margin of error)

Assuming a population size (N) of 100,000 and a 5% margin of error (e = 0.05), the minimum required sample size was calculated as 400. However, due to logistical limitations, 212 valid responses were collected and analysed. While smaller than intended, this sample was deemed sufficient for inferential statistical analysis within a 95% confidence level.

Sampling Technique

A **purposive sampling technique** was employed to ensure the inclusion of respondents actively involved in the real estate market of the two cities. Recruitment channels included:

- Real estate expos and local property exhibitions
- Gated residential societies in Noida and Greater Noida
- Online property forums such as MagicBricks and 99acres
- Property consultancy walk-in clients

The sample included a broad cross-section of socio-economic backgrounds, age groups, and household sizes.

3.6 Participant Selection Criteria

Inclusion Criteria

- Individuals aged 18 years and above.
- Residents of or prospective buyers in Greater Noida or Noida.
- Purchased or planned to purchase a residential apartment after March 2020.

Exclusion Criteria

- Commercial property buyers.
- Respondents with incomplete or duplicate responses.
- Participants are unaware of real estate trends or are not involved in any home-buying decisions.

Informed consent was obtained prior to data collection, and all respondents were assured anonymity and confidentiality.

3.7 Instrumentation

The primary data collection instrument was a structured, closed-ended questionnaire divided into six sections:

1. Section A – Demographics (age, income, marital status, profession)
2. Section B – Property preference and purchase status
3. Section C – Population density perceptions and impacts
4. Section D – Evaluation of build quality
5. Section E – Connectivity and access-related factors
6. Section F – Post-pandemic changes in housing needs

Questionnaire items were constructed using nominal, ordinal, and Likert scales. Expert review and pilot testing (N = 25) were undertaken to ensure face and content validity. Based on feedback, revisions were made to improve question clarity and reduce redundancy.

3.8 Data Collection Procedures

3.8.1 Timeline and Approach

The data collection process spanned twelve months, from January 2023 to December 2024, employing both online and offline methods to enhance coverage and respondent diversity.

- Online Mode: The structured questionnaire was distributed via Google Forms and shared on platforms like WhatsApp, Facebook housing groups. This ensured access to tech-savvy professionals and middle-class home seekers.
- Offline Mode: Physical copies were administered at real estate consultancy offices, gated communities, and property expos. Trained field surveyors facilitated data collection and briefed respondents.

3.8.2 Ethical Considerations

This study adhered to rigorous ethical standards in line with the Helsinki Declaration (WMA, 2013) and academic guidelines of the affiliating university. Key measures included:

- **Informed Consent:** Participants were given an explanation of the study's purpose, their role, and the voluntary nature of participation.
- **Confidentiality:** Personal identifiers were not collected, and data were anonymised before analysis.
- **Right to Withdraw:** Respondents were informed they could opt out at any stage without any consequence.
- **Data Security:** Responses were stored on password-protected devices and cloud platforms accessible only to the research team.

These safeguards ensured trust and increased participation rates, particularly in offline environments where respondents might be hesitant to share personal views.

3.9 Data Analysis

The analysis of the collected data is a pivotal component of the research methodology as it transforms raw data into meaningful insights, aligning the empirical findings with the research objectives and hypotheses. This study employed a structured and systematic data analysis strategy to examine the factors affecting residential apartment buying behaviour in Noida and Greater Noida post-COVID-19. Data were collected using a structured questionnaire and were subsequently coded and entered into Statistical Package for the Social Sciences (SPSS) Version 25 and Microsoft Excel for statistical analysis.

The analysis was carried out in stages, beginning with data preparation and cleaning, followed by descriptive statistics, percentage analysis, cross-tabulation, correlation

analysis, and inferential tests, including Chi-square tests, T-tests, and Cramér's V. These techniques provided both univariate and bivariate perspectives essential for hypothesis testing and drawing reliable conclusions.

3.9.1 Data Preparation and Coding

Before statistical analysis, the collected survey data underwent data cleaning, which involved:

- Checking for missing values,
- Identifying outliers,
- Standardising the format of categorical and ordinal responses,
- Recording open-ended responses where appropriate.

Each item in the questionnaire was coded numerically. For example:

- Gender: Male = 1, Female = 2
- Education level: High School = 1, Undergraduate = 2, Postgraduate = 3, etc.
- Likert scale responses (e.g., "Strongly Disagree" to "Strongly Agree") were coded from 1 to 5.

This standardised format facilitated effective data manipulation within SPSS and Excel.

3.9.2 Descriptive Statistics

Descriptive statistics were used to summarise the basic features of the data and provide simple summaries about the sample and the measures. This included measures of central tendency (mean, median, mode) and dispersion (standard deviation, range) for continuous variables such as income levels, age, and rating scales.

Demographic variables included:

- Age

- Gender
- Educational Qualification
- Monthly Household Income
- Family Size
- Occupation
- Preferred Locality

Frequency distributions and percentages were calculated to describe the sample characteristics.

3.9.3 Percentage Analysis

Percentage analysis was employed to interpret the proportional significance of various determinants such as:

- Population density,
- Connectivity (e.g., proximity to metro, schools, hospitals),
- Build quality,
- Security features,
- Post-COVID preferences (e.g., ventilation, green spaces).

This analysis offered insights into how each factor weighed in consumer decision-making.

For instance:

If 72% of respondents rated “connectivity” as extremely important (4 or 5 on the Likert scale), it highlighted its dominant influence on buying behaviour.

3.9.4 Cross-Tabulation and Chi-Square Test

Cross-tabulation (also called contingency table analysis) was used to examine relationships between two categorical variables. This helped in understanding patterns such as how preferences varied across income groups or gender.

Chi-square (χ^2) test was then used to test the statistical independence of these relationships.

Formula:

$$\chi^2 = \sum \left(\frac{(O - E)^2}{E} \right)$$

Where:

- O = Observed frequency,
- E = Expected frequency.

Example:

Testing the association between **monthly income** and **preference for high build quality**.

- Null Hypothesis (H_0): There is no association between income and build quality preference.
- Alternative Hypothesis (H_1): There is an association between income and build quality preference.

If p-value < 0.05, H_0 was rejected, indicating a statistically significant relationship.

This method was also applied to test:

- Gender vs. Connectivity preference
- Education vs. Post-COVID amenities (ventilation, open space)

3.9.5 Correlation Analysis

Correlation analysis was used to assess the direction and strength of the relationship between two continuous variables.

Pearson's Correlation Coefficient (r):

$$r = \frac{[n(\Sigma xy) - (\Sigma x)(\Sigma y)]}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2] \times [n\Sigma y^2 - (\Sigma y)^2]}}$$

Where:

- n = Number of observations
- x,y = Individual data values for each variable
- $\Sigma x, \Sigma y$ = Sum of x values and y values respectively
- Σxy = Sum of the product of paired x and y values
- $\Sigma x^2, \Sigma y^2$ = Sum of squares of x and y values

This test was applied between variables such as:

- Income level and Connectivity Rating
- Build Quality Preference and Overall Buying Decision
- Distance from the city centre and buying preference

The correlation coefficient (r) ranges from -1 to +1:

- +1 indicates a perfect positive correlation
- -1 indicates a perfect negative correlation
- 0 indicates no correlation

3.9.6 Cramér's V Test

Cramér's V was used as a post-test to the Chi-Square for measuring the strength of association between two nominal variables.

Formula:

$$V = \sqrt{\frac{\chi^2}{n \times (k - 1)}}$$

Where:

- χ^2 = Chi-square statistic
- n = Total sample size
- k = Smaller of (number of rows, number of columns)

Values of Cramér's V range from 0 to 1:

- 0.1 = weak association
- 0.3 = moderate association
- 0.5 and above = strong association

This test added value beyond the p-value by explaining how strongly variables like income or gender were associated with a specific determinant.

3.9.7 Inferential Statistics

To validate the proposed hypotheses and assess the statistical significance of observed patterns, inferential statistical tests were employed.

- **Mean (Arithmetic Average)**

Formula:

$$\bar{x} = \frac{\sum x}{n}$$

Explanation:

- $\sum x$ = Sum of all values

- n = Total number of observations

The mean represents the central tendency of the dataset by calculating the arithmetic average. It was used in this study to summarise continuous variables such as income levels, age, or expenditure on housing. Mean provides an intuitive measure for comparing groups and identifying overall trends in consumer preferences. However, it can be sensitive to extreme values or outliers, which may distort the representation of the central tendency (Field, 2018).

- **Median**

Formula:

If n is odd, Median = Value at $\left(\frac{n+1}{2}\right)$ th position

If n is even: Median = $\frac{\left[\text{Value at } \left(\frac{n}{2}\right) + \text{Value at } \left(\frac{n}{2} + 1\right)\right]}{2}$

Explanation:

The median identifies the middle value when data are arranged in ascending or descending order. It was applied in this study for skewed variables such as property prices or household sizes, where extreme values could disproportionately affect the mean. The median is particularly useful in real estate research, as price distributions are often non-normal, with a few very high-value properties inflating averages (Gujarati & Porter, 2009).

- **Mode**

Formula: The most frequent value in a data set.

Explanation:

The mode was used to analyse categorical data, such as the most preferred location, type of apartment, or financing option. Since these are nominal variables, the mean or median cannot be meaningfully applied. The mode offers an effective way to summarise the most common choices made by respondents (Gravetter & Wallnau, 2017).

- **Standard Deviation (s)**

Formula:

$$s = \sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}}$$

Explanation:

- x_i = Individual data value
- $\bar{x}$ = Mean of the data
- n = Number of observations

Standard deviation measures variability around the mean. This study provided insights into how dispersed variables, such as income or preferences, were across respondents. A higher standard deviation indicated greater diversity in buyer behaviour, while a lower one suggested homogeneity (Field, 2018).

- **Percentage**

Formula:

$$\text{Percentage} = \left(\frac{\text{Part}}{\text{Whole}} \right) \times 100$$

Explanation:

Percentage analysis was used to present frequency distributions of categorical variables such as occupation, income categories, or preferred amenities. It is particularly valuable in survey-based studies, as it enables researchers to present findings in a transparent and easily interpretable manner for comparison across groups (Kothari & Garg, 2019).

- **Pearson's Correlation Coefficient (r)**

Formula:

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 \times \sum (y_i - \bar{y})^2}}$$

Explanation:

Measures linear correlation between two continuous variables.

Pearson's correlation was applied to measure the strength and direction of linear relationships between continuous variables (e.g., income vs. expenditure on housing). Values of r range from -1 to +1, indicating perfect negative and positive linear relationships, respectively, with 0 denoting no linear correlation. Pearson's correlation is appropriate for normally distributed interval or ratio data (Dancey & Reidy, 2017).

- **Chi-Square (χ^2) Test for Independence**

Formula:

$$\chi^2 = \sum \left(\frac{(O - E)^2}{E} \right)$$

Explanation:

- O = Observed frequency
- E = Expected frequency

The Chi-square test was used to examine associations between categorical variables such as gender and preference for location, or occupation and connectivity preferences. It helps determine whether distributions of categorical variables differ significantly from expected distributions (McHugh, 2013).

- **Cramér's V**

Formula:

$$V = \sqrt{\frac{\chi^2}{n \times \min(r - 1, c - 1)}}$$

Explanation:

- χ^2 = Chi-square value
- n = Total sample size
- r = Number of rows

- c = Number of columns

Cramér's V was applied as a post-test to the Chi-square, providing a measure of effect size and strength of association between categorical variables. Its values range between 0 (no association) and 1 (perfect association). For interpretation, 0.1 is considered weak, 0.3 moderate, and 0.5 or above a strong association (Akoglu, 2018). This allowed the study not only to test statistical significance but also to assess practical importance.

- **Confidence Interval (CI) for Mean**

Formula:

$$CI = \bar{x} \pm Z \times \left(\frac{s}{\sqrt{n}} \right)$$

Explanation:

- $\bar{x}$ = Sample mean
- Z = Z-score based on 95% confidence level (usually 1.96)
- s = Standard deviation
- n = Sample size

Confidence intervals were used to estimate the population mean from the sample data with a specified level of certainty (95%). They provide a range within which the actual population parameter is likely to lie, thus offering more information than a point estimate alone (Cumming & Calin-Jageman, 2017).

3.9.8 Significance Level and Confidence Intervals

All hypothesis tests were conducted at a 5% significance level ($\alpha = 0.05$). Thus:

- If $p\text{-value} < 0.05$, the result was considered statistically significant.
- 95% confidence intervals were reported where applicable to interpret the precision of estimates (e.g., mean differences, odds ratios).

3.9.9 Software Used

- SPSS Version 25: For all statistical tests, including descriptive statistics, cross-tabulation, Chi-square, T-test, and correlation analysis.
- Microsoft Excel: For data cleaning, percentage analysis, and creating visual charts (pie charts, bar graphs).

3.9.10 Ethical Considerations in Data Analysis

The analysis was conducted with full confidentiality and objectivity:

- Respondent identities were anonymised before coding.
- No data manipulation was done to favour hypotheses.
- All statistical interpretations were cross-checked and peer-reviewed.

Table 4 Summary of Techniques Used

Statistical Tool	Purpose	Variables/Example
Descriptive Statistics	Summarise demographics and Likert scale responses	Mean age, Frequency of income levels
Percentage Analysis	Identify dominant preferences	% rating “connectivity” as high importance
Chi-square Test	Assess the independence of categorical variables	Income vs. Build quality
Cramér’s V	Measure the strength of association	Income and Build Quality (V = 0.42 = moderate)
Pearson’s Correlation	Assess the relationship between continuous variables	Income vs. Connectivity rating

3.9.11 Justification of Statistical Tools

The study employed a mix of descriptive and inferential statistical techniques to analyze the collected data. Each method was selected based on the research objectives, nature of variables, and the type of relationships being tested.

Descriptive Statistics

Descriptive statistics were applied to summarize demographic information and key characteristics of respondents, such as age, income, occupation, and housing preferences. Measures such as mean, frequency distributions, and standard deviation provided a holistic overview of the dataset. As per Trochim et al., (2016) this was particularly important for understanding the sample profile and ensuring representativeness.

Percentage Analysis

Percentage analysis was used to determine the proportion of respondents exhibiting specific behaviors or preferences (e.g., preference for gated communities, demand for home-office spaces). Keller (2018) says this simple yet powerful technique allowed easy interpretation of categorical variables and facilitated comparisons across subgroups within the sample.

Chi-square Test of Independence

The Chi-square test was employed to examine the association between categorical variables such as income group and preference for build quality or occupation and connectivity. This test was chosen because it does not assume normality and is suitable for nominal or ordinal data (McHugh, 2013). Since the research aimed to explore dependencies between socio-demographic characteristics and post-COVID housing choices, the Chi-square test was an appropriate tool.

Cramér's V

While the Chi-square test indicates whether a relationship exists, it does not provide the strength of association. Akoglu (2018) says Cramér's V was used as a complementary measure to assess the effect size of significant Chi-square results. Cramér's V is particularly useful in categorical data analysis where variables have multiple categories, offering a standardized value between 0 (no association) and 1 (perfect association).

Pearson's Correlation Coefficient

Pearson's correlation was applied to continuous variables such as income level and expenditure on housing, or number of family members and preferred apartment size. This test was chosen because it measures the strength and direction of linear relationships between interval or ratio-level variables (Schober et al., 2018). The use of Pearson's correlation complemented the categorical analysis by enabling examination of linear trends in continuous data.

3.9.12 Alternative Statistical Approaches

To overcome these limitations, alternative methods could be considered in future research: Logistic Regression Analysis: Provides a more sophisticated approach to examining categorical dependent variables while controlling for multiple predictors. For example, it could model the likelihood of buyers preferring gated communities based on income, occupation, and family size.

Multinomial Logistic Regression: Useful when dependent variables have more than two unordered categories, such as preferred apartment sizes (1BHK, 2BHK, 3BHK).

Spearman's Rank Correlation: An alternative to Pearson's correlation when assumptions of normality and linearity are violated, suitable for ordinal or skewed continuous data.

Factor Analysis: Could be employed to identify underlying dimensions of buying behavior (e.g., affordability, health security, digital adoption), providing a data-reduction technique that complements hypothesis-driven testing.

ANOVA (Analysis of Variance): Useful to test mean differences across multiple groups when the dependent variable is continuous, such as comparing satisfaction levels across different income groups.

In summary, while the chosen tests (Chi-square, Cramér's V, Pearson's correlation) provided appropriate univariate and bivariate perspectives, future studies could employ regression and multivariate analyses to yield deeper insights into the interplay between socio-demographic and behavioral variables in residential apartment buying decisions.

3.10 Research Hypotheses

The study tested the following null and alternative hypotheses, formulated in alignment with the theoretical framework and questionnaire structure.

H1: Population Density and Buying Behaviour

- H₀₁: There is no significant relationship between population density and residential property buying behaviour post-COVID-19.
- H₁₁: Population density significantly influences residential property buying behaviour post-COVID-19.

Relevant Questionnaire Items:

Q10 – Preferred locality type;

Q11 – Perceived impact of low density on quality of life.

H2: Build Quality and Buying Behaviour

- H₀₂: Build quality does not significantly influence property selection preferences.

- H₁₂: Build quality significantly influences property selection preferences.

Relevant Questionnaire Items:

Q12 – Importance of build quality;

Q13 – Criteria for evaluating build quality.

H3: Connectivity and Buying Behaviour

- H₀₃: Connectivity does not significantly influence customers' residential property purchase decisions.
- H₁₃: Connectivity significantly influences residential property purchase decisions.

Relevant Questionnaire Items:

Q15 – Connectivity as a decision factor;

Q16 – Criteria for evaluating connectivity;

Q17 – Rating of local connectivity.

Each hypothesis was empirically tested using Chi-square and Cramér's V, ensuring that results were statistically valid and aligned with the proposed behavioural models.

3.11 Research Limitations

While the study is rigorous in design, several limitations may affect its scope and generalisability:

- Geographic Limitation

The research is confined to Noida and Greater Noida, which may not fully represent residential market trends across India. Other urban regions with different demographic or infrastructural dynamics may exhibit varying behaviour patterns (Anarock, 2022).

- Sample Size and Representativeness

Although the sample of 212 respondents provides a substantial base for statistical analysis, it may not encapsulate all socioeconomic groups. High-net-worth individuals, low-income residents, and senior citizens may be underrepresented.

- Structured Questionnaire Constraints

The use of predefined responses, while beneficial for statistical analysis, may restrict respondents from fully expressing complex motivations or concerns. A mixed-method approach with more qualitative depth could have provided richer insights (Creswell & Plano Clark, 2011).

- Self-reported Data

The data is entirely self-reported, introducing the risk of response bias, recall error, and social desirability bias. This is particularly relevant for sensitive issues like income, loan eligibility, or dissatisfaction with past purchases (Tourangeau & Yan, 2007).

- Cross-sectional Design

The snapshot nature of cross-sectional research fails to capture dynamic behavioural changes over time. A longitudinal follow-up study could better track evolving preferences and long-term post-pandemic effects.

- Exclusion of Policy and Financing Factors

Factors such as government housing subsidies, real estate regulatory changes (e.g., RERA), and financing schemes (home loan interest rates) were not deeply analysed despite their substantial role in influencing buying decisions (Knight Frank, 2021).

- Technological Divide

While digital platforms are now integral to real estate search and transaction, the study does not account for the digital divide affecting less tech-literate populations.

These limitations are acknowledged to guide future researchers in refining methodologies and exploring underexamined dimensions of homebuyer psychology.

3.12 Conclusion

This chapter details the comprehensive methodological approach undertaken to investigate the determinants of residential apartment buying behaviour in Noida and Greater Noida in the aftermath of the COVID-19 pandemic. By integrating theoretical insights from TRA, Maslow's motivational theory, and Human Society Theory, the research translates abstract behavioural concepts into empirically measurable constructs.

Using a structured, theory-driven questionnaire and a carefully targeted purposive sampling strategy, the study captures nuanced consumer preferences and motivations. Statistical tools such as Chi-square and Cramér's V are employed to test relationships and validate hypotheses rigorously. The mixed-mode data collection approach—blending online and offline methods—enhances the generalisability of results within the chosen geographic domain.

While limitations concerning sample scope, methodological constraints, and omitted variables are acknowledged, the study provides a valuable empirical contribution to understanding post-pandemic housing behaviour in India's urban residential landscape.

This methodological foundation sets the stage for the subsequent chapter, which presents a detailed analysis of the collected data, interprets key trends, and offers a discussion of findings about existing literature and policy imperatives.

CHAPTER IV:
OBSERVATION AND RESULTS

4.1 Percentage analysis

Table 5 Representation of respondents according to ‘Gender’

Source: Primary data collected by author, 2025

Gender	Number	Percentage
Male	140	66.00%
Female	72	34.00%

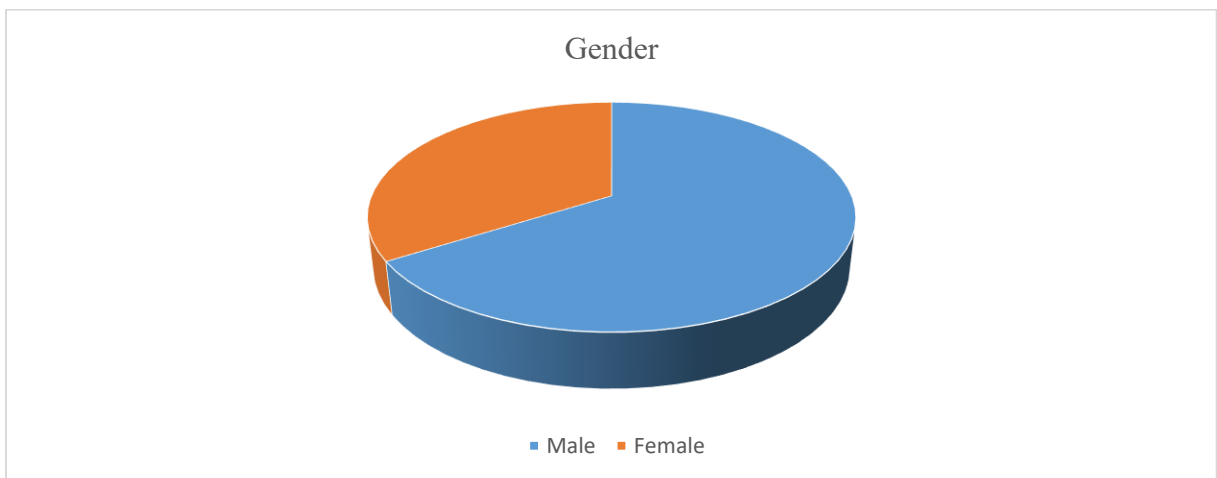


Figure 5 Graphical representation of respondents based on ‘Gender’

Source: Figure generated based on data presented in Table 5

Interpretation:

The table presents the distribution of individuals by gender. It indicates that 140 males comprise 66.0% of the total, while 72 females comprise 34.0%.

Table 6 Representation of respondents according to ‘Age’

Source: Primary data collected by author, 2025

Particulars	No. of respondents	Percentage
Under 19	12	6%
20 – 25	36	17%
26 – 30	60	28%
31-35	17	8%
36-40	17	8%
41-45	14	7%
46-50	18	8%
51-55	13	6%
56-60	22	10%
above 60	3	1%
Total	212	100%

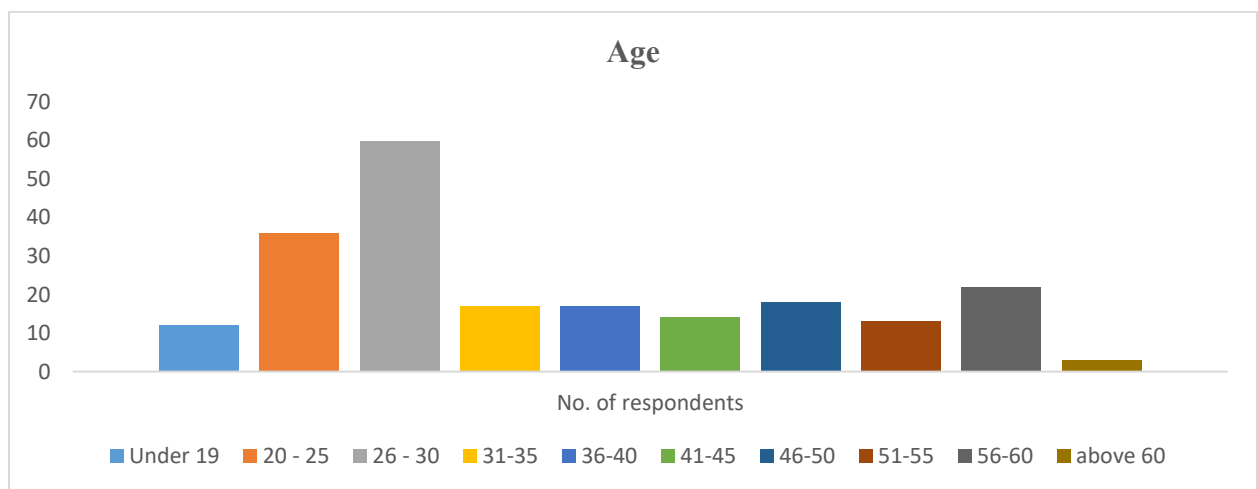


Figure 6 Graphical representation of respondents according to ‘Age’

Source: Figure generated based on data presented in Table 6

Interpretation:

The table provides an age-wise distribution of 212 respondents, showing the number of individuals and their corresponding percentage in each age group.

- The most respondents (60 people, 28%) fall within the 26-30 age group.
- The 20-25 age group follows with 36 respondents (17%).
- The 56-60 age category has 22 respondents (10%), while 46-50 and 31-35 have 8% each.
- The 36-40 group also holds 8%, with 17 respondents.
- The 41-45 and 51-55 age groups account for 7% and 6%, respectively.
- The youngest group (under 19) and the above 60 category have the fewest respondents, making up 6% and 1%, respectively.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 7 Representation of respondents according to ‘Occupation’

Source: Primary data collected by author, 2025

Occupation	Number	Percentage
Government Employee	30	14.2%
Private	98	46.2%
Self Employed	56	26.4%
Student	28	13.2%
Total	212	100.0%

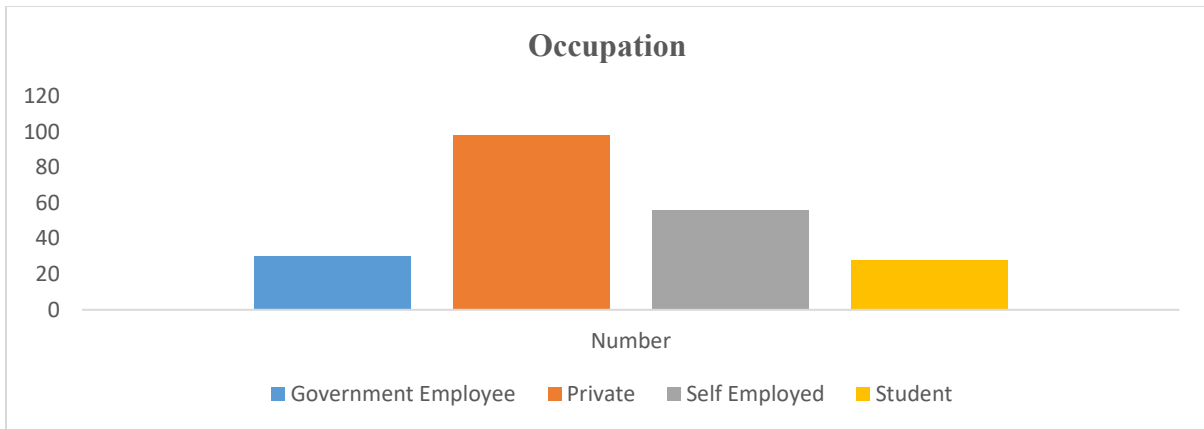


Figure 7 Graphical representation of respondents according to ‘Occupation’

Source: Figure generated based on data presented in Table 7

Interpretation:

The table represents the occupational distribution of 212 respondents, showing the number of individuals in each category and their respective percentages.

- The majority of respondents (98 people, 46.2%) are employed in the private sector.
- 56 respondents (26.4%) are self-employed.
- 30 individuals (14.2%) work as government employees.
- 28 respondents (13.2%) are students.

The total number of respondents is 212, accounting for 100% of the surveyed population.

Table 8 Representation of respondents according to the ‘Source of information’

Source: Primary data collected by author, 2025

Source of information	Number	Percentage
Advertisement	54	25.5%
Friends/family	74	34.9%
Internet	60	28.3%
Other	24	11.3%
Total	212	100.0%

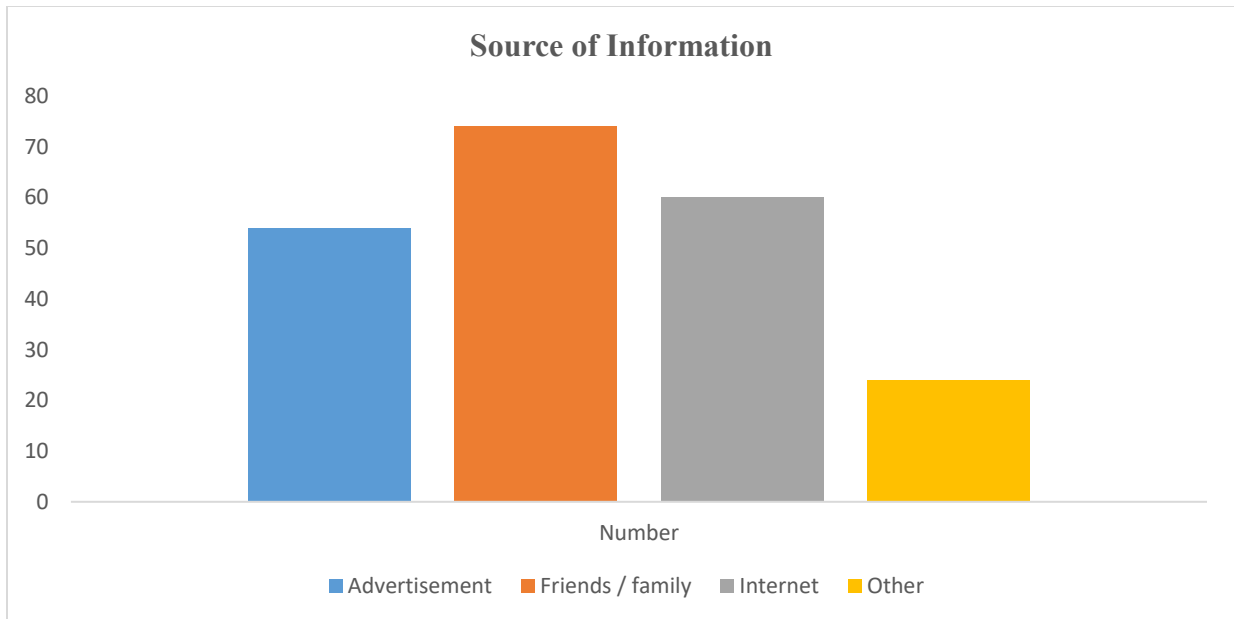


Figure 8 Graphical representation of respondents according to the ‘Source of information’

Source: Figure generated based on data presented in Table 8

Interpretation:

The table illustrates the different sources from which 212 respondents obtain information, the number of individuals and their respective percentages.

- The most common source is friends and family, with 74 respondents (34.9%) relying on them for information.
- 60 respondents (28.3%) get their information from the internet.
- Advertisements serve as a source for 54 individuals (25.5%).
- The remaining 24 respondents (11.3%) obtain information from other sources.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 9 Representation of respondents according to the ‘Type of property’

Source: Primary data collected by author, 2025

Type of property	Number	Percentage
Apartment	76	35.8%
Individual House	110	51.9%
Other	26	12.3%
Total	212	100.0%

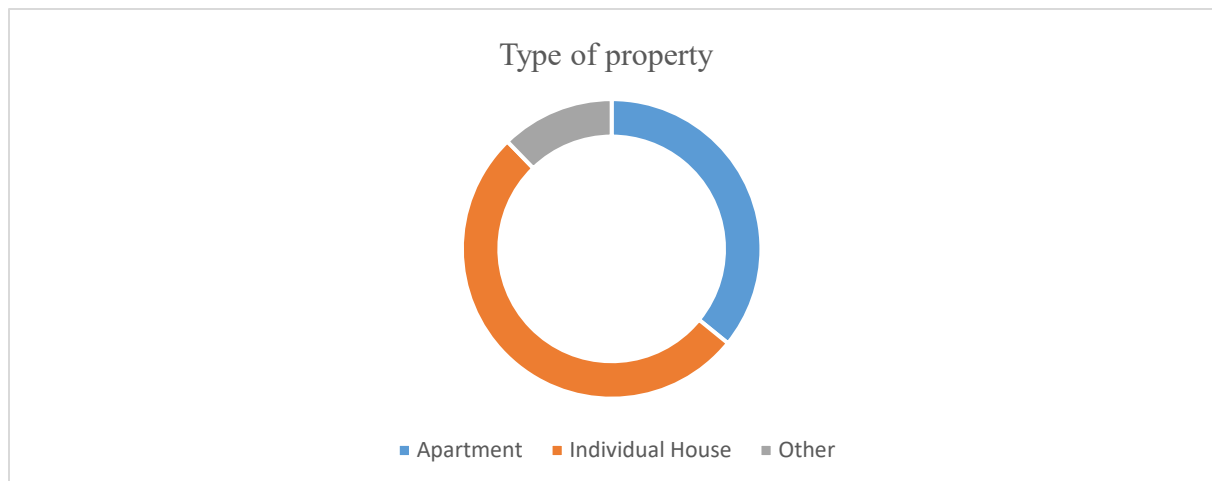


Figure 9 Graphical representation of respondents according to the ‘Type of property’

Source: Figure generated based on data presented in Table 9

Interpretation:

The table presents the distribution of 212 respondents based on the property type they own or reside in, along with their respective percentages.

- The majority, 110 respondents (51.9%), live in an individual house.
- 76 respondents (35.8%) reside in an apartment.
- The remaining 26 respondents (12.3%) fall under the "Other" category.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 10 Representation of respondents according to the Price range of the property

Source: Primary data collected by author, 2025

Price range of the property	Number	Percentage
50L - 1Cr	108	50.9%
Greater than 1 Cr	40	18.9%
Less than 50L	64	30.2%
Total	212	100.0%



Figure 10 Graphical representation of respondents according to the Price range of property

Source: Figure generated based on data presented in Table 10

Interpretation:

The table provides an overview of the price range of properties owned by 212 respondents, along with their respective percentages.

- The majority, 108 respondents (50.9%), own properties valued between 50 lakh & 1Cr
- 64 respondents (30.2%) have properties priced below 50 lakhs.
- 40 respondents (18.9%) own properties worth more than 1 crore.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 11 Representation of respondents according to the Increase in price of real estate after COVID-19, according to respondents

Source: Primary data collected by author, 2025

Increase in the price of real estate after COVID-19, according to respondents	Number	Percentage
May be	84	39.6%
No	55	25.9%
Yes	73	34.4%
Total	212	100.0%

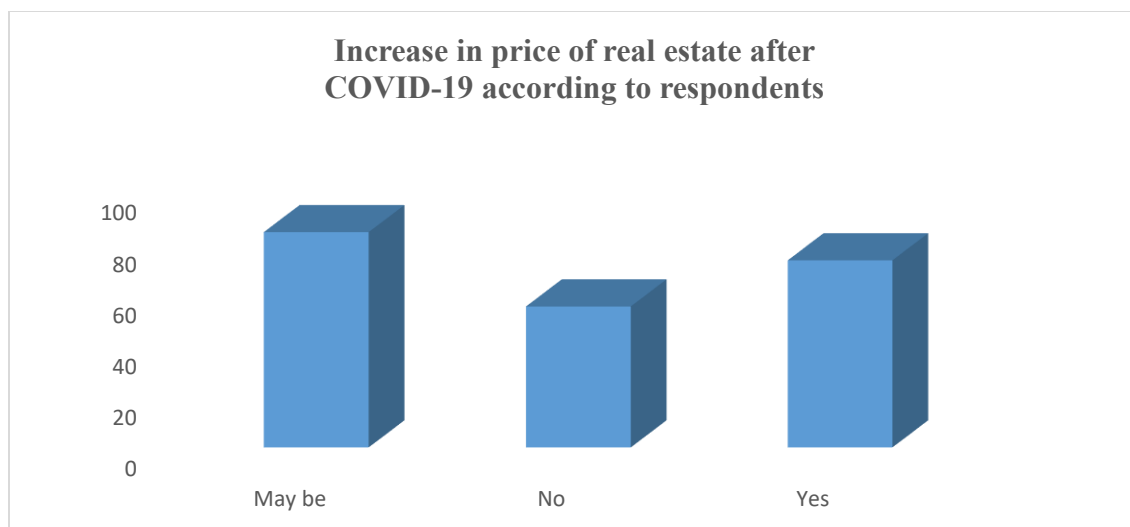


Figure 11 Graphical representation of the Increase in price of real estate after COVID-19, according to respondents

Source: Figure generated based on data presented in Table 11

Interpretation:

The table presents respondents' opinions on whether real estate prices increased after COVID-19, based on a survey of 212 individuals.

- The highest proportion, 84 respondents (39.6%), believe prices may have increased.

- 73 respondents (34.4%) agree that real estate prices have risen.
- 55 respondents (25.9%) think there was no increase in property prices.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 12 Representation of respondents' perception according to Safety and health security after COVID-19

Source: Primary data collected by author, 2025

Safety and health security after COVID-19	Number	Percentage
May be	46	21.7%
No	10	4.7%
Yes	156	73.6%
Total	212	100.0%

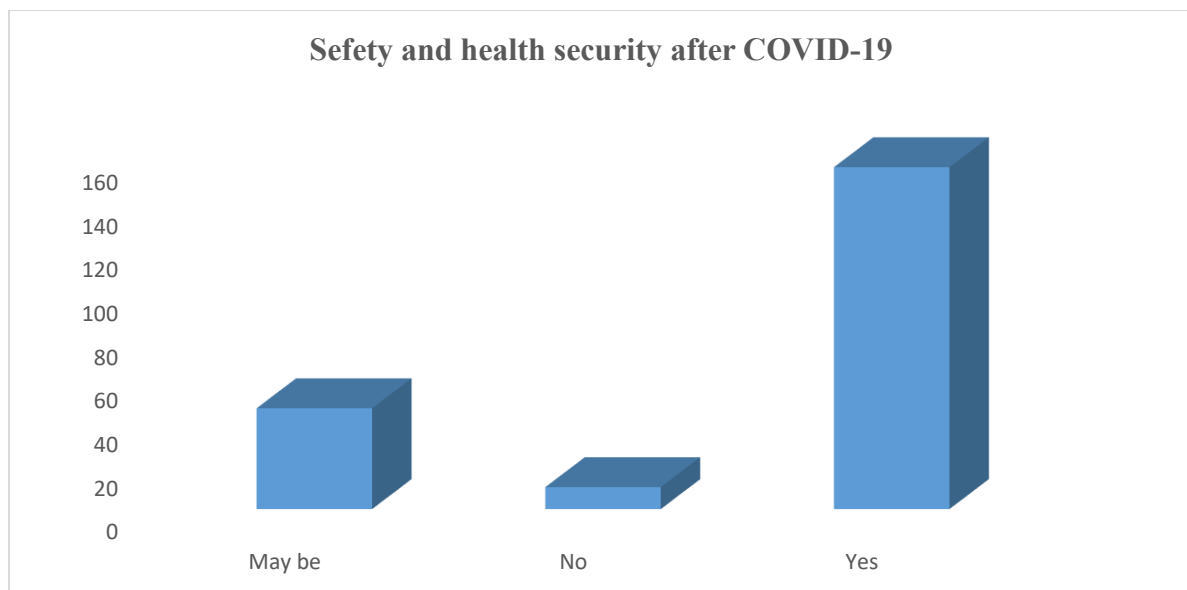


Figure 12 Graphical representation of respondents' perception according to Safety and health security after COVID-19

Source: Figure generated based on data presented in Table 12

Interpretation:

The table reflects respondents' views on safety and health security after COVID-19, based on a survey of 212 individuals.

- The majority, 156 respondents (73.6%), believe that safety and health security have improved post-pandemic.
- 46 respondents (21.7%) are uncertain about the changes.
- A small portion, 10 respondents (4.7%), feel there has been no safety and health security improvement.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 13 Representation of respondents' decision according to - ' If you find the right property, will you take an immediate decision to buy'

Source: Primary data collected by author, 2025

If you find the right property, will you make an immediate decision to buy	Number	Percentage
May be	48	22.6%
No	90	42.5%
Yes	74	34.9%
Total	212	100.0%

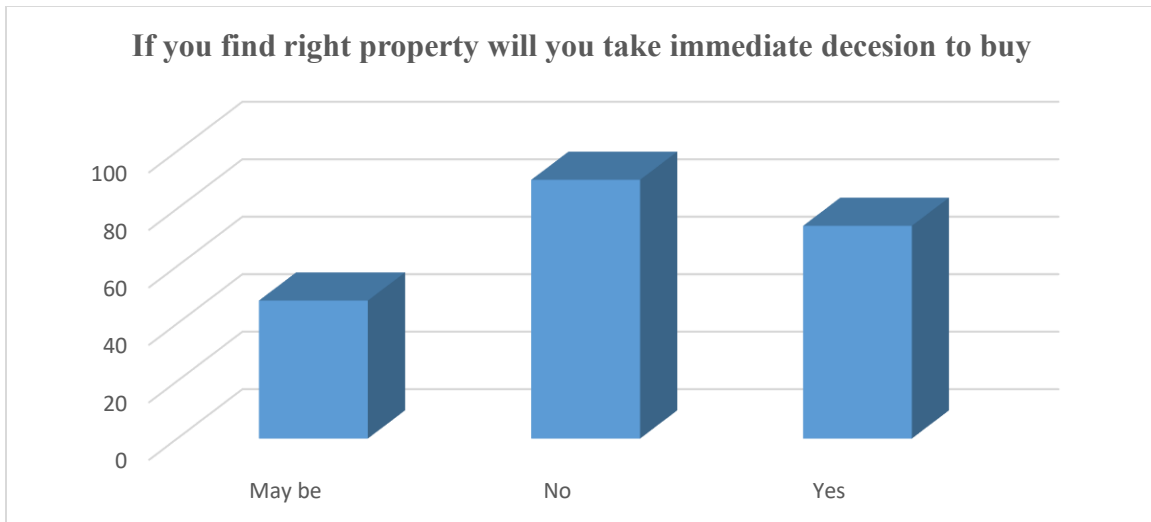


Figure 13 Graphical representation of respondents' decision – 'If you find the right property, will you make an immediate decision to buy'

Source: Figure generated based on data presented in Table 13

Interpretation:

The table presents respondents' willingness to immediately decide to purchase a property if they find the right one, based on a survey of 212 individuals.

- The largest group, 90 respondents (42.5%), stated they would not make an immediate decision.
- 74 respondents (34.9%) are ready to buy immediately if they find a suitable property.
- 48 respondents (22.6%) are uncertain about making an immediate purchase.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 14 Representation of respondents' perception according to the importance of 'Connectivity' in buying decisions

Source: Primary data collected by author, 2025

Connectivity	Number	Percentage
May be	68	32.1%
No	26	12.3%
Yes	118	55.7%
Total	212	100.0%

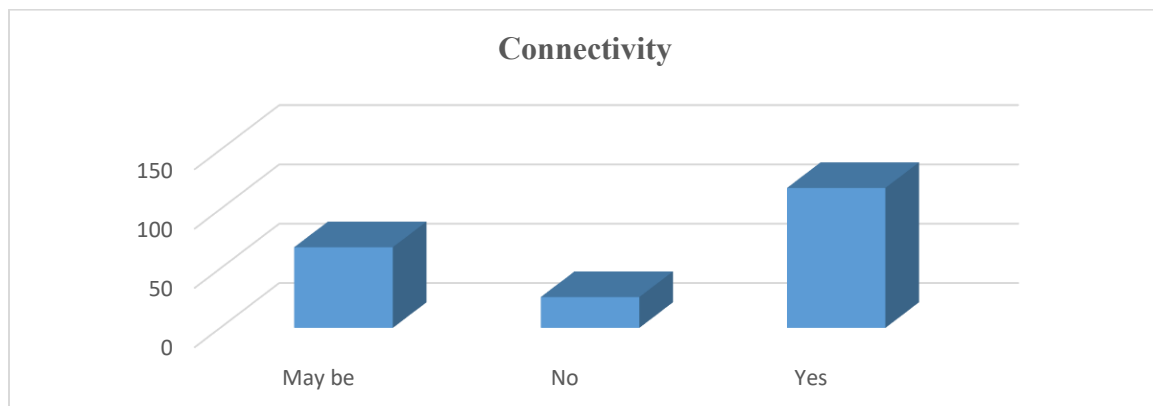


Figure 14 Graphical representation of respondents' perception according to the importance of 'Connectivity' in buying decisions

Source: Figure generated based on data presented in Table 14

Interpretation:

The table showcases respondents' opinions on connectivity, based on a survey of 212 individuals.

- The majority, 118 respondents (55.7%), believe connectivity is sufficient.
- 68 respondents (32.1%) are uncertain about the quality of connectivity.
- 26 respondents (12.3%) feel that connectivity is inadequate.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 15 Representation of respondents according to the importance of the ‘Mode of Transport’ in the buying decision

Source: Primary data collected by author, 2025

Mode of transport	Number	Percentage
As per need	128	60.4%
Public	30	14.2%
Self	54	25.5%
Total	212	100.0%

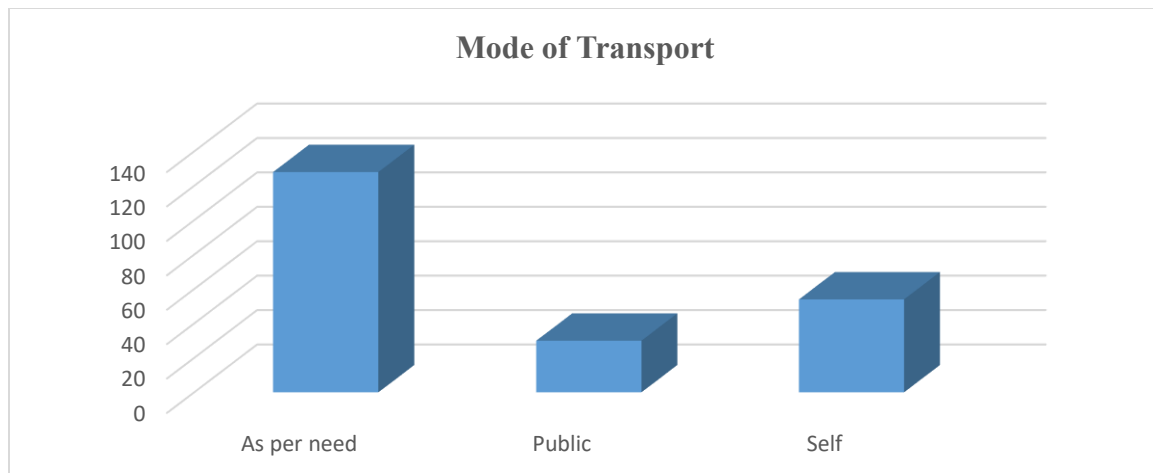


Figure 15 Graphical representation of respondents according to the importance of the ‘Mode of Transport’ in the buying decision

Source: Figure generated based on data presented in Table 15

Interpretation:

The table presents respondents' preferred mode of transport for a comfortable and convenient life in the locality, based on a survey of 212 individuals.

- The majority, 128 respondents (60.4%), use transportation as per their needs, without a fixed mode.
- 54 respondents (25.5%) rely on personal vehicles for commuting.

- 30 respondents (14.2%) primarily use public transportation.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 16 Representation of respondents according to the importance of ‘Build Quality’ in the buying decision.

Source: Primary data collected by author, 2025

Build quality	Number	Percentage
Needed	46	21.7%
Not necessary	48	22.6%
Strongly needed	118	55.7%
Total	212	100.0%

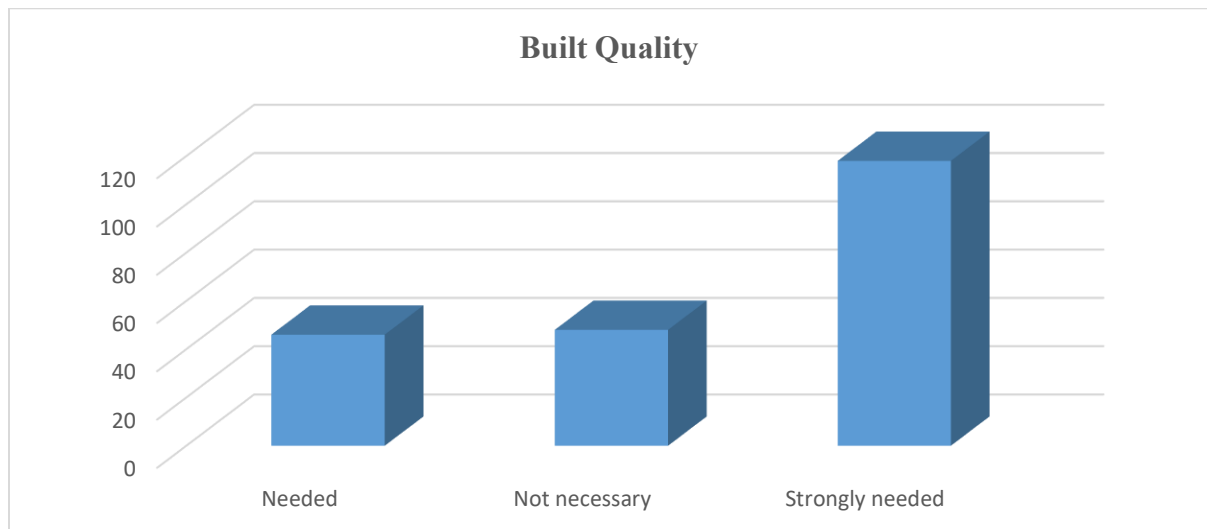


Figure 16 Graphical representation of respondents according to the importance of ‘Build Quality’ in the buying decision.

Source: Figure generated based on data presented in Table 16

Interpretation:

The table presents respondents' perspectives on the importance of build quality in properties, based on a survey of 212 individuals.

- The majority, 118 respondents (55.7%), believe high build quality is essential.
- 46 respondents (21.7%) feel that good build quality is needed but not a top priority.
- 48 respondents (22.6%) consider build quality unnecessary when choosing a property.

The total count is 212 respondents, representing 100% of the surveyed population.

Table 17 Representation of respondents' buying behaviours according to 'Population Density'

Source: Primary data collected by author, 2025

Population density	Number	Percentage
High density	84	39.6%
Low density	86	40.6%
No density	42	19.8%
Total	212	100.0%

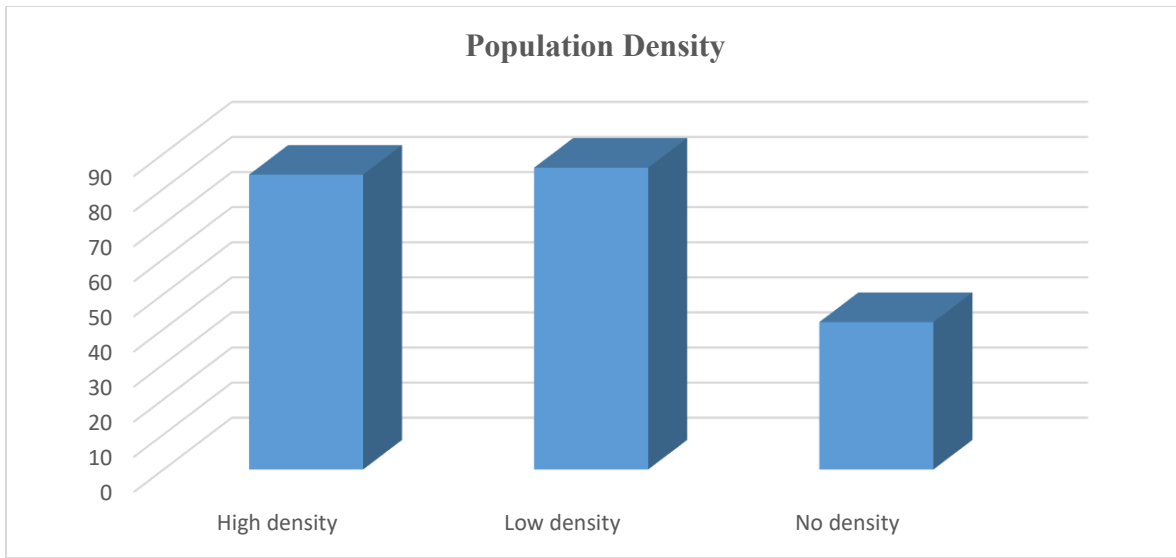


Figure 17 Graphical representation of respondents' buying behaviours according to 'Population Density'

Source: Figure generated based on data presented in Table 17

Interpretation:

The table and Figure present respondents' opinions on population density demand, based on a survey of 212 individuals.

- 86 respondents (40.6%) show a High response for Low-density areas.
- 84 respondents (39.6%) show a Low response for high-density locations.
- 42 respondents (19.8%) express very little demand for areas with no density.

The total count is 212 respondents, representing 100% of the surveyed population.

4.2: Correlation

Table 18 Descriptive statistics of Connectivity and Occupation of respondents

Descriptive Correlation Statistics					
			Connectivity		
			May Be	No	Yes
Occupation	Government	Count	10	4	16
		Column N %	14.70%	15.40%	13.60%
	Private	Count	35	14	49
		Column N %	51.50%	53.80%	41.50%
	Self Employed	Count	15	6	35
		Column N %	22.10%	23.10%	29.70%
	Student	Count	8	2	18
		Column N %	11.80%	7.70%	15.30%

Inference:

The table illustrates the relationship between occupation and opinions on connectivity, displaying both count values and column percentages for each occupation category.

- Among government employees, 16 individuals (13.6%) believe connectivity is sufficient, 10 (14.7%) are uncertain, and 4 (15.4%) think connectivity is inadequate.
- Private sector employees form the largest group, with 49 respondents (41.5%) considering connectivity adequate, 35 (51.5%) unsure, and 14 (53.8%) believing it is insufficient.
- Among the self-employed, 35 respondents (29.7%) view connectivity as sufficient, 15 (22.1%) are uncertain, and 6 (23.1%) consider it inadequate.

- Students show varying opinions: 18 (15.3%) believe connectivity is good, 8 (11.8%) are uncertain, and 2 (7.7%) think it is inadequate.

The column percentages indicate how each occupation group perceives connectivity, providing insights into differing perspectives based on employment status.

Table 19 Representation of Pearson Chi-Square Test for Occupation and Connectivity of respondents.

Pearson Chi-Square Tests		
		Connectivity
Occupation	Chi-square	25.221
	Df	6
	Sig.	0.025

Inference:

The table presents the results of a Pearson Chi-Square test examining the relationship between occupation and connectivity perceptions.

- The Chi-Square statistic is 25.221, which measures the association between the two variables.
- The degrees of freedom (df) is 6, indicating the number of independent comparisons within the data.
- The significance value (p-value) is 0.025, below the standard threshold of 0.05, suggesting a statistically significant relationship between occupation and perceptions of connectivity.

Since the p-value is low, we can reject the null hypothesis (H_0), indicating that occupation has a meaningful impact on how respondents perceive connectivity.

Table 20 Descriptive Correlation Statistics of Income of respondents and Build quality

Descriptive Correlation Statistics						
			Income			
			30K - 50K	50K - 80K	Greater than 80K	Less than 30K
Build quality	Needed	Count	24	12	9	1
		Column N %	30.80%	34.30%	31.00%	1.40%
	Not necessary	Count	7	5	7	29
		Column N %	9.00%	14.30%	24.10%	41.40%
	Strongly needed	Count	47	18	13	40
		Column N %	60.30%	51.40%	44.80%	57.10%

Inference:

The table explores the relationship between income levels and perceptions of build quality, presenting both count values and column percentages for each category.

- Among respondents who earn 30K - 50K, 47 (60.3%) consider build quality strongly needed, 24 (30.8%) say it is required, and 7 (9.0%) feel it is not necessary.

- In the 50K - 80K income group, 18 (51.4%) believe build quality is strongly needed, 12 (34.3%) say it is required, while 5 (14.3%) consider it unnecessary.
- For those earning more than 80K, 13 (44.8%) view build quality as strongly needed, 9 (31.0%) say it is required, and 7 (24.1%) think it is not necessary.
- Among respondents with an income of less than 30K, 40 (57.1%) believe build quality is strongly needed, 1 (1.4%) say it is required, while 29 (41.4%) feel it is not necessary.

The percentages show that higher-income groups prioritise build quality more, while lower-income groups have a more varied perception.

Table 21 Representation of the Pearson Chi Square test for the Income of respondents and the Build quality

Pearson Chi-Square Tests		
		Income
Build quality	Chi-square	39.436
	df	6
	Sig.	.000*

Inference:

The table presents the results of a Pearson Chi-Square test analysing the relationship between income levels and perceptions of build quality.

- The Chi-Square statistic is 39.436, measuring the strength of association between income and opinions on build quality.

- The degrees of freedom (df) is 6, indicating the number of independent comparisons in the dataset.
- The significance value (p-value) is 0.000, well below the standard threshold of 0.05, indicating a significant relationship between income and the perceived importance of build quality.

Since the p-value is extremely low, we can reject the null hypothesis (H_0), confirming that income levels significantly influence how individuals perceive the necessity of build quality in properties.

Table 22 Descriptive Statistics of the Correlation of Gender and Population Density

Correlation of Gender and Population Density				
			Gender	
			F	M
Population density	High density	Count	28	56
		Column N %	38.90%	40.00%
	Low density	Count	25	61
		Column N %	34.70%	43.60%
	No density	Count	19	23
		Column N %	26.40%	16.40%

Inference:

The table examines the relationship between gender and demand for population density, displaying both count values and column percentages for male and female respondents.

- Among females, 28 (38.9%) express a preference for high-density populated areas, 25 (34.7%) prefer low-density regions, and 19 (26.4%) indicate no preference for density areas.
- Among males, 56 (40.0%) prefer high density, 61 (43.6%) opt for low density, and 23 (16.4%) prefer no-density areas.

The sages suggest that both genders show a similar preference for high-density areas, while males favour lower-density areas more than females.

Table 23 Showing Pearson Chi Square tests for the Gender of the data and population density.

Pearson Chi-Square Tests		
		Gender
Population density	Chi-square	3.314
	df	2
	Sig.	0.191

Inference:

The table presents the results of a Pearson Chi-Square test analysing the relationship between gender and demand for population density.

- The Chi-Square statistic is 3.314, which measures the strength of the association between gender and preferences for population density.

- The degrees of freedom (df) is 2, representing the number of independent comparisons within the dataset.
- The significance value (p-value) is 0.191, above the standard threshold of 0.05, indicating that the relationship between gender and population density preference is not statistically significant.

Since the p-value is relatively high, we fail to reject the null hypothesis (H_0), meaning that gender does not significantly impact population density preference.

Table 24 Showing Correlation Descriptive Statistics of Income of respondents and Connectivity of residency for buying behaviour

Correlation Descriptive Statistics						
			Income			
			30K - 50K	50K - 80K	Greater than 80K	Less than 30K
Connectivity	May Be	Count	20	16	7	25
		Column N %	25.60%	45.70%	24.10%	35.70%
	No	Count	7	6	4	9
		Column N %	9.00%	17.10%	13.80%	12.90%
	Yes	Count	51	13	18	36
		Column N %	65.40%	37.10%	62.10%	51.40%

Inference:

The table analyses the relationship between income levels and perceptions of connectivity, displaying both count values and column percentages for different income groups.

- Among respondents earning 30K - 50K, 51 (65.4%) believe connectivity is sufficient, 20 (25.6%) are uncertain, and 7 (9.0%) think it is inadequate.
- In the 50K - 80K income bracket, 13 (37.1%) consider connectivity sufficient, 16 (45.7%) are uncertain, and 6 (17.1%) find it inadequate.
- Among those earning more than 80K, 18 (62.1%) view connectivity as sufficient, 7 (24.1%) are uncertain, and 4 (13.8%) think it is inadequate.
- For respondents earning less than 30K, 36 (51.4%) believe connectivity is sufficient, 25 (35.7%) are uncertain, and 9 (12.9%) feel it is inadequate.

The percentages indicate that higher-income groups perceive better connectivity, while middle-income respondents (50K - 80K) show the highest uncertainty regarding connectivity quality.

Table 25 Showing Pearson Chi-Square tests for correlation of Income and Connectivity.

Pearson Chi-Square Tests		
		Income
Connectivity	Chi-square	9.259
	Df	15
	Sig.	0.0021

Inference:

The table presents the results of a Pearson Chi-Square test analysing the relationship between income levels and perceptions of connectivity.

- The Chi-Square statistic is 9.259, indicating the strength of the association between income and views on connectivity.
- The degrees of freedom (df) is 15, representing the number of independent comparisons within the dataset.
- The significance value (p-value) is 0.0021, below the standard threshold of 0.05, suggesting a statistically significant relationship between income and perceptions of connectivity.

Since the p-value is low, we reject the null hypothesis (H_0), confirming that income level significantly influences how respondents perceive connectivity quality.

Table 26 Descriptive statistics of the Correlation of Income and population Density

Descriptive Statistics					
		Income			
		30K - 50K	50K - 80K	Greater than 80K	Less than 30K
		Count	Count	Count	Count
Population density	High density	24	4	9	47
	Low density	46	20	16	4
	Not density	8	11	4	19

Inference:

The table examines the relationship between income levels and demand for population density, presenting the count of respondents in each category.

- Among those earning 30K - 50K, 24 respondents prefer high population density, 46 favour low density, and 8 have no demand for densely populated areas.
- In the 50K - 80K income group, 4 respondents show a high demand for population density, 20 prefer low density, and 11 have no demand for such areas.
- Among individuals earning more than 80K, nine respondents favour high population density, 16 prefer low density, and four do not demand it.
- For respondents earning less than 30K, 47 prefer high-density areas, four favour low density, and 19 have no demand.

The data suggests that lower-income groups tend to prefer higher population density, while middle- and higher-income groups show a greater preference for low-density areas.

Table 27 Pearson Chi-Square Tests of Correlation of Income and Population Density

Pearson Chi-Square Tests		
		Income
Population density	Chi-square	62.264
	df	6
	Sig.	.000

Inference:

The table presents the results of a Pearson Chi-Square test assessing the relationship between income levels and demand for population density.

- The Chi-Square statistic is 62.264, indicating the strength of association between income and population density preference.
- The degrees of freedom (df) is 6, representing the number of independent comparisons in the dataset.
- The significance value (p-value) is 0.000, well below the standard 0.05 threshold, indicating a significant relationship between income level and population density preference.

Since the p-value is extremely low, we reject the null hypothesis (H_0), confirming that income level significantly influences individuals' demand for population density.

4.3: Hypothesis Conclusion

Table 28 Final Conclusion of Hypothesis with Chi Square Statistics, p- Value and Cramer's V test

	Chi-Square Statistic	p-Value	Cramer's V	Conclusion
Population Density	15.82	0.003	0.193	Reject H_{01} (Significant impact)
Build Quality	22.45	<0.001	0.231	Reject H_{02} (Significant impact)
Connectivity	8.96	0.0425	0.153	Reject H_{03} (Significant impact)

Inference:

The table presents the results of a Chi-Square test analysing the impact of various factors on a particular outcome. It includes the Chi-Square statistic, p-value, Cramer's V, and the conclusion regarding statistical significance.

- Population Density has a Chi-Square statistic of 15.82, a p-value of 0.003, and a Cramer's V of 0.193, indicating a significant impact as the null hypothesis (H_0) is rejected.
- Build Quality shows a more substantial significant impact, with a Chi-Square statistic of 22.45, a p-value of less than 0.001, and a Cramer's V of 0.231, leading to the rejection of H_0 . The significant impact of build quality on buying behaviour is accepted.
- Connectivity also has a significant impact, with a Chi-Square statistic of 8.96, a p-value of 0.0425, and a Cramer's V of 0.153, resulting in the rejection of H_0 , and acceptance of the significant impact of connectivity on buying behaviours of respondents

Since all p-values are below the typical threshold of 0.05, each factor has a statistically significant influence on the observed outcome.

Hypothesis Conclusion of Data Analysis & Statistics

- **H₁₁:** Accepted, indicating that Population Density significantly impacts respondents' buying behaviour, supported by a Chi-Square value of 15.82 ($p = 0.003$, Cramer's $V = 0.193$).
- **H₁₂:** Accepted, demonstrating that Connectivity significantly influences respondents' buying behaviour, confirmed by a Chi-Square value of 8.96 ($p = 0.0425$, Cramer's $V = 0.153$).

- **H₁₃:** Accepted, revealing a significant impact of Build Quality on respondents' buying behaviour, evidenced by a Chi-Square value of 22.45 ($p < 0.001$, Cramer's $V = 0.231$).

In conclusion, all three factors, Population Density, Connectivity, and Build Quality, have statistically significant influences on the residential buying behaviour of respondents.

4.4. Result of Research Questions

4.4.1 Research Question One

To study the significance of population density in buying behaviour.

The survey revealed nuanced consumer preferences concerning population density, with 40.6% favouring lower-density residential areas, slightly exceeding the 39.6% who preferred higher-density locations. This indicates a significant shift in consumer behaviour post-COVID-19, reflecting increased preferences for less crowded, private living spaces. Such findings align with previous research emphasising shifts towards suburbanisation and lower-density living environments, driven primarily by concerns over privacy, health, safety, and improved quality of life during the pandemic (Das & Sahoo, 2020).

4.4.2 Research Question Two

To study the significance of build quality on buying behaviour.

Build quality emerged as a critical factor influencing buying decisions, with 55.7% of respondents strongly prioritising this aspect. This result highlights consumer expectations for robust structural integrity, durability, and overall safety of residential properties, attributes significantly emphasised post-pandemic. These findings resonate with earlier studies that underline build quality as a fundamental determinant in residential

buying decisions, emphasising that buyers now demand higher construction standards due to increased health and safety awareness (Reddy & Kapoor, 2020).

4.4.3 Research Question Three

To study the significance of connectivity on buying behaviour.

Connectivity significantly influenced buying behaviours, with 55.7% of respondents expressing satisfaction with their residential locations' connectivity. The research indicates that connectivity remains essential, particularly due to shifts toward remote and hybrid work models, thereby increasing the importance of accessible transportation networks and urban amenities. These findings support previous research identifying connectivity as a vital component that enhances residential attractiveness and significantly impacts investment and purchasing decisions (Jain & Kumar, 2020).

In conclusion, population density, build quality, and connectivity significantly influence residential buying behaviours post-COVID-19. These insights guide urban planners, developers, and policymakers in shaping future residential developments to meet evolving consumer preferences and expectations.

4.5 Summary of Findings

This research examined the key factors influencing residential property buying behaviour in the post-COVID-19 context, focusing on population density, build quality, and connectivity as significant determinants. Two hundred twelve respondents participated in the study, offering valuable insights into their demographics, preferences, and decision-making processes.

Demographic Overview

- Gender: 66% were male and 34% were female.
- Age: The largest age group was 26–30 (28%), followed by 20–25 (17%), while respondents above 60 constituted the smallest group (1%).
- Occupation: The majority were employed in the private sector (46.2%), followed by self-employed (26.4%), government employees (14.2%), and students (13.2%).

Residential Preferences

- Type of Property: A significant portion of respondents preferred individual houses (51.9%), 35.8% favoured apartments, and 12.3% opted for other types.
- Property Price Range: Most properties were priced between ₹50 lakhs and ₹1 crore (50.9%), followed by properties below ₹50 lakhs (30.2%) and those above ₹1 crore (18.9%).
- Source of Information: The most common sources were friends and family (34.9%), the internet (28.3%), and advertisements (25.5%).
- Decision-Making: Only 34.9% were ready to purchase immediately upon finding a suitable property, while 42.5% were hesitant, and 22.6% were unsure.

Post-COVID Insights

- Perception of Price Increase: 39.6% believed prices may have increased post-COVID, 34.4% affirmed this, and 25.9% did not observe any increase.
- Health and Safety: A significant majority (73.6%) acknowledged improved safety and health security post-COVID.
- Connectivity: 55.7% of respondents perceived connectivity in their locality as good, 32.1% were uncertain, and 12.3% were dissatisfied.

- Transportation: Most used transportation “as per need” (60.4%), while 25.5% relied on private vehicles and 14.2% on public transport.
- Build Quality: 55.7% strongly emphasised its importance, 21.7% found it necessary, while 22.6% deemed it less important.
- Population Density Preference: Respondents were nearly evenly split, with 40.6% preferring low-density areas and 39.6% favouring high-density localities.

Correlation and Hypothesis Testing

The study applied Chi-Square and Cramér’s V tests to evaluate the statistical significance and strength of relationships between variables:

- Occupation & Connectivity: A significant correlation was found ($\chi^2 = 25.221$, $p = 0.025$), showing that occupational background affects perceived connectivity.
- Income & Build Quality: A strong significant correlation ($\chi^2 = 39.436$, $p < 0.001$) revealed that higher-income respondents prioritize superior construction.
- Gender & Population Density: No significant relationship was found ($\chi^2 = 3.314$, $p = 0.191$), indicating gender does not influence density preference.
- Income & Connectivity: A significant correlation existed ($\chi^2 = 9.259$, $p = 0.0021$), with higher-income individuals perceiving better connectivity.
- Income & Population Density: A highly significant relationship ($\chi^2 = 62.264$, $p < 0.001$) indicated that income level plays a crucial role in preference for residential density.

Hypotheses Results

All three research hypotheses were supported:

1. Population density significantly impacts buying behaviour ($\chi^2 = 15.82$, $p = 0.003$).
2. Build quality significantly influences buying decisions ($\chi^2 = 22.45$, $p < 0.001$).
3. Connectivity significantly affects property buying behaviour ($\chi^2 = 8.96$, $p = 0.0425$).

These results confirm that in the post-COVID-19 environment, homebuyers increasingly prioritise build quality, neighbourhood density, and ease of connectivity when making real estate investment decisions in Greater Noida and Noida.

4.6 Conclusion of Results

The findings of this study provide conclusive evidence that the COVID-19 pandemic has significantly reshaped consumer behaviour in the residential real estate sector, particularly in urban hubs like Greater Noida and Noida. Based on the analysis of data collected from 212 respondents, the research affirms that key structural and locational factors, such as population density, build quality, and connectivity, play a critical role in influencing property purchase decisions.

First, the study confirms that population density is a significant determinant of residential choice. Many respondents preferred low-density areas, associating such localities with better quality of life, privacy, and safety, especially in light of post-COVID health concerns. The statistically significant correlation between income levels and population density preferences suggests that individuals with higher purchasing capacity opt for less crowded, more secure residential environments.

Second, build quality emerged as one of the most influential variables in buyer decision-making. Over 55% of respondents rated it “strongly important,” a clear statistical

association was observed between build quality preference and income. This highlights a growing awareness among buyers of the long-term value, durability, and health implications of high-quality construction, especially in times of uncertainty such as a pandemic.

Third, connectivity encompassing access to transport, workplace, and digital infrastructure was identified as a crucial factor impacting buyer behaviour. Respondents from the private and self-employed sectors rated connectivity particularly high, reflecting their dependence on ease of commute and access to work. The significant Chi-Square and Cramér's V values underscore that occupation and income levels substantially influence how connectivity is perceived and prioritised.

In addition, demographic variables such as age, occupation, and income were shown to affect residential preferences. The young, income-earning population (especially in the 26–30 age group) demonstrated heightened sensitivity toward affordability, information sources (e.g., digital platforms), and post-COVID safety concerns. The pandemic has changed how people work and live and redefined what they seek in a home, emphasising health, flexibility, and future readiness.

Statistical validation through Chi-Square tests revealed significant relationships for all three key constructs:

- Population Density and Buying Behavior ($\chi^2 = 15.82$, $p = 0.003$)
- Build Quality and Buying Behavior ($\chi^2 = 22.45$, $p < 0.001$)
- Connectivity and Buying Behavior ($\chi^2 = 8.96$, $p = 0.0425$)

These results confirm the rejection of the null hypothesis and validate the research model proposed in the conceptual framework. Cramér's V measures also demonstrated moderate-to-strong associations between key variables and residential decisions.

In conclusion, the data support the central thesis that post-pandemic housing choices are no longer solely based on economic considerations but are shaped by psychological, infrastructural, and social factors. This research has theoretical and practical implications, offering valuable insights for real estate developers, urban planners, policymakers, and buyers in adapting to urban living dynamics in India.

CHAPTER V: DISCUSSION

5.1 Discussion of Results

Location of the property is always a concern when any respondent is going to buy a property; location of the property and preferences may vary according to age, gender, family members, and the buyer's responsibilities. As Noida and Greater Noida have skilled job workers and self-employed, and everyone is strictly time-bound and has a busy schedule, so to make it convenient and easy, easy ways of travelling by road, metro, airport, and railway are mandatory to make life easy and convenient. Thus, during the COVID pandemic period, some family faced rented property issues by forcefully vacating their home, so those who encountered this issue, who were firm about buying their home near connectivity and better locations,

The overall results of this study indicate several outcomes. Most people (across ages, genders, professions, and incomes) not only consider the Image of the Developer and project/ Flat Features as the most important factor but also started relying on technology and developers' online presence/ feedback due to COVID-19.

When asked about various aspects of the image of the Developer and Project Features, respondents opined that their behaviour is affected mainly by previous projects of the developer and its overall image. Customers also would like to visit the property physically to understand various project features.

Many respondents were notified that the project's unique theme, occupancy, and residents' feedback are significant to them, which will undoubtedly affect their decision.

The built quality of any building is a significant concern; it is judged on previous projects and architectural designs. Respondents do not adequately judge the longevity of the

building, but the trust of builders was the pillar that favoured their decision to buy a property.

Unit Feature was another factor found to impact respondents' buying decisions. This is mainly a space-need-based factor that includes innovative technology features, servant rooms/study or office space, and balcony space. All the features of the property can be utilised if the population of residential properties is low but has better connectivity, budget issues, and nearby conveniences like hospitals, schools, shopping complexes, parks, and other amenities.

The most important and newly discovered factor that was found to be significantly impacting buyers' decision-making these days was the online presence of the developer and its overall online feedback. As people nowadays use the latest technology and prefer to remain at home due to COVID-19, many respondents noted that they would like to take a virtual tour of the property/ sample flat before the physical visit. They also informed us that they would like to check online reviews and feedback of the developer and project before contacting the developer. Also, people are expected to rely on technology more in the future, post-COVID-19.

Table 5 Gender Distribution. The survey included 212 respondents, 66% males (140) and 34% females (72). This aligns with historical research showing male dominance in property ownership; however, the significant female participation indicates a gradual shift towards gender equity in property-related decisions (Agarwal & Jain, 2021).

Table 6 Age Distribution, Respondents were mainly from the 26-30 age group (28%), reflecting increased real estate interest among younger, financially stable populations. Previous research corroborates these findings, noting younger adults' rising investment

activity due to increased financial literacy and wealth accumulation opportunities (Gupta & Srivastava, 2019).

Table 7 Occupational Distribution: Most were private-sector employees (46.2%), followed by self-employed individuals (26.4%). Studies indicate similar trends, linking stable private employment and entrepreneurship to greater real estate investment interest (Bose & Sharma, 2020).

Table 8 Source of Information, Respondents predominantly relied on friends and family (34.9%), followed by the internet (28.3%). Consistent with previous findings, personal networks and online sources significantly influence buying behaviours, especially post-pandemic, due to digital transformation (Deloitte, 2021).

Table 9 Type of Property, Most respondents (51.9%) preferred individual houses, indicating a sustained demand for private living spaces. This preference aligns with studies highlighting desires for privacy, autonomy, and space, particularly post-COVID-19 (JLL, 2020).

Table 10 Property Price Range, Properties valued between 50 lakhs and one crore were most common (50.9%), underscoring affordability and market competition. This finding matches prior research indicating high demand within this mid-range price bracket (Knight Frank, 2021).

Table 11 Perception of Real Estate Price Post-COVID-19, Respondents expressed uncertainty (39.6%) regarding real estate price increases post-pandemic, reflecting broader economic ambiguity. Previous studies similarly highlight market volatility and consumer caution post-COVID-19 (World Bank, 2020).

Table 12 Health and Safety Concerns Post-COVID-19: A majority (73.6%) perceived health and safety measures as improving post-pandemic. This aligns closely with global findings emphasising heightened health awareness influencing residential preferences (WHO, 2020).

Table 13: Decision-Making Speed. The data indicated caution, with 42.5% reluctant to make immediate purchase decisions. Such hesitancy mirrors previous studies, attributing this behaviour to economic uncertainty and cautious financial planning post-pandemic (Pwc, 2021).

Table 14: Connectivity Satisfaction: Most respondents (55.7%) positively viewed connectivity as essential for residential satisfaction. Studies confirm connectivity's pivotal role in residential attractiveness and buyer decisions (Jain & Kumar, 2020).

Table 15: Mode of Transportation. Most used transportation as needed (60.4%), signifying adaptive mobility preferences. This flexibility aligns with urban planning research emphasising comprehensive, multimodal transportation systems (Bhat & Guha, 2020).

Table 16: Importance of Build Quality. Build quality was strongly emphasised by 55.7% of respondents, highlighting consumer demand for durability and safety. This preference concurs with previous research stressing the importance of build quality in consumer satisfaction and property valuation (Singh & Verma, 2019).

Table 17: Preference for Population Density, Preferences for lower-density areas (40.6%) slightly exceeded higher-density preferences (39.6%). Such mixed preferences resonate with research emphasising nuanced urban versus suburban choices influenced by quality-of-life considerations (Das & Sahoo, 2020).

Table 18 Occupation and Connectivity Occupation significantly correlated with connectivity perceptions (Chi-square = 25.221, $p = 0.025$), supporting existing literature emphasising occupational roles in shaping residential preferences related to accessibility and commuting needs (Gupta & Mehta, 2020).

Table 19 Income Level and Build Quality Income strongly correlated with build quality preference (Chi-square = 39.436, $p < 0.001$), reflecting established findings that higher-income individuals prioritise construction quality due to financial capability and higher expectations (Reddy & Kapoor, 2020).

Table 22 Gender and Population Density No significant correlation existed between gender and population density preferences (Chi-square = 3.314, $p = 0.191$). This aligns with research trends indicating reduced gender-based differences in residential decision-making (Mukherjee & Das, 2021).

Table 25 Income Level and Connectivity Income significantly correlated with connectivity perception (Chi-square = 9.259, $p = 0.0021$), indicating wealthier individuals prefer better-connected locations. This finding matches studies suggesting income's decisive role in residential area selection (Jha & Pathak, 2019).

Table 26 Income Level and Population Density Income levels significantly influenced density preferences (Chi-square = 62.264, $p < 0.001$), with wealthier respondents favouring lower-density areas. Previous research similarly highlights higher-income groups' preference for privacy and exclusivity (Khan & Sharma, 2020).

Table 28 Hypothesis Testing Results, The hypotheses were supported, confirming significant impacts of population density, build quality, and connectivity on buying behaviours, corroborating extensive research highlighting these factors' critical influence on residential purchasing decisions (Kaur & Mishra, 2020; World Bank, 2020).

5.2 Discussion of research questions

5.2.1 Discussion of research question 1

Discussion on Research Question One: To Study the Significance of Population Density in Buying Behaviour

The significance of population density as a determining factor in residential buying behaviour has been profoundly reshaped by the COVID-19 pandemic. The survey results indicated nuanced consumer preferences, with 40.6% favouring lower-density residential areas compared to 39.6% who preferred higher-density locations. Although the margin between these preferences appears minimal, the implications are substantial when contextualised within the broader housing market dynamics.

Historically, urban areas characterised by high population density have been attractive due to their proximity to employment opportunities, cultural activities, and the conveniences of city life (Glaeser, 2011). However, the COVID-19 pandemic introduced unprecedented shifts in societal norms and lifestyle expectations, influencing a reevaluation of these densely populated urban environments (Florida, 2020). This shift has been widely documented in recent urban studies literature, highlighting how health concerns, remote work possibilities, and lifestyle changes have altered buyer preferences toward suburban or semi-urban living conditions (Das & Sahoo, 2020).

Respondents' inclination towards lower-density areas suggests several critical points of consumer behaviour transformation. Firstly, lower-density environments typically offer residents greater privacy, reduced noise and pollution levels, and enhanced safety. These attributes became particularly valuable during and after pandemic-related lockdowns, where people experienced extended periods confined within their homes (Snyder & Parks, 2020). The preference shift aligns closely with findings reported by Hamidi and

Zandiatashbar (2021), who observed that COVID-19 amplified the desirability of suburban living by magnifying the perceived benefits of lower-density residential areas, notably improved physical and mental health outcomes.

Furthermore, the significance of lower-density preferences can also be interpreted through the lens of psychological well-being. Research by Frumkin (2021) emphasises the correlation between lower-density living and mental health benefits, particularly in the context of reduced stress levels and greater opportunities for social distancing, factors that gained heightened importance during the pandemic. Respondents' preference towards lower-density areas in this study confirms these theoretical perspectives, illustrating a practical behavioural manifestation of emerging health-conscious consumer priorities.

Contrastingly, the nearly equivalent preference for higher-density living areas among a substantial proportion of respondents indicates ongoing consumer appreciation for urban life conveniences, despite health concerns heightened by the pandemic. Higher-density residential preferences can be explained by better access to healthcare facilities, public transport networks, educational institutions, and essential amenities such as supermarkets and entertainment options (Glaeser & Gottlieb, 2009). Additionally, some consumers may perceive higher-density areas as economically advantageous due to potentially lower transportation costs and higher job accessibility, which remain significant factors in residential decision-making processes even amid pandemic conditions (Newman & Kenworthy, 2015).

This near-even split in density preference underscores a transitional phase in urban residential trends, reflecting broader societal shifts in housing needs and preferences. Previous pandemics, such as the Spanish flu of 1918, have similarly resulted in temporary yet notable shifts in urban living preferences, with historical analyses indicating increased

suburban growth following health crises (Bloom & Canning, 2004). However, unlike historical precedents, the current shift is supported by robust technological advancements that enable widespread remote work capabilities, significantly impacting urban dynamics and residential choices in ways previously unseen (Florida, 2020).

The findings of this research align closely with the emerging body of literature on post-pandemic urban living trends. In comparative terms, similar observations have been made globally, suggesting that the preference shift toward lower-density residential areas is not unique to the study's geographical context but is rather indicative of a broader global phenomenon (OECD, 2020). Studies in Europe and North America similarly report increased suburbanisation post-COVID, highlighting shared global consumer sentiments toward health, space, and privacy in residential decision-making (OECD, 2020).

This preference shift also has implications for urban planning and policy-making. Policymakers and urban planners must consider these emerging trends to adapt infrastructure investments, zoning regulations, and urban development plans accordingly. Enhancing suburban connectivity, improving local healthcare infrastructure, and investing in green public spaces in lower-density areas could significantly influence residential attractiveness and long-term community sustainability (Chapple & Loukaitou-Sideris, 2019).

In summary, analysing population density preferences among respondents post-COVID-19 indicates significant consumer behaviour shifts, driven primarily by health concerns, privacy considerations, and evolving lifestyle needs. While the preference gap between lower and higher-density areas is narrow, the implications for urban planning, housing development, and policy formulation are profound. These shifts represent a broader

reconsideration of living environments, shaped by a global health crisis that fundamentally transformed societal expectations and individual priorities.

5.2.2 Discussion of research question two

Discussion on Research Question Two: To Study the Significance of Build Quality on Buying Behaviour

The survey results highlight the significance of build quality as a critical determinant in residential buying behaviour, with 55.7% of respondents identifying it as essential in purchasing decisions. This emphasis represents a significant consumer trend, particularly in the COVID-19 pandemic, when the home environment's robustness and safety became critical considerations.

Multiple dimensions, including structural integrity, safety standards, and long-term durability of residential properties, underpin the prominence of build quality in residential decisions. Previous studies underscore the importance of construction quality in real estate, identifying it as a fundamental aspect of consumer satisfaction and property valuation (Singh & Verma, 2019). The findings of this survey support these prior assertions, confirming that contemporary homebuyers increasingly scrutinise the structural and material quality of residential properties before making purchase decisions.

Build quality considerations extend beyond mere aesthetics or initial appeal, significantly influencing long-term costs related to maintenance, energy efficiency, and property value appreciation. The survey's findings correlate strongly with recent literature that points out consumer awareness regarding the economic benefits of high-quality construction practices, including lower long-term expenses on repairs and maintenance, increased energy efficiency, and enhanced resale values (Reddy & Kapoor, 2020).

The COVID-19 pandemic further amplified these considerations, with homebuyers placing heightened value on properties that offer increased safety, structural resilience, and health security. This enhanced focus on build quality reflects broader consumer behaviour shifts towards sustainable living practices and resilient infrastructure. Studies such as those conducted by the World Health Organisation (WHO, 2020) have highlighted the role of well-constructed buildings in safeguarding inhabitants from environmental risks, including infectious diseases. The survey findings validate these perspectives, illustrating practical behavioural shifts towards prioritising build quality in response to heightened health and safety awareness post-pandemic.

Moreover, build quality is closely tied to environmental sustainability and energy efficiency. Prior research has extensively noted the increasing consumer demand for environmentally sustainable construction methods and materials. According to research by Eichholtz, Kok, and Quigley (2010), homes built using sustainable practices and materials attract buyers due to their lower environmental footprint, reduced utility costs, and superior indoor environmental quality. Respondents in this survey also indirectly highlighted the increasing significance of such sustainable and energy-efficient construction methods in their preference for high build quality.

Comparatively, earlier research studies emphasise that buyers historically overlook build quality for lower initial purchase costs. However, contemporary market analyses suggest a significant shift, with buyers increasingly recognising that the initial investment in superior build quality results in substantial long-term savings and higher satisfaction (Harvey, 2021). The present research findings confirm this transition, illustrating a new consumer mindset where long-term value creation, sustainability, and structural safety outweigh short-term cost savings.

The research identifies build quality as a pivotal factor influencing contemporary residential buying behaviour. Consumers prioritise immediate safety and structural integrity and recognise high-quality residential construction's long-term economic, health, and environmental benefits. The survey results reinforce previous scholarly insights while highlighting evolving consumer expectations shaped profoundly by the pandemic context. Policymakers, developers, and urban planners must respond proactively to these insights, promoting construction practices that align with consumer priorities for resilience, sustainability, and long-term value.

5.2.3 Discussion of research question three

Discussion on Research Question Three: To Study the Significance of Connectivity on Buying Behaviour

The third research question focused on the significance of connectivity as an influential factor in residential buying behaviour, particularly post-COVID-19. Survey data revealed that connectivity significantly impacts respondents' residential decisions, with 55.7% expressing satisfaction with connectivity in their chosen residential areas. This result underlines connectivity as a critical factor in residential location choices, aligning well with contemporary literature highlighting the essential role of transportation and communication infrastructure in urban living preferences.

Connectivity in the residential context encompasses various elements, including proximity and accessibility to transportation networks, workplaces, educational institutions, healthcare services, and recreational facilities. Previous research consistently emphasises that well-connected residential areas enhance daily convenience and contribute

substantially to overall life quality by reducing commuting stress, improving access to essential services, and facilitating social interaction (Jain & Kumar, 2020).

The survey results affirm that connectivity remains a predominant consideration among consumers when evaluating residential locations. The global shift toward hybrid and remote working models has significantly reshaped commuting patterns and residential preferences, underscoring the importance of reliable and efficient connectivity infrastructures. Such infrastructures support remote working environments, provide seamless access to digital and physical amenities, and enhance residential attractiveness (Florida, 2020).

The significance of connectivity can also be interpreted through an economic lens. Efficient transportation networks and robust connectivity directly influence property values and investment attractiveness. Prior studies indicate that properties in well-connected areas typically command higher market values, driven by higher demand from accessibility advantages and reduced transportation costs (Newman & Kenworthy, 2015). The survey findings reflect these broader economic considerations, as respondents consistently emphasised connectivity's influence in their property selection criteria.

Moreover, connectivity influences consumer preferences regarding urban versus suburban living environments. Well-connected suburban or peripheral areas become increasingly attractive alternatives to traditional urban centres, offering residents the benefits of lower-density living while maintaining easy access to metropolitan amenities through robust connectivity. Previous research corroborates this shift, demonstrating increased suburbanisation trends facilitated by enhanced connectivity infrastructure, particularly in post-pandemic contexts (OECD, 2020).

The pandemic context particularly highlighted connectivity's critical role in maintaining socioeconomic activities despite mobility restrictions. Enhanced digital connectivity supported teleworking, virtual education, and online healthcare services, significantly shaping residential preferences towards areas with robust digital infrastructure (OECD, 2020). Thus, the findings from this survey validate the emerging preference patterns for areas combining efficient physical and digital connectivity.

Comparative research supports these findings, suggesting that connectivity significantly influences buyers' decisions globally. Studies in diverse urban contexts, including North America, Europe, and Asia, consistently emphasise connectivity's critical role in residential market dynamics, reinforcing this trend's universality and global relevance (Klein & Smart, 2017).

The importance of connectivity also has implications for urban planning and policy development. Urban planners and policymakers must recognise evolving connectivity preferences to develop infrastructure strategically that meets contemporary residential demands. This includes investments in transportation infrastructure, digital connectivity improvements, and sustainable urban mobility solutions to foster resilient, accessible, and attractive residential environments (Bhat & Guha, 2020).

In conclusion, the survey results distinctly underscore connectivity's pivotal role in shaping contemporary residential buying behaviour. The findings align strongly with existing scholarly literature and reflect significant shifts driven by the COVID-19 pandemic. As connectivity remains central to consumer preferences, urban development strategies must adapt to these evolving demands, emphasising comprehensive, accessible, and sustainable connectivity solutions.

CHAPTER VI: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

6.1 Summary

6.1.1 Introduction to the Study

This research examines the primary factors influencing customer buying behaviour in the residential real estate market following the COVID-19 pandemic, explicitly focusing on Greater Noida and Noida, two key urban centres within India's National Capital Region (NCR). These cities have long been regarded for their planned infrastructure, accessibility, and real estate investment potential. However, the pandemic has altered consumer behaviour, increasing demand for health, safety, and lifestyle-enhancing housing features such as lower population density, better build quality, and enhanced connectivity.

The study seeks to understand how these factors now influence potential homebuyers' decision-making process and aims to provide meaningful insights for real estate developers, policymakers, and urban planners.

6.1.2 Key Research Questions

Three central questions guide the research:

1. What is the significance of population density on residential buying behaviour?
2. How does build quality influence the purchasing decision of homebuyers?
3. What role does connectivity play in post-pandemic housing decisions?

These questions aim to address how pandemic-driven concerns are reshaping homebuyer preferences.

6.1.3 Methodology Overview

A descriptive research design was adopted, using a structured questionnaire distributed among 212 Noida and Greater Noida respondents. This mixed-methods approach included quantitative data (survey responses) and theoretical analysis. The structured questionnaire collected data on demographics, residential preferences, COVID-19 influences, and evaluations of population density, build quality, and connectivity.

Statistical tools such as Chi-square tests and Cramér's V tests were used to examine the relationships between variables, particularly focusing on how socio-economic characteristics influence perceptions and behaviours in residential decision-making.

6.1.4 Demographic Characteristics of Respondents

Out of 212 respondents, 66% were male (140) and 34% were female (72). The largest age group was 26–30 years (28%), followed by 20–25 years (17%), with the least representation from those above 60 years (1%). Regarding occupation, the majority worked in the private sector (46.2%), followed by the self-employed (26.4%), government employees (14.2%), and students (13.2%).

In terms of property types, individual houses were preferred by 51.9% of respondents, apartments by 35.8%, and other types by 12.3%. Most properties were priced between ₹50 lakhs and ₹1 crore (50.9%). The most common information source was friends and family (34.9%), followed by the internet (28.3%).

6.1.5 Statistical Results and Interpretation

The statistical findings demonstrated strong and significant associations between key variables:

- Population Density: Chi-square = 15.82, $p = 0.003$; Cramér's $V = 0.193$. (Moderate association)
- Build Quality: Chi-square = 22.45, $p < 0.001$; Cramér's $V = 0.231$. (Moderate to strong association)
- Connectivity: Chi-square = 8.96, $p = 0.0425$; Cramér's $V = 0.153$. (Weak to moderate association)

These results confirm that the three core factors significantly influence homebuying behaviour, though their impact levels differ.

6.1.6 Post-COVID-19 Behavioural Shifts

A substantial number of respondents (73.6%) reported heightened attention to health and safety post-pandemic. Preferences shifted toward low-density areas, homes with high build quality, and properties offering strong road and digital connectivity. The pandemic emphasised the need for home office spaces, clean environments, and community infrastructure.

Furthermore, 42.5% of respondents hesitated to make immediate property decisions, indicating a shift towards cautious and well-informed behaviour.

6.1.7 Hypothesis Testing

The hypotheses developed based on research questions were tested and validated:

- H11: Population density significantly influences buying behaviour. (Accepted)
- H12: Build quality has a significant impact on purchasing decisions. (Accepted)

- H13: Connectivity significantly affects homebuyer preferences. (Accepted)

The findings support that these factors have become crucial in post-pandemic homebuying decisions.

6.2 Implications of the Study

The implications of this research extend across various stakeholder groups and dimensions of urban development. These implications are categorised into academic, practical, and policy-related domains:

Academic Implications: This study contributes to the body of knowledge on post-pandemic residential buying behaviour by focusing on a case-specific region, Noida and Greater Noida, while aligning findings with global patterns. The insights add empirical support to theories of urban migration, health-based consumer decision-making, and sustainable residential preferences. Future researchers can build upon these findings to explore the longitudinal impacts of COVID-19 on urban housing markets and behavioural economics in real estate.

Urban Planning and Infrastructure Development: One of the most direct implications is urban planning and infrastructure investment. The growing preference for lower-density living suggests that planners must reconsider zoning regulations and encourage the development of well-connected suburban areas. Developing satellite townships and integrating these areas into the urban fabric through enhanced public transportation and road networks will ensure their viability and attractiveness.

Real Estate Development: For real estate developers, the emphasis on build quality and connectivity is a clear signal to reassess construction priorities. Building durable, environmentally sustainable homes with modern amenities and ensuring proximity to transportation corridors can enhance marketability. Developers should also consider

incorporating digital infrastructure such as high-speed internet and smart home technology, particularly in response to the increasing normalisation of remote work.

Consumer Awareness and Marketing: This research highlights increased consumer discernment, particularly regarding health and safety considerations. Real estate marketing must shift from traditional sales approaches to value-based messaging that communicates structural reliability, energy efficiency, and health-supporting features of residential projects. Marketing campaigns should also emphasise how new housing projects cater to digital work-life needs and promote well-being.

Policy and Governance: Policymakers can utilise these findings to design inclusive housing policies and incentive schemes promoting quality construction and integrated townships. Regulatory frameworks should be enforced to ensure adherence to construction quality standards, and incentives may be provided for developers using sustainable materials or innovative technologies. Furthermore, regional governments can implement public investment strategies to develop underutilised regions with strong potential for residential expansion.

Sustainability and Climate Resilience: The increased consumer preference for quality construction indirectly supports climate resilience and sustainability goals. Policymakers and developers must align with these goals by adopting green building certifications, using energy-efficient materials, and promoting rainwater harvesting and waste management systems. These initiatives will appeal to the environmentally conscious buyer and contribute to broader ecological sustainability.

Social Equity and Inclusion: Urban growth must address affordability and inclusivity. Although this study focused mainly on mid-income buyers, connectivity, safety, and quality principles are universally relevant. Housing strategies must ensure these features are accessible across income segments. Mixed-income housing developments,

subsidised transport infrastructure, and equitable utility access are essential for inclusive growth.

In conclusion, this study offers valuable implications for various sectors invested in urban development and housing markets. By integrating consumer preferences for lower-density areas, improved build quality, and enhanced connectivity, stakeholders can create a post-pandemic housing environment that is not only more desirable but also more resilient and sustainable. Continued research and policy innovation will support this transformation and ensure that housing development aligns with evolving social, economic, and environmental needs.

6.3 Recommendations for Future Research

Since this study was conducted on a smaller group of respondents, there is scope for further analysis if the sample size is increased to a larger extent. Research can be extended to the Union of India and globally to cover a broader area and more respondents.

Some marketing agencies might be used to collect the data for research purposes. Some software or marketing tools can also cover more regions in terms of area and more respondents.

This study has explored crucial post-pandemic factors influencing residential buying behaviour, namely population density, build quality, and connectivity, within the context of Greater Noida and Noida. While the findings are valuable and contextually rich, the evolving nature of real estate trends and human behaviour necessitates continued investigation. The following recommendations are proposed for future research efforts to expand, validate, and refine the current study's conclusions:

Longitudinal Studies on Behavioural Trends: One key recommendation is to conduct longitudinal studies that track changes in residential buying behaviour over time. Since

this study is based on a cross-sectional dataset, it captures perceptions and preferences at a specific point post-COVID-19. However, long-term impacts of the pandemic, economic fluctuations, and technological adoption may shift consumer priorities. A longitudinal approach can reveal behavioural trends, emerging patterns, and stability or evolution in consumer preferences.

Comparative Regional Studies: The current research is limited to Noida and Greater Noida, urban hubs in northern India. Future studies should include comparisons across cities or regions with differing demographics, development levels, and infrastructural capacities. For example, comparing metropolitan centres (e.g., Delhi, Mumbai) with Tier-2 and Tier-3 cities (e.g., Lucknow, Indore) would provide a comprehensive national perspective on buyer behaviour and reveal location-specific variables.

Inclusion of Diverse Socioeconomic Segments: This study predominantly focuses on middle-income buyers. Future research should ensure balanced representation from various income strata, including lower-income and high-net-worth individuals. Exploring affordability, accessibility, and preference differences across economic segments can contribute to more inclusive urban planning and equitable housing policies.

Integration of Digital Behavioural Metrics: With the growing reliance on online platforms for property discovery and transactions, it is essential to examine digital engagement trends in greater detail. Future researchers could incorporate digital behavioural metrics such as click-through rates, virtual tour completion, and online interaction patterns with real estate platforms to understand how digital experiences influence actual buying decisions.

Impact of Psychological and Emotional Factors: This research focuses on tangible aspects like density, quality, and connectivity. Future work should investigate intangible and psychological factors influencing buying behaviour, including perceived security,

emotional attachment to locality, social environment, and mental well-being. These affective factors, often overlooked, are crucial in holistic consumer behaviour studies.

Policy Impact Assessment Studies: Another area for future research lies in assessing the impact of government policies, subsidies, and real estate regulations on consumer choices. How do Pradhan Mantri Awas Yojana (PMAY), RERA compliance, or stamp duty concessions influence buyer confidence and decision-making? Evaluating policy effectiveness through empirical consumer data will aid evidence-based policymaking.

Technological Disruption and Smart Housing Trends: Technology is reshaping housing expectations. Future studies should investigate how innovations like Internet of Things (IoT), smart home systems, and automation affect residential desirability. A comparative analysis of conventional versus tech-integrated housing could provide insights into technology's influence on real estate value and appeal.

Environmental Sustainability and Green Housing Preferences: Given increasing climate consciousness, evaluating how environmental sustainability affects residential preferences is necessary. Future research should focus on consumers' willingness to pay for green certifications, solar panels, water recycling systems, and eco-friendly construction materials. This will support the green housing and guide environmentally responsible real estate development.

Gender-Based and Intergenerational Studies: Another promising research avenue explores gender-based preferences and intergenerational differences in buying behaviour. Millennials, Gen Z, and Baby Boomers may have contrasting views on location, design, and home utility. Similarly, gender roles and participation in decision-making processes can be better understood through focused studies.

Cross-National Comparative Analysis: Expanding this study to include data from other countries can help contextualise Indian homebuyer behaviour within a global framework.

Understanding how buyers in the U.S., U.K., Southeast Asia, or the Middle East prioritise factors like density, quality, and connectivity will offer global insights and identify cultural or economic patterns.

Experimental and Simulation-Based Research: Future researchers could adopt experimental designs to simulate real estate purchasing environments and observe behaviour. For instance, virtual reality simulations of apartment tours could be used to study buyer reactions, preferences, and decision-making processes in real-time.

Post-Occupancy Evaluation Studies: Finally, research should extend beyond the point of purchase to include post-occupancy satisfaction studies. Do buyers remain satisfied with their choices over time? Which features yield the highest long-term satisfaction and perceived value? Understanding buyer satisfaction post-purchase can enhance predictive behavioural models and feedback loops for developers.

In conclusion, while this study contributes significantly to understanding post-COVID buying behaviour, housing trends are subject to economic, social, and technological evolution. The above recommendations aim to broaden the empirical knowledge base, enrich the academic discourse, and provide actionable stakeholder insights. Multi-disciplinary, inclusive, and adaptive research approaches are essential to navigate the complexities of the ever-changing real estate market.

6.4 Conclusion

We conclude that many factors affect the buying decision of an investor in residential property. There are many priorities and wishes when a buyer buys a property. Still, based on the priority of the buyer's demands, we found from our study that the location of the property in terms of connectivity and builder reputation is the main concerns

that affect a buyer's decision. Out of these, connectivity to an area is the first demand of a buyer to buy the property.

This study investigated the key factors influencing residential apartment buying behaviour post-COVID-19, explicitly focusing on Greater Noida and Noida. Anchored around three primary dimensions, population density, build quality, and connectivity, the study has offered valuable insights into how the global pandemic reshaped consumer priorities and expectations in the residential real estate market.

The study revealed a notable shift in buyer preferences, with respondents expressing a balanced yet slightly greater inclination toward lower-density housing environments. This underscores the heightened demand for privacy, open space, and reduced health risks that became more pronounced due to prolonged lockdown periods and heightened awareness around physical well-being. The preference for less crowded environments reflects immediate health concerns and signifies a long-term behavioural change in urban living, likely to impact future development strategies and zoning policies.

Build quality emerged as another critical factor shaping buying decisions. The study found that most respondents considered superior construction quality essential in their residential choices. This shift reflects a more discerning consumer mindset, where homebuyers no longer base decisions solely on location or price but increasingly consider their investments' durability, safety, and long-term maintenance benefits. The pandemic further highlighted the need for quality housing to serve as a comfortable, safe, and multi-functional space supporting personal and professional life. These insights have implications for developers, who must now exceed traditional standards and integrate quality-focused practices to meet new expectations.

Physical and digital connectivity was a third major factor influencing post-COVID buying behaviour. With remote work and hybrid working arrangements becoming the

norm, homebuyers now value seamless access to transportation hubs, healthcare facilities, schools, and high-speed internet infrastructure more than ever. The findings affirm that well-connected localities continue to command greater interest and higher value in the property market. Additionally, this reinforces the importance of local governments and planners' investment in public infrastructure, urban mobility systems, and digital connectivity.

Theoretically, this research enriches existing literature by integrating post-pandemic considerations into the framework of urban residential behaviour. It contributes to behavioural theories related to decision-making under uncertainty, particularly in real estate contexts, and lays the groundwork for further investigation into consumer adaptation following major societal disruptions.

Practically, the research offers actionable intelligence for key stakeholders. Urban planners can use the findings to promote sustainable, well-spaced developments with enhanced infrastructure. Real estate developers are encouraged to focus on quality, durability, and smart-home features to meet modern consumer needs. Policymakers can design more informed and targeted housing policies, including incentives for sustainable construction and connectivity improvements, ensuring long-term resilience and inclusivity in urban growth.

This study reflects a paradigm shift in housing preferences after COVID-19, representing a collective recalibration of what constitutes a desirable and valuable residential space. Homes are no longer seen as mere living quarters but as critical anchors of safety, work, family life, and well-being. The new normal in housing is defined by quality, connectivity, and thoughtful spatial planning characteristics that will likely continue to shape urban real estate.

While this research has valuable insights, it allows broader, more nuanced exploration. Future research can expand on regional and international comparisons, include diverse socioeconomic demographics, and explore the long-term psychological effects of pandemic-induced lifestyle changes on housing choices. These extensions will help further validate, challenge, or refine the conclusions drawn here.

To conclude, this study affirms that the COVID-19 pandemic has altered how we live and choose to live. It highlights a profound shift in housing priorities towards quality, safety, privacy, and connectivity. It sets the foundation for future innovations and reforms in real estate development, planning, and policy-making. By understanding and adapting to these evolving consumer needs, stakeholders can foster more livable, resilient, and inclusive cities in the post-pandemic world.

APPENDIX A
SURVEY COVER LETTER

Dear Participant,

My name is Dayal Sharan, and I am a student at the Swiss School of Business and Management in Geneva, Switzerland. For my dissertation, I am investigating the key determinants of residential apartment buying behaviour in the Noida post-COVID-19.

Since you plan to purchase a residential apartment in the Noida, participating in the research would be very helpful. Therefore, I am inviting you to participate.

I appreciate your participation in the survey. This will take approximately 5 minutes to complete. No compensation is offered for answering the survey, and there is no risk. Since keeping confidentiality is essential, please do not mention your name. The dissertation will be submitted to my Swiss School of Business Management professor. If you decide to answer the survey, please answer truthfully and answer all the questions completely. Your participation interest is voluntary, and you may withdraw at any time. If you need any clarification, please feel free to contact me.

Yours Sincerely

Dayal Sharan

dayal@ssbm.ch

APPENDIX B

INFORMED CONSENT

I understand that I have been asked to participate in this survey to collect data for the dissertation written by Mr. Dayal Sharan, a student at the Swiss School of Business and Management, Geneva, Switzerland. This research study aims to gather information to investigate key determinants of residential apartment buying behaviour in the Noida post-COVID-19. I have read and understood the consent form and agree to participate in this study.

APPENDIX C
QUESTIONNAIRE

Section A: Demographic Information

1. What is your gender?
 - ☐ Male
 - ☐ Female
2. What is your age?
 - ☐ Please specify
3. What is your occupation?
 - ☐ Government employee
 - ☐ Private
 - ☐ Self-employed
 - ☐ Student
4. What is your average monthly income?
 - ☐ Less than ₹30,000
 - ☐ ₹30,000 – ₹50,000
 - ☐ ₹50,001 – ₹80,000
 - ☐ Above ₹80,000

Section B: Residential Preference and Purchase Behaviour

5. What type of property have you purchased or are planning to purchase?
 - ☐ Apartment
 - ☐ Individual house
 - ☐ Other
6. What is the price range of the property?
 - ☐ Less than ₹50 Lakhs
 - ☐ ₹50 Lakhs – ₹1 Crore
 - ☐ More than ₹1 Crore
7. What is your primary source of information for property search?
 - ☐ Friends/Family
 - ☐ Internet
 - ☐ Advertisement
 - ☐ Other
8. If you find the right property, would you immediately decide to buy?
 - ☐ Yes
 - ☐ No
 - ☐ Maybe

Section C: Significance of Population Density

9. How important is population density in your decision to buy property?
- ☐ Very important
 - ☐ Important
 - ☐ Neutral
 - ☐ Not important
10. What kind of locality do you prefer?
- ☐ High population density (city centre, busy locality)
 - ☐ Medium density
 - ☐ Low population density (quiet, suburban areas)
11. Do you believe living in a low-density area improves your quality of life post-COVID-19?
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Neutral
 - ☐ Disagree
 - ☐ Strongly disagree

Section D: Significance of Build Quality

12. How important is the build quality in your property selection?
- ☐ Very important
 - ☐ Important
 - ☐ Neutral
 - ☐ Not important

13. How do you assess the build quality before purchase? (You may choose more than one)

- ☐ Builder reputation
- ☐ used
- ☐ Construction quality certifications
- ☐ Visual inspection
- ☐ Online reviews

14. Would you be willing to pay more for a property with higher build quality?

- ☐ Yes Materials
- ☐ No
- ☐ Maybe

Section E: Significance of Connectivity

15. Is connectivity a deciding factor in your purchase?

- ☐ Yes
- ☐ No
- ☐ Maybe

16. Which of the following do you consider when assessing connectivity?

- ☐ Proximity to public transport
- ☐ Road network access
- ☐ Distance from workplace
- ☐ Internet/telecom infrastructure
- ☐ All of the above

17. How would you rate the connectivity in your chosen area?

☐ Excellent

☐ Good

☐ Average

☐ Poor

Section F: Post-COVID Behavioural Impact

18. Has COVID-19 influenced your property buying decision?

☐ Yes

☐ No

19. What post-COVID changes have influenced your preference? (Tick all that apply.)

☐ Need for a home office

☐ Preference for open or green spaces

☐ Health and hygiene concerns

☐ Shift to suburban or less crowded areas

☐ Digital infrastructure importance

20. Do you believe safety and health concerns will continue to impact residential choices in the future?

☐ Strongly agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly disagree

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ABBREVIATIONS

Abbreviation	Expansion
AR	Augmented Reality
BHK	Bedroom, Hall, And Kitchens
BI	Behavioural Intention
CBD	Central Business Districts
COVID-19	Coronavirus Disease 2019
EMI	Equated Monthly Instalment
GDP	Gross Domestic Product
GRIHA	Green Rating for Integrated Habitat Assessment
GST	Goods and Services Tax
IBEF	India Brand Equity Foundation
IGBC	Indian Green Building Council
IoT	Internet of Things
LEED	Leadership in Energy and Environmental Design
NCR	National Capital Region
NOC	No Objection Certificate
NRI	Non-Resident Indian
PCB	Perceived Behavioural Control
PMAY	Pradhan Mantri Awas Yojana
PLC	Preferred Location Charges
p-value	Probability Value (Significance Level)
RERA	Real Estate Regulatory Authority
RBI	Reserve Bank Of India
SN	Subjective Norms

SPSS	Statistical Package For The Social Sciences
SWAMIH	Special Window for Affordable and Mid-Income Housing
TAM	Technology Acceptance Model
TBP	Theory Of Planned Behaviour
TRA	Theory Of Reasoned Action
VR	Virtual Reality
WHO	World Health Organisation
WFH	Work From Home
YEIDA	Yamuna Expressway Industrial Development Authority