The Role of Government Policies in Architecture and Construction Business in Pakistan

Aman Ullah
Ph.D. Scholar in Architecture Program
Istanbul Okan University
Istanbul - Turkey
Amankhan31452@gmail.com

Prof. DEMET IRKLI ERYILDIZ
Istanbul Okan University
Istanbul - Turkey
demet.eryildiz@okan.edu.tr

Abstract

The present study aims to explore the impact of government policies for planning and designing on sustainable housing and residents' comfort in order to upgrade this industry globally. To attain the objectives, a cross-sectional study was planned by developing a structured questionnaire. The data was gathered online through Google forms from professionals; such as architects, engineers and environment specialists. The data revealed that there is a positive impact of effective government policies on sustainable housing and residents' comfort in Pakistan that is a positive sign for the growth of architecture and construction industry. However, there is a serious need to study the concept of sustainable housing in Pakistan through various dimensions so that its application and practicality can become possible to attain financial growth in local and international market.

Introduction

The concept of housing is no longer limited to a place to sleep and survive; it is increasingly recognized as a critical component of accomplishing integrated physical, mental and economic growth, natural catastrophe prevention, employment opportunities, wealth generation, and long-term development in different areas of personal and social life (Ibem and Aduwo, 2015). The location of homes, how they are planned and constructed, and how well they are integrated with existing environmental, social, cultural, and economic fabrics of communities all have an impact on people's everyday life, health, security, and well-being, according to UNHABITAT (2012). This understanding clarifies

and reflects that in the concept of sustainable housing, housing is considered as the heart of sustainable development worldwide.

Sustainable development has its overriding purpose of the preservation and improvement of the global environment for future generations (Chen, Glickman and Scott, 2007). That is why, its one component "Housing" must be economically viable, socially acceptable, technically practical, and environmentally suitable to be considered sustainable. Sustainable housing, according to UN-HABITAT (2012), comprises of socially beneficial and environmentally favorable household practices that are incorporated into larger settlement systems.

For many reasons, incorporating sustainability into housing development is extremely difficult in different countries. There are several sustainability bottom lines, all of which are continually changing (Yang, 2012). Hundreds of parties are involved in the home development supply chain, many of whom have opposing interests (Yang and Yang, 2015). Unlike direct economic activity, the economic value of sustainability is based mostly on solid environmental and social practices, which may include imprecise, non-immediate advantages that expose stakeholders to additional risks. The diversity and multiplicity of stakeholders in the housing building sector, each of whom values and perceives sustainability differently, exacerbates the dilemma (Winston, 2010).

Pakistan, with a population of roughly 220 million people, is the world's fifth largest country, after China, India, the United States, and Indonesia (according to UN estimates). It ranks low on all human development indicators, with a median age of 23, 65 percent of the population under 35, and a poverty rate close to 39 percent. The economic collapse, which began in 2017 and was exacerbated by the Corona Pandemic (2019-20) and global supply chain disruption, has pushed millions more people into poverty, but specific estimates are not yet known (Farrukh, 2021).

According to the 2017 census, the yearly population growth rate is 2.4 percent, indicating a growing demand for housing. It, like other emerging countries, is seeing rapid urbanization as people migrate from countryside to cities; yet, housing has not kept up with this increase. More than 36% of the population lives in cities. The country's two major cities, Karachi and Lahore, alone host 60% of the country's population, resulting in massive infrastructure issues ranging from sanitation to education to health (Hasan and Arif, 2018). Because of the decline and deprivation in village life style and self-sufficiency (the concept of different levels of social groups and exchange system, which is already vanishing), migration from rural to urban areas has also become high due to lack of available resources in rural areas. The country has no specific plans yet to overcome the solution of increasing

population and to cater migrant inflow at a high rate in Pakistan (Ijaz, 2021), that is making the accommodation more difficult and challenging day by day due to the lack of housing. Due to intensifying expenses, distances, difficulties of travelling, and poor infrastructures; residing in katchi abadis in the absence of suitable housing system near newly developing urban centers is becoming increasingly challenging. As an outcome, low-rise low-income housing schemes near commercial areas are unintentionally becoming too high day by day, with all of the limited resources and social differences that come with unexpected densification. All plots and housing infrastructures are also shrinking in size to make them cost friendly. For the moment, many people are residing or sleeping on footpaths, under bridges, at roundabouts, outside hotels, in parks and in open air 'hotels' in Pakistan's urban centers and number of such people is also increasing day by day due to expensive shelters (particularly in Karachi and the larger cities) (Hasan and Arif, 2018).

In urban places all throughout the world, there is a tremendous imbalance between supply and demand for housing. Many households are compelled to live in unhygienic and risky dwellings as a result of the uncontrollable housing crisis. According to a study, Pakistan has one of the worst housing shortages in South Asia, with roughly 10 million units in need, half of which are in metropolitan areas (Pakistan Plots, 2021).

According to the United Nations, by 2030, more than half of Pakistan's anticipated 250 million people would live in cities, up from 36% today. As a result, the demand for lodging is projected to skyrocket. This shortfall is an issue if it isn't always met, but it's also a terrific chance for investors to get involved and provide affordable homes for low-income people. Pakistan's housing shortfalls will necessitate a $ 250 billion investment. In terms of road and rail network, housing and urban planning, land reform, effective policy resources and incentives for mixed-use development, and the absence of regulatory impediments, the government must give solutions. Builders, developers, construction solution providers, banks, leasing firms, and finance businesses will all have to pool their resources (Project Appraisal Document, 2018).

So, this study aims to explore the impact of government endeavors in the area of sustainable housing on the wellbeing and comfort level of dwellers in Pakistan by investigating the opinions of specialists. This study will highlight the role of government in enhancing capacities in architecture and construction industry in Pakistan so that it can flourish the economy by applying modern methods and technologies. This will help attaining services from international professionals to promote the architecture and construction business globally.

Literature Review

The majority of the literature on sustainable housing is concerned with environmental issues. Nonetheless, the Brundtland Report's widely accepted concept of sustainable development underlined three important components: environmental conservation, economic progress, and social fairness (Turcotte and Geiser, 2010). This study is mainly focusing on the sustainable housing that have all three components.

One of the most important industries of the building business is housing. Due to the exponential increase in population, it influences assets, that cause housing to increases national wealth, and real estate investment is one of the fastest-growing industries. Several efforts from various parties are required to improve the housing business, particularly in removing obstacles posed by technology, people, money, and resources. It requires adjustments at all levels of the sector, from the person to the organizational to the industry level, therefore the transition from a conventional to a sustainable strategy takes time. (Abidin, Yusof and Othman, 2013).

As was already mentioned, when designing housing complexes, the housing design should take into account social, aesthetic, and environmental concepts as well as all elements required to create an interior space that matches individuals' or communities' lifestyles (Dohr and Portillo, 2011). People's pleasure with their residence is one of the key variables impacting their quality of life and behavior in their homes. (Sakip et al., 2012). Personal characteristics (cognitive, emotional, or behavioral factors) and social facets of the living environment influence residents' contentment. (Mohit and Nazyddah, 2011). Social, economic, and environmental factors in house design should be taken into account to achieve the best results. It can be done by respecting the cultural, psychological, physiological, financial, historical, and other traits and preferences of the community or the residents (Ali, 2010).

But in addition to fulfilling people's basic needs, other aspects like security and social standing are also crucial. According to Shach-Pinsly (2019), greater trust and reciprocity among residents as well as stronger feelings of community and belonging result from people feeling safer while interacting with others in cities free of crime and conflict. These social contacts within a community also promote good relationships and a sense of belonging. The identity and comfort of urban living are also significantly influenced by environmental design and constructed infrastructure (Shawket, 2018).

A healthy environment is now prioritised above enhancing the socioeconomic and environmental conditions for both the present and future generations when it comes to raising living standards. Sustainable development aims to meet people's needs and improve

their quality of life while minimising harmful environmental effects. People's happiness may indicate that they are satisfied with their surroundings and have a greater quality of life since public areas in neighbourhoods are designed for dialogue and enjoyment. Examples of these locations include playgrounds for kids, parks, walking paths, monuments, and architectural buildings. According to Saiedlue et al. (2015), The presence of water features (lakes, fountains), as well as a big number of green spaces, is essential for boosting happiness because they refresh and purify the air, as well as offer residents considerable health benefits.

Infrastructure development and economic concerns are equally important, in addition to the environmental and social facets of living satisfaction. A sense of identity, belonging, and a comfortable urban lifestyle are provided by elements of urban planning such as locations of essential services utilized often by residents (Ibrahim, 2020). Among the latter are clinics and post offices, financial institutions, grocery stores or corner shops, kindergartens, schools, libraries, and facilities for sports and entertainment. Ideal locations for all of these components ought to be ones that are open to both locals and visitors. The transportation interchange should also be user-friendly for all users pedestrians, cyclists, and drivers of cars and offer a high degree of accessibility for people with physical disabilities and other forms of municipal transit (Dempsey et al., 2011).

To better understand what actions to take to improve the sustainability parameters in residential models and complexes of the state housing stock, it is vital to research the impact of various variables on residency comfort (Liu, 2003). There is a research gap has been found in examining the role of government endeavors and policies in developing and implementing sustainable housing plans in Pakistan. However, several housing policies have been introduced since Pakistan came into existence, to provide best of living standards to the society by keeping the environmental and financial matters in mind, but most of the times, the policies remained unimplemented and the need for sustainable housing could not be addressed carefully.

Pakistan's housing crisis began with the country's hard-won independence and the resulting influx of refugees into Pakistan's territories. At the moment of independence, Pakistan's government adopted the welfare-state model as its development policy. The State agreed to provide housing and shelter to its residents under this approach. The government also aided the process of forming housing cooperative societies by offering low-cost state land to the organizations. However, the members of these societies were almost always from the upper (government personnel) and medium (military forces) income categories, and as a result, these programs failed to give shelter to the working classes or the rural poor (Jabeen, Sheng and Aamir, 2015).

Later on, many other policies were introduced by the government of Pakistan, such as the National Housing Policy (NHP) was introduced in 2001 which focused on the fundamental requirements of creating a positive atmosphere in order to stimulate and accelerate the housing sector. The strategy aimed to support new ideas and their execution in order to ensure that all citizens have livable and acceptable housing. This strategy intended to identify parcels of property, whether public or private, in rural and urban regions for the purpose of housing development, but unfortunately the policy couldn't be implemented for multiple reasons; such as the inability of low-income group even to buy the cheapest homes, inability to gather enough funds to construct houses, huge difference in supply an demand curves, lack of acceptance in people and lack of community initiatives, high maintenance costs etc.

Currently, the Prime Minister's Five Million Naya Pakistan Housing Program Green Building Guideline is the first effort toward making the housing sector green. It is suggested in nature, with the goal of bringing about a shift in the housing sector through environmentally friendly building design, construction, and operation practices, as well as ensuring the long-term use of building materials to enhance effective use of energy, conserve water, improve indoor environmental quality, and reduce GHG emissions (Hussain et al., 2021). It will act as a guide for green construction designers, architects, builders, and owners. The Guideline establishes negligible performance criteria in carbon dioxide emissions, energy efficiency, water conservation, and site and household waste management in order to maximize energy efficiency, conserve natural resources, generate less waste, and provide inhabitants with healthy environments. It is an addition to traditional architectural design that emphasizes economy, durability, serviceability, and comfort (Green building, 2021). Its implication and success would be determined later.

The present study aims to investigate the further role of government in developing sustainable housing and enhancing residents' comfort with the objective to contribute in international industry of architecture and construction.

Methodology

The purpose of the study is to explore the impact of government policies and efforts on residents' comfort in a sustainable housing system in Pakistan, so that the industry can be given attention at local and international level. This study is being done to investigate the opinion of specialists; such as architects, engineers, economists and environmental specialists. The intention behind choosing this population is to understand the specialized view on the concept and sustainable housing. Every other individual or resident does not

know the meaning of this concept and unable to provide his/her viewpoint in this area. So, the data was collected through online platform by using google forms. The data was gathered with the help of a structured questionnaire that consisted of items which were designed to investigate the dimension of government policies and practices for sustainable housing and associated resident comfort at personal and environmental level. Total 58 responses were obtained from target population to fulfill the objective of this cross-sectional study. A quantitative method of data analysis was used to find the impact of variable (Tariq et al., 2018).

Results and Discussion

Impact of Government Policy on Sustainable Housing, Residents' Comfort and Environmental Safety

	Beta	T	Significance
Sustainable Housing	0.251	1.892	0.064
Residential Comfort and Environmental Safety	0.258	2.364	0.022

Table shows that there is a significant impact of government policies on sustainable housing and residents' comfort and environmental safety.

The results of the study suggests that government policies of planning and design for sustainable housing play a significant role in its implementation and put a positive impact on residents' comfort. According to most of the specialized professionals, government's active involvement with local companies and organizations as a partnership in achieving the goal of sustainable houses can resolve the housing crisis in Pakistan to a great extent. The government can create opportunities for people to get their own homes by making housing affordable at different levels; from planning and designing to construction and development. The results also shed light on the fact that government can get better outcomes if keep an eye on evolving needs of residents. The use of modern advance technology and machinery can also create ease in the process and reduce the cost of man power. This rapid improvement and growth in the construction and architecture industry would not only enhance the capacity and economy of Pakistan, but it will also contribute to the international economy. This sector of the economy, the environment, and society as a

whole all suffer substantial effects. Everybody is affected since everyone's quality of life is greatly influenced by the built environment in which they live. Since all economic value is created within or through structures such as buildings or other "constructed assets," almost every other sector benefits from the construction sector. Furthermore, as an industry, it contributes 6% to the world's GDP. Additionally, it is the largest consumer of raw materials, and manufactured goods are responsible for 25 to 40 percent of global CO2 emissions.

However, it is evident in the literature that government always took different initiatives by introducing effective housing policies but due to many reasons, they couldn't fully implemented. So, there is still a dire need to look into the possibilities that how an effective sustainable housing policy can be planned and introduced and how it can be implemented realistically by combined efforts of community, government and organizations with the help of local and international professionals.

Conclusion

The objective of the present study was to explore the impact of government policies of planning and design on residents' comfort in order to enhance the growth of this industry at local and international level. For this purpose, cross-sectional survey was conducted through online platform that was responded by professionals; such as architects, engineers and environmental specialists etc. The results of the study suggested a significant impact of government policies (planning and designing of sustainable housing) on residents' comfort that indicated a strong need of government initiatives in this area. The active participation of government in the construction and architecture business can lead the country generate profit and flourish globally.

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