

Analysis of Supply System of Housing in India

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Abstract

Housing is a basic need of human being. The importance of housing was universally accepted from the dawn of history. Even the Neolithic man (10,000 and 2000 B.C.) used to build habitation like pit dwellings, lake dwellings and beehive huts which were durable. With the advancement of civilization and development of knowledge, people became more particular about sanitation, environment, privacy, location of house, etc. Man becomes more conscious of better facilities, which make his/her life easy and very comfortable. A house is the place where one can take rest, sleep and cook food. It is a basic need but not everyone especially the poor cannot be able to get a house with minimum or standard facilities. Earlier people have to build their own house himself, but after urbanization, house now a product where one can buy it like a simple commodity. There so many reasons behind not getting a house to live, but the main cause is the gap of demand and supply of housing. The aim of this paper is to describe the supply of housing, shortage of housing and demand supply relation of housing in India.

Keywords: Supply and demand, Supply System of Housing

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INTRODUCTION

Housing refers to many issues surrounding the way in which human fundamental needs for shelter and associate needs for privacy and security are met. Housing is a basic need but it is not as easy to get a job like to get a pen or cloth. In housing many other issues are incorporated. The development of infrastructure, finance condition, planning approach and national policy of housing can play important role on housing supply. There is a popular feeling that the prices of housing is all time increasing and people interest to invest on this sector just for business.

The demand of housing increasing day by day due to population growth, urbanization and increasing problem of housing, reducing privacy and overcrowding in small house, steady growth of slums and unplanned settlements which create severe

effect on civic services in urban areas. The condition of housing day by day worse because of inadequacy of water supply, improper drainage, congested transportation and lack of amenities (park, playground) .

On the other hand, nowadays supply of housing is a combined effort of all public, private, cooperative societies, individual and joint venture between private and public etc. Here, it is important that after change of Government policy on privatization in 1990, private developer are producing house to sale to the consumer. Still there is a gap in demand of housing and supply of housing (both public and private sector) as per demand supply law the price in increasing. For that the lower income group and poor people cannot able to buy house where the demand house is more.

Demand and Supply

Supply and Demand is the important factor of any market. There is a framework in supply and demand which is used to clarify and calculate the equilibrium price and quantity of any goods. In supply and demand study there is both supply and demand curve are used to identify them in market. With the help of a point on the supply curve, one can be know the quantity of the products that suppliers are willing to sell for a given price. On other hand in demand curve, a point shows the quantity of goods that is demanded in market and consumers are willing to buy for a given price. If in one graph both the supply curve and demand curve of particular product is set, then the intersection point shows the equilibrium condition of the market for this particular product^[1,2].

In competitive market the supply-and-demand framework is applied where a competitive is defined under the following two conditions:

1. There are many buyers and many sellers, all of whom are small relative to the market.
2. The goods that sellers produce are perfect substitutes.

Buyers and sellers take the price as given in a competitive market and they consider their actions have no effect on the price in the market and also assume that the price depends on the demand and supply laws.

Demand Law

According to the law, as the price of housing decrease, the quantity demand increases.

This is an example of the law of demand, which derives from two effects:

1. As the price of good or service decreases, more individuals choose to buy a positive quantity rather than zero.

2. As the price of a good or a service decreases, individuals choose to buy a larger quantity.

In the case of the market, the first of these is more important. Most people own either zero houses or one house. As houses become cheaper, people feel that they can afford a house hence, the quantity demanded increases. And a few might decide to buy an additional house, but they would presumably be in the rich minority. For other goods, such as chocolate bars or shoe shines, the second effect is more important: as price decreases, people increase the quantity that they buy.

Shift of Demand

By assuming everything constant, the demand curve is drawn with respect to price and on this situation if price increase the demand decreases. For housing, the level of income, the prices of other goods and services in the economy, and the tastes of households is fixed. If the other factors change, then the market demand curve will shift- that is, the quantity demanded will change at each price. The demand of house shifted is mainly due to various factors, including the following:

1. A decrease in the income of households in the market
2. Concerns about the future health of the economy.
3. A reduction in the price of a typical apartment rental.
4. An increase in the interest rates for mortgages.
5. A change in social tastes so that buying a house is no longer viewed as a status symbol.

Supply

Supply curve is the opposite of demand curve in the market. If all other factors are constant and then the price increase, supply also increases where the supply curve slopes upward. But with the relation of demand there are two effects-

1. As price increases, more firms decide to enter the market-that is, these firms produce some positive quantity rather than zero.
2. As price increases, firms increase the quantity that they wish to produce.

Shifts in Supply

By assuming all factors that have impact on supply are fixed, a supply curve can be drawn on the basis of price, where the prices in varies^[1,2]. The market supply curve is shifted due to a change in any other factor. In housing supply, the supply of house shifted is due to various factors, including the following:

1. Increase in the costs of production, such as wages, the cost of borrowing,
2. Bad weather: that delays or damages construction in process.
3. Change in the regulations that make it harder to build.

Market Equilibrium

The point where supply and demand meets is the equilibrium in the market. At this point, there is a perfect match between the amount that buyers want to buy and the

amount that sellers want to sell. The following are the basic factors and determinants of the price of housing.

1. The primary factor that influences the demand for housing is the price of housing. By the law of demand, as price decreases, the quantity of housing demanded increases. The demand for housing also depends on the wealth of households, i.e., their current income, and interest rates.
2. The primary factor influencing supply of housing is also the price of housing. As price increases, the quantity supplied also increases. The supply of housing is shifted by changes in the price of inputs and changes in technology.
3. The quantity and price of housing traded is determined by the equilibrium of the housing market.

In a competitive market, equilibrium price and quantity are determined by the intersection of the supply and demand curves.

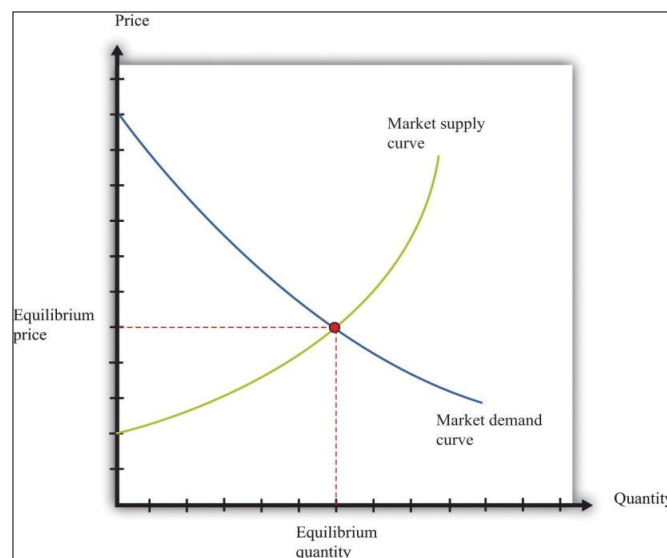


Fig. 1: Market Equilibrium (Source E- book: Theory-and-applications-of-economics).

Supply of Housing Role in Economy

Housing is of fundamental importance to the economy and society. Supply of

housing directly related to construction sector which play important role in Gross domestic product (GDP) of a country. On

the other hand, according to the Economic Survey of India, 2012–13, the real estate sector contributed 5.9% of the India's total GDP in 2011–12, registering a growth of 7.2% from the previous year. Housing construction creates job opportunity which also play important role on economy. The following table shows the contribution of housing supply in GDP and employment in India. In India, housing and construction sector is the 2nd largest employment generator after agriculture out of which a 20–30% employment is shared by the real estate sector alone. In the last decade from 1999–2000 to 2009–2010 the employment levels in the construction sector increased from 17.54 to 52.16 million as per the estimates of Planning Commission. In the

real estate, there were around 7.6 million people employed and the number is expected to grow more than twice up to 17 million in 2015.

Housing plays a dual role as: a human need, through its functional use as place to live and the influence of its attributes on people as well being; and an asset, given that for many it is a long term investment which represents a large proportion of their wealth. Investment in house building also creates jobs for construction workers and those in related supply chains, which has knock-on effects on aggregate demand^[3].

Table 1: Housing Contribution on GDP, India.

Percentage share of Housing, Real Estate Services and Construction sectors in Gross Domestic Product (GDP)							
(at 1993-94 prices, Share in %-age)							
Year	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000
Housing	5.6	5.3	5.1	4.9	4.8	4.6	4.5
Real Estate Services	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Construction	5.2	5.1	5.1	4.8	5	5	5.1
Total	10.8	10.5	10.2	9.7	9.9	9.7	9.6
Source : National Accounts Statistics 2001, Tenth Five-Year Plan Document							

(Source: National Accounts Statistics 2001, 10th Five Year Plan Documents).

Table 2: Employment in Housing Contribution, India.

Sector	Formal employment	Informal Employment	% of Total
Residential Construction	0.61	7.31	6.86
Real Estate Services	0.12	0.14	0.14
Ownership of Dwelling and Business Services	4.76	0.71	0.98

(Source: NSSO 66th Round survey, 2009–10).

Types of Hosing Supply

There are mainly two types of supply of housing-plot type and apartments type

housing. In plot type housing, the owner will get the ownership of land according to plot individually where the owner share of land ownership in apartment housing system.

In plot type there are two type of supply of housing-one is plot with house in built form and plot without house. In first category, the supplier or developer provide the plot with house in built form with all services (road, drainage, electricity, park school etc.) and amenities. Here, the sanitation, water supply and electricity of the building are provided and it is sold to consumer in ready format.

In second type plot system, the developer or housing agencies provide the developed plot without house building. In this system the whole land development is done by the developer including development of road, infrastructure and services and amenities as per rules and requirements but the building has to be built by the consumer with his/her own cost and design.

In apartment type of housing, the house is provided in multistoried building and here multi ownership is in one piece of land. In this type of housing services and amenities are provided by the builder or developer. The maintenance and further development will be done by the co-operative where the all owner are the members of that cooperative.

Characteristics of Housing Supply

It is widely accepted that new supply levels are insufficient to meet arising housing needs; the previous government recognized the failure of housing supply to keep up with rising demand in all over the world.

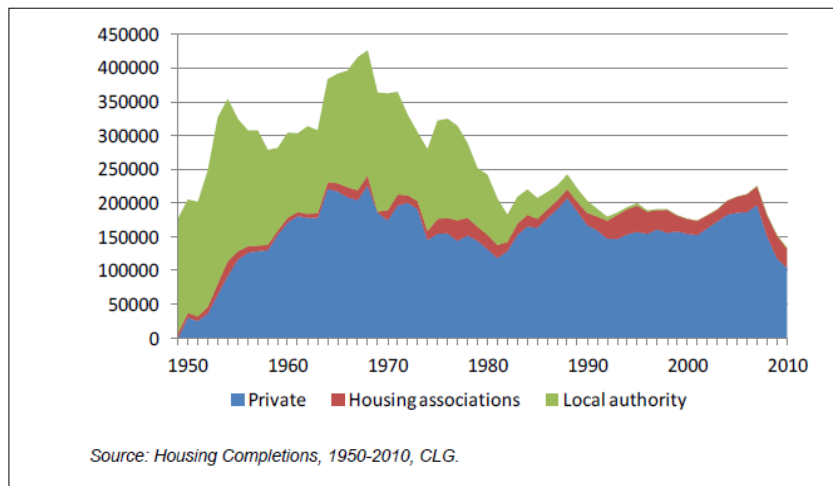
The housing market is subject to geographical differences in demand and supply with regional and urban/rural divides and unique local area effects. It is also subject to segmented sub-markets for certain needs-by type of consumer lifestyle and life stage-as well as including both a rental and purchase market^[4].

Housing suppliers consider target locations with the greatest likely future demand and household types in their plans. On contrary, Government seeks to ensure the appropriate mix of market and affordable housing.

These needs state that the supply of housing is considerably more complex than the number of units of housing supply. Moreover, if the supply of market housing meets the effective levels of demand, rather than housing need, we would not necessarily expect the market to meet the full extent of housing need. This suggests that, even if the market delivers an economically efficient level of housing, there would still be a role for government to provide affordable housing.

Now after privatization, developer which is mainly private company and their main aim is profit, also play important role in housing supply. Government and local authorities also involve in these sector. The following table shows the role of different agencies in housing supply in UK in different year.

In India, the main policy adopted by the Government of India to achieve the objectives of housing sector is to make provision for shelter needs of all and to take direct responsibility for the homeless and economically weaker sections of the society.

Table 3: Housing Completion, UK 1950–2010.

It also aims at providing security of tenure to household creating flexible institutional finance system for housing system and by motivating a tendency of saving and investment habit in all the sections of the society especially in rural areas. It further aims to provide a good environment of housing investment for rental purpose from the real estate agents, property developers and other investment people, especially in metro cities and other state capital towns. In addition to this, it also encourages research and development activities in housing sector mainly in low cost building by using locally available

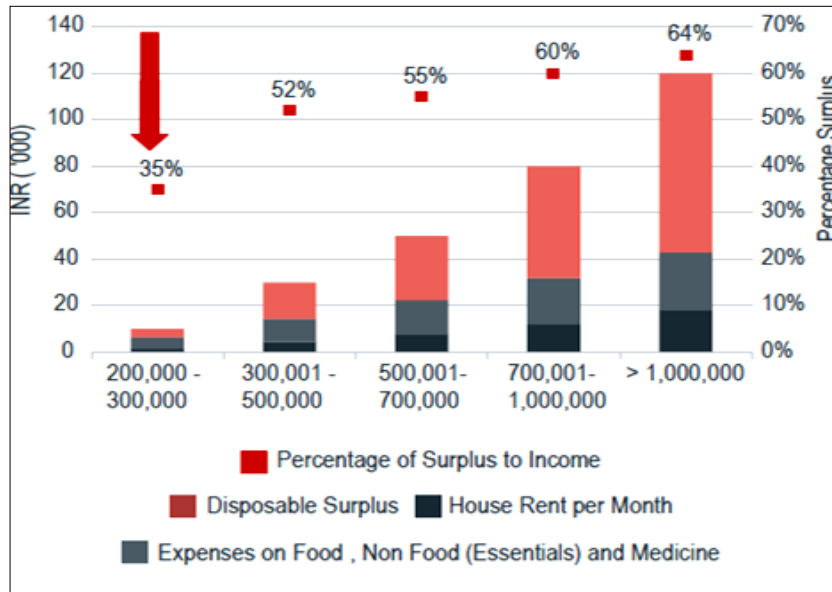
resources for house construction and inclusion of most modern equipment for better finishing and attaining highest durability of houses. The policy envisages the role of co-operatives, financial institutions, multi-national companies, private and public institutions etc.

The following table shows the housing shortage of India and where the most shortage in EWS and LIG sector. For this, government takes many programs to supply house on those sector like with HUDCO, NHB, JNNURM and RAY.

Table 4: Housing Shortage in India.

	Monthly Per Capita Expenditure	Estimated Number of Households (2007)*	Housing Shortage in million (2007)	Percentage Shortage
EWS	0 - 3,300	21.81	21.78	99.9%
LIG	3,301 - 7,300	27.57	2.89	10.5%
MIG	7,301 - 14,500	16.92	0.04	0.2%
HIG	14,501 and above			
Total Shortage		66.30	24.71	37.3%

(Source: Report on Technical group (11th Five Year Plan, 2007–12) on Estimating Housing Shortage in India)

Table 5: Table of Surplus of Different Income Group in India.

(Source: Jones Lang Lasalle Research^[5])

Different housing supply for different income group in India:

Housing for Higher Income Group (HIG) and Medium Income Group (MIG)

The shortage of housing in HIG and MIG is not prominent and these two groups specially the HIG can be able to buy a house according to their income. The bank also provide available loan for housing for HIG and MIG. The loan depends on the income level, age, location and others conditions.

Housing for Lower Income Group (LIG)

It is difficult for LIG group to buy house with their low income which is shown in the above Jones Lang LaSalle research table. For LIG, affordable housing scheme is necessary where government will provide the house in low price or the developer produce the house minimizing land cost and construction cost. The another important issue is that LIG has less accessibility to Bank finance and for that they cannot able to get loan for housing from Bank. To solve this problem, government has established Housing and Urban Development Company (HUDCO)

for providing loan for LIG in different term and condition with low interest.

Housing for Economically Weak Section

This sector mainly informal sector of the country and maximum people live in informal settlements. The living condition is worst and sometime in unhygienic which is called slum. Government of India tries to provide house to this sector in different scheme like JNNURM and RAY where rehabilitation, relocation and cast in situ development program included.

DIFFERENT AGENCIES ON HOUSING SUPPLY IN INDIA

Due to development of housing number of agencies involved in both public as well as private, joint venture, group housing societies and number of other institutions are in operation. From the governmental side, central and the state government for example developmental authorities, state and central owned public undertakings; housing boards, city improvement trust etc. are also involved. In addition to above mentioned, housing and urban development corporation, called HUDCO has been continuously involved in the

preparation of various policies for the betterment of housing especially for poor sections of the society. Life Insurance Corporation and other agencies in the insurance sector are also contributing their might by promoting loans and other advances to the employees in the private as well as public sector on large scale. In the private sector, the concession of massive housing is being encouraged by provision of adequate finance.

Central Government Agencies:

The Ministry of Urban Development (MoUD) makes policies for urban development which includes the housing activities. Other than launching projects, that target particular section of the society, it is also plays a role in laying down the policy perspectives, building data systems for the whole country and overviewing the state level programs. Through the Public Works Department (PWD), the central government undertakes various housing schemes for its employees in all the union territories.

State Government Agencies

In India the provision of public sector housing is the responsibility of the state Government. State government has to play important role in housing. Local development authorities work on this sector under state government. Example - Delhi government has taken of housing projects especially for the economically weaker sections through the Delhi State Industrial and Infrastructure Development Corporation (DSIIDC) and the slum departments of MCD & DDA^[6].

Primary Cooperative agencies

Cooperatives receive preferential treatment in the allotment of land from the city development authority. A cooperative can be formed by registering at the office of the registrar of cooperative societies as per

cooperative societies Act; which differ city to city. There are basically two types of cooperative housing societies. First is the Individual ownership type, where the individual member becomes the owner of the plot once the loan is repaid. Second is the Co ownership or tenant co-partnership society, where members reside as tenants of their society and they cannot legally sell their plot individually.

Private developers and Builders

Private developers are involved to provide house to the consumer in India. Here, it is a business where the profit is main aim. Government controls them by rules and regulations. The main consumer is MIG and HIG who get the financial benefit from the Bank by housing loan. Government tries to give housing loan to them in low interest to mitigate the housing shortage in India. Here, Real Estate Company builds house for their benefit at the same time people of country is benefited by getting a house.

Individual or Households

The individuals or households are themselves responsible for arranging labour, finance and management. However, only the rich build houses using engineers and contractors. Here, the land may be provided by the government and they buy plot/land from developer and then they build house in the plot individually.

The poor usually resort to informal methods of shelter acquisition wherein the houses built by them are generally unhygienic and substandard. Government or public authorities try to help all agencies in different way to build house. The below table show the facilitated houses that by Delhi Development Authority but constricted by different agencies in 2008.

Table 6: Data of Dwelling Units.

TYPES OF DWELLING UNITS	NUMBER
Dwelling units constructed by DDA	3.05 lacs
Dwelling units on DDA plots by private individuals	2.50 lacs
Dwelling units in JJ resettlement colonies	2.40 lacs
Dwelling units constructed on plots allotted to co-operative group housing societies	2.00 lacs
Dwelling units through Rohini plotted scheme	0.85 lacs
Total	10.80 lacs

(Source: Kritika Narula, 2009^[6])

The Present Housing Delivery System

Like other developing countries in India there are three types of housing development, formal, informal and organic developing countries^[7]. Most of the formal housing efforts, especially since independence, have catered only to the middle classes and above, so that the only recourse left for lower income groups has been to live in the “hutments” commonly referred to as “slum” housing. The lower costs of housing in these settlements match their needs to minimize their housing expenditure.

Formal developments refer to those that have the legal sanction of the planning agency prior to the development and have been developed within the framework of government rules, regulations and controls having minimum required standard of environmental quality and infrastructure.

On the other hand, informal developments are illegal and are composed of unauthorized colonies and squatter settlements. These have mostly emerged because of non-availability or un-affordability of housing in the legal housing market. The common characteristics of the informal sector are insecurity of tenure and low standard of infrastructure and facilities^[8].

Formal Housing Delivery Systems

Formal housing delivery system is broken down into its various stages: planning;

land assembly; implementation; and final disposal of the finished house. Planning consists of two parts, plan preparation and plan approval. Land assembly consists of three components: land acquisition; payment of compensation to landowners; and finance to agencies. The implementation stage consists of two steps, land development and construction of housing. Land development is the responsibility of government where responsibility for housing construction is divided among various sectors- public, private and cooperative. The disposal of housing, tenure of property and the system of finance available to individuals is a formal system for allocation and disposal of housing and land for shelter overseen by the public sector and government approved cooperatives.

Housing disposal is mainly supervised by government for all income groups while some are steered by cooperative group housing societies. The system for providing finance to individuals is poorly developed. The only agencies that provide loans to individuals are the Housing Development Finance Corporation (HDFC) and, to a smaller extent, the National Housing Bank (NHB)^[8].

Informal Housing Delivery Systems

As the informal sector has become quantitatively significant, policy makers have begun to realize that simply understanding this sector is far from an

adequate management response. In order to develop a policy to provide housing to all, it is requisite to understand the mechanisms of informal housing delivery. It is common on the part of urban planners and policy makers to regard the entire slum formation or informal housing sector as being homogeneous^[8].

CONCLUSION

As housing is a basic need of human beings, Government of India changes the housing policy time to time to meet the requirements. The new Housing and Habitat Policy unveiled in 1998 was aimed at assuring “shelter for all” and a better quality of life to all citizens by using the unused potential in public, private and household sectors.

The long-term goal of the National housing Habitat Policy (NHHP) was to eliminate housing shortage, to improve the housing conditions of the inadequately housed and to provide a minimum level of basic services and amenities to all. It identified that the magnitude of the housing stock needs the involvement of various agencies including Government at different levels, the Cooperative Sector, the community and the private sector.

The policy envisaged a major shift in Government’s role to act more as a facilitator than as a provider. The Policy provided for review and modification in the light of changing scenario in the housing sector as and when needed. On the other hand the supply system of housing is not same for all people in India. It is differ mainly according to their income and affordability. For that there are different scheme and system in housing supply and government tries to facilitate all the system for better housing.

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