

Urban immigrant worker housing research and design for Da Nang, Viet Nam



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ABSTRACT

This paper outlines research and design for housing rural-to-urban migrants in Viet Nam. Foreign capital infusion has produced internal migration in developing nations given the transition from agricultural to industrial and service economies. Around 7 million Vietnamese are expected to relocate to urban areas by 2019 to seek entry-level employment in the industrial or service sectors, and will be challenged to afford housing meeting minimum standards. Finding a solution to housing urban immigrants is critical to stabilize the economy and help manage the movement, health, and welfare of people. In response, the Vietnamese government has implemented a low interest loans program to encourage apartment ownership for qualifying individuals.

The authors led a team of students and lecturers in summer 2014 under the auspices of a Fulbright Specialist Grant in Urban Planning at Da Nang University of Science and Technology that researched and documented Vietnamese urban infrastructure, planning, housing, and construction. From these findings, housing design criteria were formulated, including affordability, sustainability, resilience, and social needs. A prototype housing block was designed to address the design criteria. The design shows a promising first step to find more optimal solutions to the current and ongoing Vietnamese workforce housing problem.

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1. Introduction

Recent global trends include the shift of manufacturing and service functions from developed to developing countries as a means to minimize costs and maximize profits. Significant foreign investment in the developing world has precipitated unprecedented fiscal growth and a radical transition from agricultural economies to industrial and service based economies.

This effect is best seen in China where millions of rural people have moved to expanded or newly constructed industrial cities. A similar phenomenon is seen in Viet Nam, though on a smaller scale due to the significant difference in overall population. These shifts align with recent liberalized policies including the transition from a centrally controlled socialist economy to market socialism, and the granting to individuals the right to obtain long-term land leases.

The Vietnamese government and foreign investors first concentrated on the coastal cities given that they had sufficient infrastructure to connect with the global production network, a

larger available workforce population, and conditions to grow the manufacturing and service sectors. The creation of new job opportunities prompted major rural-urban migration, with 6.6 million people relocating between 2004–2009 (Le & Nguyen, 2011). The scale and impact of the migration was not fully anticipated, and the government has been slow to respond. Only limited housing and related policies have been implemented to adequately address the crisis. When worker housing is provided – either by government or a factory owner – it is often substandard and lacking in surrounding urban amenities.

2. Economic and demographic shifts in Viet Nam

The Nguyen dynasty collapsed after French colonial occupation. The French enlarged and built new cities and transportation infrastructure to capitalize on economic resources in mining, industry, and shipping. After French occupation ended in 1954, Viet Nam was divided into North and South, each with different political structure, causing mass intra-country migration. During the 30 years of the Viet Nam War, Northern residents vacated the cities to avoid airstrikes, whereas in the South, people moved to the cities to avoid

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Fig. 1. Ha Noi worker housing built in the 1960's.



Fig. 3. Worker housing near Ho Chi Minh city for Samsung Electronics Ltd. employees.



Fig. 2. One-story boarding house worker housing type.

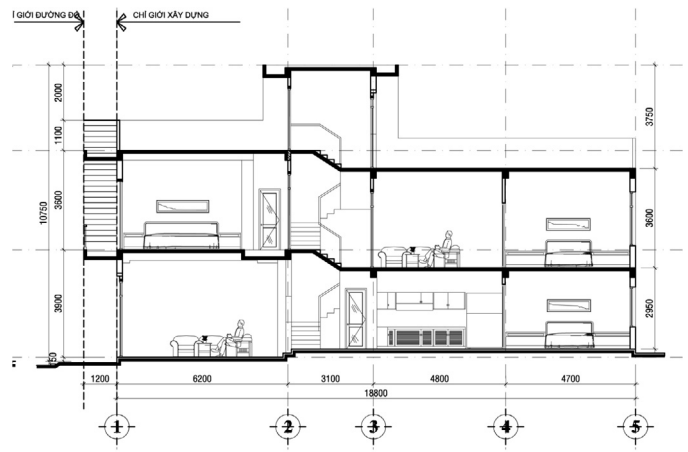


Fig. 4. Longitudinal section of Da Nang row house type.

rural guerrilla warfare. Sai Gon grew from 1,485,295 inhabitants in 1967 to 3,498,120 inhabitants by 1975 (Tran, 2012).

In the 10 years following the end of the Viet Nam War, political uncertainty, U.S. economic sanctions, and other conditions created widespread poverty that fueled significant out of country migration. United Nations High Commissioner of Refugees (UNHCR) statistics indicate that from 1975 to 1997, 839,288 Vietnamese arrived in UNHCR camps in South East Asia and Hong Kong (Robinson, 1998).

The *Doi Moi* reforms initiated in 1986 led the transition from socialist collectivized land holdings to a market economy which allowed individuals or entities to obtain long-term land leases. This gave exchange value to land (Kemper, Ha, & Klump, 2015). In 2001 Viet Nam enacted the Law on Foreign Investment and signed the Agreement on Viet Nam-U.S. Trade. These policies helped spur significant foreign investment, and global economic interests invested heavily in Viet Nam in order to capitalize on inexpensive labor and infrastructure (Huyen, 2015). As a result, cities developed economically with associated improvements in living conditions, such as education, health care, and higher wages. Data from 2011 shows average Viet Nam urban resident income of 3968 USD/year vs. 2041 USD/year for rural residents (General Statistic Office of Vietnam, 2016). Due to factors including rural poverty, vulnerability to varied crop yields, and poor infrastructure, rural families are motivated to send one or more family member to an urban center for work to raise living standards and diversify income (Nguyen & Locke, 2014). The majority of rural-to-urban migrants are unskilled and find entry-level industrial or services positions (Le & Nguyen, 2011).

The new urban immigrants provide the human resource for the rapidly expanding manufacturing and service markets. However, rapid urban population increase presents a number of challenges in providing adequate infrastructure, schools, and healthcare facilities. With economic development, the cost of living and housing rise, making affordable housing difficult to secure, and causing such development to be built away from the urban centers in industrial areas that are often polluted, and that have few amenities, such as parks and public spaces. Most affordable housing constructed to date – either by government or factory owners – have been found to lack acceptable space, sanitation, ventilation, and temperature control (Le, Tran, Nguyen, & Phuong, 2011).

3. Environmental management

As with many developing countries, Viet Nam deferred more stringent environmental protection policies in order to maximize production. To grow the economy quickly, the country exploited inexpensive labor and natural resources. Significant pollution and CO₂ emissions have resulted from unregulated industrial and energy production (Zimmer, Jakob, & Steckel, 2015).

Viet Nam is vulnerable to climate change. In the last 50 years there have been increases in average temperature, rainfall, sea level, storm frequency and intensity, floods, salinity in coastal fresh-water bodies, and drought. (Phan & Ngo, 2013).

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