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Master Planned Mixed-Use: Lessons from Delhi

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ABSTRACT

Traditional Indian cities were mix-use developments, with finely juxtaposed street-based living, production and trading. In contrast, cities in the West formulated mix-use policies in 1960s to deliver vibrant and compact urban areas.

In India, the modern planning movement completely ignored mixed-use and city master-plans propagated strict land-use zoning regulations. Nevertheless, mixed-use activities proliferated even in strict land-use zones, as people and markets responded to the absence/separation of vital and interdependent uses. Only recently have the master-plans of Delhi, Bangalore, Mumbai etc., introduced provisions for mixed-use.

This paper discusses the impact of mixed-use in Delhi, where despite its well-intentioned insertion, it has become a threat as a 'planned' element. It has caused externalities such as privatization of erstwhile public space, unsafe pedestrian environment, degenerated residential quality, and infrastructure deficiencies. The paper examines these impacts and attempts to understand mixed-use as a design tool in the Indian context to inform relevant policies.



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Introduction

Mixed use emerged out of some of the ill-effects of the early 20th century planning frameworks of strict zoning and segregated land use such as lack of vitality of urban environment and urban sprawl etc. Since its

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emergence in 1960s in North America and Europe, the concept of mixed use has gained popularity due to its environmental, social and economic benefits and all the major urban planning concepts such as New Urbanism, Sustainable Urban Development, Compact City and Smart Urbanism have used it as a key principle. In India, historically, cities always had mixed use. However, modern land use planning changed that. In past 10 or 15 years, metropolitan cities of India have attempted to re-adopt this concept in different forms by either changing their land use regulations or by introducing new policies such as Transit-oriented Development.

The present paper reviews the introduction of mixed-use policy in the case of Delhi and its impact and whether the desired merits could be achieved or not. The study is limited to the metropolitan core of Delhi only and is undertaken with the help of visual surveys, related local planning documents, media material and interaction with planning officials. Overall, it is seen that the metropolitan core of

Delhi has undergone massive transformation due to mixed-use property development, as promised by the master plan, but the desired benefits have not been achieved in the implementation of the policy.

The paper first presents a historical and theoretical review of the concept of mixed use and its potential benefits. A summary of key policy provisions is discussed subsequently, followed by empirical observations on the impact of the mixed use. The paper concludes with specific factors which might have led to an unintended impact of the policy in

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the case of Delhi and puts forward certain recommendations important to realization of the potential of the policy.

Mixed Use- a Traditional or Contemporary Concept

In last three to four decades, mixed use has emerged as an important planning concept in American and European cities, essentially as a reaction to the non-vitality of mono-functional and segregated land uses of the early 20th century town planning and also as one of the significant tools in regeneration of their inner-city/ town centres that were

facing urban decay (Grant, 2002). Looking back at the history of urbanization, the mixed use finds its application in the structuring of all the towns especially during medieval period and pre-industrial settlement pattern (Wardner, 2014). In fact, it has been argued as the most 'ubiquitous characteristics of cities and urban areas' throughout the world urban history (Herndon, 2011) till the Industrial Revolution. Some of the common traits of form of settlement in medieval period exhibited the same concept of tight and close intermingling of functions of the built environment including places to live, socialize and produce and

Often mixed use implies a combination or mixing of commercial, residential and industrial land uses as opposed to the segregation of residential land uses from non-residential land uses (Aurand, 2010). Thus, having the residential use in the area becomes the defining parameter in the definition (Coupland, 1997)

distribute goods and services, essentially due to walking as a primary mean of transportation, high density and clear distinction between urban and rural. Herndon (2011) notes that "fundamental shift in this pattern of settlement planning was brought by five factors, namely industrialization, urbanization, advances in transportation, zoning ordinances and rise of affluent middle class."

Thus, the town planning framework based on single-use function and strict zoning ordinances of 19th century and early 20th century led to demise of the mixed use (Grant, 2002; Hirt, 2007). The re-emergence of the mixed use in the first place is attributed to the ill-effects of

these planning frameworks especially related to the harm done to the urban vitality and urban sprawl (Hirt, 2007). One of the first literature on this concept was Jane Jacob's 1964 book *The Death and Life of Great American Cities* advocating fine-grain mixing of diverse uses to create vibrant and successful neighbourhoods in 1960s (Grant, 2002; Hirt, 2007). In subsequent decades, till the end of 20th century, mixed use assumed centre-stage in many important planning paradigms such as New Urbanism, Smart Growth, Compact City and Sustainable Development (Hirt, 2007; Wardner, 2014; Coupland, 1997) and is also linked to environmental quality, equity and efficiency of post-industrial city (Grant, 2002). Traditional and re-emerging mixed-use concepts of 1960s differ in few ways, one important difference being the placement of the latter within the context of zoning ordinances, thus wherein in traditional context, the entire city was a mixed-use settlement, modern mixed-use districts are merely single tiles within a mosaic of mostly single use zoning classifications (Herndon, 2011).

Definitions and Benefits

Mixed use has been interpreted in wide variety of ways in post 1960s and some of the important ones are briefly discussed here to form an appropriate context for the case of Delhi. In a very simplistic way, mixing different land uses in the same geographical area is mixed use, though the nature of mix and scale of geographical area are crucial. Often mixed use implies a combination or mixing of commercial, residential and industrial land uses as opposed to the segregation of residential land uses from non-residential land uses (Aurand, 2010). Thus, having the residential use in the area becomes the

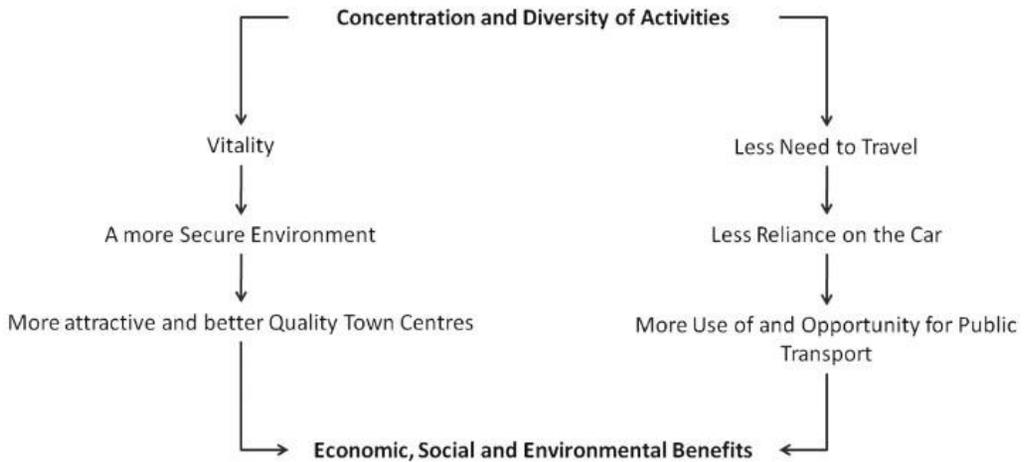


Figure 1: Benefits of Mixed-use Development (based on Coupland, 1997)

defining parameter in the definition (Coupland, 1997). Another definition is linked to physical and functional integration and the combined revenue generation potential of different uses in the mix as defined by Urban Land Institute (ULI, 1987). On a conceptual level, three aspects “increased intensity of land uses, increased diversity of uses, and integrating segregated uses” become defining features of a mixed-use development (Grant, 2002). Depending on the scale of the mix, four types of mixed use are defined by Rowley (1996)- within buildings, within building blocks, within the street or other public spaces and within neighborhoods- moving downward on the scale of fine-grained mix. Smart growth paradigm defines it as diversity of compatible land uses that serve the needs of the local population and these uses are easily accessible to residents, preferably by walking or public transit (Aurand, 2010). Grant (2002) shows the difference in definition of the term within the two streams of New Urbanism- traditional neighbourhood design (TND) and transit-oriented development (TOD)

and proposed that former is used in green-field cases and latter in in-fill and redevelopment.

Though centred on re-introducing vitality in urban areas and improving town and city centres, mixed use has encompassed many strands of sustainable development as well as theory of good urban form with objectives of economic vitality, social equity and environmental quality (Grant, 2002). Wide-range benefits and outcomes of mixed use development, as adopted from Coupland (1997) are illustrated in **Figure 1**.

Expected benefits of mixed use development are as follows.

1. Attractive pedestrian environments, enhanced social interaction and restoration of richer, more vibrant and diverse urban life (Hirt, 2007).
2. Creation of economically efficient composition of compatible land uses by

- discouraging intensive office development (Tucker, 1980).
3. Provision of residential accommodation close to work and entertainment.
 4. Preservation of historic buildings and retention of scale and character of older areas (Tucker, 1980).
 5. Reduction in the car ownership and usage by enabling people to live near places where work, shop and play is present (Grant, 2002, Wardner, 2014).
 6. Construction efficiencies and a more

The mixed-use regulation was a quick response to prevent sealing and demolition of thousands of illegal/ unauthorized commercial establishments in residential areas as per the Supreme Court Order in 2006. There was a rampant proliferation of unauthorized commercial development in housing areas.

- rapid realization of the site's potential (Wardner, 2014).
7. Benefit to service providers of activities as some supplement the competencies of others in the exchange of good and services (Wardner, 2014).

At the same time, main disadvantages of the mixed use are also highlighted as follows.

1. Hard to dispose of the property due to multiple occupants.
2. Requires active management of property.
3. Requirement of separate access for each use.
4. Conflict between activities in the form of traffic, noise etc.

5. Longer delivery and higher construction cost of mixed-use project against the single use (Coupland, 1997, Niemera, 2007).

One important aspect for realization of the benefits of mixed use is the challenge in creation of mixed use itself and requires

Although unauthorized, such development was a response to the needs of areas that were predominantly residential but having plenty of livelihood opportunities.

a capable and diverse development team (Wardner, 2014). Addressing the concerns and interests of multiple stakeholders with their competing needs is essential to achieve mixed use along with management of different levels of service and intensity of use requirement (Wardner, 2014).

Looking at the specific context of Delhi, the definition of mixed use takes into account a residential and non-residential mix necessary to sustain everyday life. It involves mix of uses within buildings, and within layouts, sites or continuous street frontages with different uses in the metropolitan core of Delhi.

Mixed Use in Delhi - Policy Changes

Town planning in Delhi since the first master plan of Delhi in 1962 followed a rigid and segregated zoning-based land use for the city and the adoption of mixed use as a policy is quite recent and the context of its introduction is not exactly related to the paradigm change in urban planning that has occurred in the west since 1960s as discussed above. The mixed-use regulation was a quick response to prevent sealing and demolition of thousands of illegal/

unauthorized commercial establishments in residential areas as per the Supreme Court Order in 2006. There was a rampant proliferation of unauthorized commercial development in housing areas. This came about as a reaction to lack of planned, accessible and affordable provisions for adequate commercial and institutional spaces by the Development Authorities in past few decades. Although unauthorized, such development was a response to the needs of areas that were

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predominantly residential but having plenty of livelihood opportunities.

Thus, mixed use policy was adopted in Delhi as a special regulation to avoid large scale public outcry as well as to handle this specific legal problem of unauthorized development. 2183 streets were notified by the Government of Delhi in 2006 for local commercial and mixed-use activities (DDA, 2007). Later in 2007, with the notification of revised Master Plan-2021 (MPD-2021) for the Delhi, this regulation was incorporated as a separate chapter and is now a major policy doctrine in the recent Transit-oriented Development (TOD) regulations of the city (MoUD, 2015).

As per MPD- 2021, broad objectives of introduction of a liberalized provision of mixed use in residential areas were, 1) to meet the growing demand of commercial activities and overcome the shortfall of

available commercial space, 2) to achieve a better synergy between workplace, residence

Thus, it can be argued here, that on one hand, this policy was a major deviation from the earlier single-use zoning regime, and, at the same time was informed by influence of the planning practices of 1970-90s in Europe and North America wherein mixed use was seen a major tool for inner-city regeneration.

and transportation, and 3) to allow access to commercial activities in the proximity of the residences and thus reduce the need of commuting across various zones in the city.

MPD-2021 applied a differentiated approach to promote mixed use based on the categorization of residential colonies (a term common in Delhi and includes residential areas ranging from approx. 15,000 to 1,00,000 inhabitants) on the basis of property tax assessment. Three board types of mixed use are permissible based on the category of residential colony and road widths. These three uses are:

- 1) Commercial activity in the form of retail shops and offices.
- 2) Other activity in the form of pre-primary schools, nursing homes, guest houses, banks, fitness centre, coaching centers, offices of NGOs, vocational training centres.
- 3) Professional activity involving service based occupations such as doctors, lawyers, architects, management offices etc.

Detailed regulations are provided by the Master Plan for percentage of the total built-up area to be used for mixed use based on the nature of development, i.e., plotted vs. group housing.



Figure 2: neighborhood streets transformed to commercial roads with erstwhile public space along plot boundaries becoming inaccessible and privately guarded, Esasur Vithi Road, Greater Kailash-I (Source: Author)

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These new retail, hospitality and medical/professional facilities do not cater to the local residential areas but form city/sub-city level infrastructure requiring continuous access and frontage from the main road/streets.

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Present Impact in Delhi

Delhi has seen massive transformation after the notification of the mixed-use policy and almost all the major streets ranging from 18m to 60m in the city now have proliferation of one or other form of three mixed use activities permitted as per MPD-2021. Following are significant externalities generated by the implementation of mixed use policy in Delhi in last ten years since its inception in 2006.

1. Privatization of Erstwhile Public Space:

Major roads in the metropolitan core of the city (about 15-20 km radius), especially at the immediate periphery of the residential areas or at the interface of two residential pockets have attracted all sorts of commercial, institutional and professional activities, ranging from retail showrooms, service-sector oriented offices,

In case of Delhi, this transformation is on the contrary, leading to an erasure of pedestrian space of a footpath along the road/streets. Moreover, the problem is compounded by regular access of cars to the individual properties, in direct conflict with movement of pedestrians along the road.

new restaurants, hospitality sector and medical facilities. In the disguise of nursing homes and guesthouses, as permitted under the mixed-use norms, city has seen conversion of residential plots into boutique hotels and specialized medical centres.

These new retail, hospitality and medical/professional facilities do not cater to the local residential areas but form city/sub-city level



Figure 3: No space for pedestrians on newly christened mixed-use streets, Lala Lajpat Rai Road, East of Kailash and Internal Street, Block-F, East of Kailash (Source: Author)

infrastructure requiring continuous access and frontage from the main road/streets. This has led to small 4-5 m setback spaces directly accessible from the main streets instead of earlier boundary

Thus, one finds penetration of non-residential uses, mostly acting as city-level functions, into the residential areas, in turn affecting the residential quality and character of the neighborhoods and threatening the safety and social mix of neighborhoods.

walls of the residential plots due to revised redevelopment property regulations. At the same time, all these newly developed properties have their own private security (guards as commonly known in Delhi), not only looking after the property but also managing the setback space and access from the main street. These sub-city/city level functions also attract cars from rest of the city and thus setback space and earlier footpath space are used for parking with security guards acting as parking managers. This is clearly an encroachment of earlier public space by new commercial establishments.

2. Unsafe Pedestrian Environment

As residential plots have transformed into wide variety of commercial establishments, the original setbacks have remained intact. Earlier configuration of residential development with compound walls and dedicated footpath space along the roads have been replaced bit by bit by boundary less conditions wherein footpaths have become extension of the setback space of the individual commercial establishments. This transformation is quite distinct and different from typical mixed-use street development wherein properties sit right at the edge of the property line and have active interface with the footpath/ pavement space leading to safe and comfortable pedestrian experience.

In case of Delhi, this transformation is on the contrary, leading to an erasure of pedestrian space of a footpath along the road/streets. Moreover, the problem is compounded by regular access of cars to the individual properties, in direct conflict with movement of pedestrians along the road. The condition is also forcing people to walk at the edge of the main carriageway, a particularly unsafe situation for old people and children.



Figure 4: neighborhood streets transformed to commercial roads with erstwhile public space along plot boundaries becoming inaccessible and privately guarded, Esasur Vithi Road, Greater Kailash-I (Source: Author)

3. Degeneration of Residential Quality

MPD-2021 provides for inclusion in mixed use only 24 kinds of commercial activities meant to cater to the local residential neighborhood. MPD-2021 also provides for nursing homes, banks, guest houses etc. as other activities ranging from 2/3rd to 100% of FAR on plot sizes of 200 sq.m. and above with additional condition of minimum road width being 18m. This particular regulation is leading to the intrusion of large format commercial development, not necessarily catering to the local residential areas. As most of the planned residential development (belonging to 1960s and 1970s) in the metropolitan core of Delhi fits the minimum prescribed norms of 200 sq.m. plot size and 18 m road width, the entire area is susceptible to commercial transformation due to high real estate opportunity cost.

Thus, one finds penetration of non-residential uses, mostly acting as city-level functions into the residential areas, in turn affecting the residential quality and character of the

neighborhoods and threatening the safety and social mix of neighborhoods.

4. Infrastructure Deficiencies

Rampant commercialization of residential fabric is not backed by enough planning at local area and thus city suffers from congestion and traffic management along these mixed-use roads/ streets. Residential streets also suffer from unauthorized parking as commercial functions attract visitors from across the city and not necessarily from the local neighborhood. Additional load on basic services is not quantified yet as piece by piece transformation is under progress in the city.

Conclusion

The case of Delhi shows that in the first ten years of implementation of the mixed-use policy, the strategic objectives have not been achieved except for meeting the demand of commercial activities. Neither the synergy between residences and work place nor the reduction in commuting needs across the city zones has been observed. In fact, one can argue



Figure 5: Continuous building activity and rising infrastructure deficiencies leading to undesirable residential quality, Main Road, GTB Nagar and Hansraj Gupta Marg, Greater Kailash (Source: Author)

that mixed use has led to commercialization of the housing stock and congestion in the metropolitan core of Delhi. Instead of achieving the expected social and environmental objectives, mixed use has acted as a catalyst for real estate development purely for private gain.

Neither the synergy between residences and work place nor the reduction in commuting needs across the city zones has been observed. In fact, one can argue that mixed use has led to commercialization of and congestion in the housing stock in the metropolitan core of Delhi.

Delhi has also seen another recent attempt of mixing use in District Centres (e.g. in Jasola), wherein retail shops are planned along the main streets with offices on upper floor. Here also, due to real estate market pressure and corporate offices, the nature of retail is either introverted, i.e. not-so street friendly or shops are fully air-conditioned (as restaurants, bars

etc.) defeating the very objective of mixed use as the promoter of public realm.

Some of the larger forces behind the observed outcomes of the mixed-use policy in Delhi are opportunity costs of conversion of use due to high real estate property values, induced changes due to introduction of rail-based mass transit system in the past 15 years, and high car ownership. These three specific characteristics/conditions of Delhi along with nature of residential development (essentially plotted housing) undergoing change are some of the significant reasons behind the results of the implementation of the mixed-use policy in the city.

The learning from the case of Delhi is very important, as mixed use has been promoted across all the cities of the country via two policies- Transit Oriented Development (TOD) and Smart City Mission. Mixed use policy requires further fine-tuning rather than blanket application because there is a potential danger of conversion of more urban land into private real estate benefit under the guise of mixed use. The case of

Delhi further shows up the limitation mentioned by Wardner (2014) that “mixed-use can be handled by the planning policy up to a point only” and requires other conditions and efforts to realize positive benefits.

The following are some aspects, specific to the context of Delhi for mitigating the negative impacts of mixed use policy in future.

- 1) Preparation of local area plans for implementing the mixed-use policy (including the TOD policy) taking into consideration the unique attributes of the existing housing typologies and their transformations into mixed use properties and infrastructure upgradation.
- 2) Involvement of local stakeholders and their willingness to undertake transformations and nature of mixed use, and
- 3) Overall streetscape improvement plans for protecting the right of the pedestrian and integrating the transformation with attractive public realm. ■

Notes:

¹ The historical inner cities in India were frontrunners in showcasing the multiple benefits of mixed-use.

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