Institutional Shifts of Four East Asian Developmental Housing Systems

Hyunjeong Lee*

*Associate Professor, Department of Housing and Interior Design, Kyung Hee University, South Korea

Abstract
The purpose of this study is to examine the historical pathways of the developmental housing systems of four East Asian tigers (Hong Kong, Singapore, South Korea, and Taiwan) to identify the institutional factors of systemic transformations and specify similarities and differences by using cross-national data and performing data analysis. The main results are as follows: (1) historically, the four housing systems have been deeply embedded in market-oriented, pro-homeownership policies; (2) massive provision of large-scale housing coincided with industrialization, urbanization, and modernization to tackle escalating demands for homeownership; (3) public rental housing has been severely marginalized and residualized; (4) the minimalist approach to public housing aggravated the institutional vulnerability of the states in the face of economic globalization; (5) the housing transformation in the global era was triggered by institutional factors, including political power shifts, economic restructuring, and socio-demographic transitions; and (6) it is clear that the developmental housing systems were redirected in recent decades to overcome their institutional shortcomings. Despite the similarities, each developmental state's housing sector has unique features that have formed their diverse pathways.

Keywords: housing system; institutional shift; developmental state; tiger economies; East Asia

1. Introduction
Housing in industrial societies has been central to growth, playing a pivotal role in industrialization, urbanization and modernization. On the contrary, housing is often described as a wobbly pillar under the welfare state (Torgersen, 1987), and the ideation is attributable to several factors (Kemeny, 1982, 1991). First, housing, even subsidized homeownership, is costly for households as end users. Second, housing directly provided by the state serves a small proportion of the people, such as socially and economically disadvantaged groups, and largely relies on tax revenues, which places a considerable financial burden on public expenditures. This means that housing is vulnerable in times of fiscal retrenchment. Third, public housing, particularly rental housing, is highly marginalized. These factors contribute to the neglect of housing in the social system and to its high commodification in the market. Similar features are easily observed in East Asian developmental housing systems.

East Asian states initiated economic development in the 1960s by adopting developmental paths guided by the states, oriented towards exports, and led by industrialization. By extension, the housing policies were subjugated under national policies of economic growth. In recent decades, economic globalization has forced developmental housing pathways to change from synchronization to desynchronization. In other words, states employ different strategies and approaches to sustaining economic growth. Therefore, institutional development has been path-dependent and the transformations diverged.

This study examines the characteristics of developmental housing systems in institutional spheres by focusing on four little tiger economies (Hong Kong, Singapore, South Korea, and Taiwan). It highlights similarities and differences in the institutional shifts of the housing systems. In addition, this study explores the structural forces changing the housing systems, specifically, housing price fluctuations, and public spending on housing. To achieve the research goals, this study employs an extensive collection and analysis of cross-national data.

2. Housing Systems and Institutionalism
Housing systems are mechanisms in which institutional arrangements consisting of collections of organized elements interact in space and time (Bekebrede and Mayer, 2006). Because housing
systems are within broader societal systems, their components include demand and supply, and their institutions are affected by external factors, such as political, economic, and socio-demographic developments (Boelhouwer and van der Heijden, 1992; Lee, 2017; Priemus, 1983; van der Heijden et al., 2011).

In East Asia, housing systems are firmly embedded in the development model, and they are characterized by a centralized housing supply, high commodification of housing, and a pro-homeownership, market-driven, and nuclear family-oriented policy (Doling, 1999; Hirayama and Ronald, 2007; Holliday and Wilding, 2003). These features emerged from the states' institutions in which the housing systems have evolved, developed, and transformed. However, little attention has been paid to the historical development of the structures forming these housing systems. The conventional notion of historical institutionalism is that institutional development over time is marked by path dependence (Bekebrede and Mayer, 2006; Pierson, 2000). While the theoretical approach acknowledges variation in executive power, institutional analysis offers a basis on which states construct and implement policies (Mahoney, 2001). Therefore, analytical characteristics of state institutions draw internal and external forces involved in institutional maintenance and transformation. In this regard, institutions influence and are influenced by a housing system (Boelhouwer and van der Heijden, 1992; Kleinman, 1996). From the perspective of an international comparative analysis, it is important to consider housing systems in an institutional context.

The four states under investigation in this study have contributed much research, but their housing systems embedded into institutional development have received little attention. Nonetheless, they should be understood in institutional spheres particularly from the politico-economic and socio-demographic perspectives.

3. Four East Asian Developmental Housing Systems

Although post-war East Asia experienced political unrest, economic challenges, and social turmoil, the four little tiger economies in this study followed the developmental pathway on which the housing system was laid out for the benefit of economic nationalism. These four states have institutional similarities, such as authoritarian rule; state-guided, export-led, and industrialization-driven economic development; interdependence in the global economy regarding trade\(^1\) (Fig.1.); reliance on international lending and foreign investment\(^2\) (Fig.2.); and instrumentality of their housing policies to promote economic growth as an overriding policy (Table 1.). As the four states in the post-war period faced with serious housing shortage and squalid living conditions, they set up state housing agencies to carry out the housing policy and to coordinate housing development (e.g., housing production, distribution and consumption) – the Hong Kong Housing Authority (HKHA) in 1973, Singapore's Housing Development Board (HDB) formed in 1960, the Korea Land and Housing Corporation (LH)\(^3\) in 1962, and to a lesser extent, Taiwan's Executive Yuan in 1928.

![Fig. 1.](image1.png)

**Fig. 1.** Proportion of Trade Volume to GDP in Four Developmental States (1960-2016)

Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017); National Statistics, Republic of China (2017)

![Fig. 2.](image2.png)

**Fig. 2.** Proportion of Foreign Direct Investment Inflows to GDP in Four Developmental States (1970-2016)

Source: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017); National Statistics, Republic of China (2017)

After being threatened by a series of economic crises, the four developmental housing systems strategically planned for economic growth, which revealed some institutional vulnerability. The effects of economic globalization deepened these flaws, which ostensibly forced the states to undergo institutional shifts. Therefore, most of the states employed social functioning of the housing system to mitigate social problems in response to the crises, which grew because of changing political and social spheres. Indeed, the institutional shifts of the developmental housing systems were decisively driven by politico-economic and socio-demographic forces.

3.1 Political Sphere

The housing systems of post-war East Asian developmental states created by nationalism were developed to rebuild national identities and political legitimacy. All of the states except Hong Kong...
underwent national rebuilding. To gain full political control or to remove anti-governmental threats, most of the states relied on strong leadership through one-party dominance (Singapore and Taiwan) or dictatorship (South Korea). Authoritarian rule delayed democracy that would have triggered a public housing expansion, and the states strategically used their housing systems to ensure national solidarity (Singapore) or maintain political legitimacy and win electoral support (South Korea and Taiwan).

Most of the states had entered democratic transitions since the late 1980s through the end of authoritarian rule (South Korea) or the lifting of martial law (Taiwan and, to a lesser extent, Hong Kong). The shifts in the
political landscapes were stimulated by a wide array of civil activities in the democratic movement (e.g., labour unions, social advocacy groups, and non-profit organizations) that elevated public spending on housing (Hong Kong and South Korea) (Fig. 3.). Because democratization deepened political pluralism, the decentralization of state power was reinforced to expand public housing provisions.

3.2 Economic Sphere

The four tiger economies are known as late industrializers that had either no (Hong Kong and Taiwan) or brief (Singapore and South Korea) interruptions in economic growth until the Asian Financial Crisis (Fig. 4.). Impressive economic achievements were driven by the states’ policies of economic growth that ensured political legitimacy and subjugated housing policies. The primacy of economic policy was supported by the assumption that economic prosperity ultimately benefits all by ensuring full employment, which, in turn, escalates family income that subsequently improves living standards. Indeed, the four developmental states viewed that economic well-being boosted consumption capacities to where housing was affordable, which reduced the demand for and dependence on public resources and markedly decreased average annual public spending on housing (Figs. 5., 6. and 7.). In addition, it stimulated the homeownership rates (2015: 50.4% in Hong Kong, 90.8% in Singapore, 56.8% in South Korea, and 76.4% in Taiwan) (Figs. 8. and 9.). This rationale was strongly upheld in times of economic boom, but it concealed any inherent, institutional defects that might be present in the public system, which overlooked the importance of public rental housing as a social protection to lessen social discontent and enhance state capacities.

Most of the states allocated little funding to housing, and relied, instead, on market forces in response to the growing demands for homeownership. For example, pro-market housing policy was particularly upheld in South Korea and Taiwan, which are well known for underinvested and underdeveloped public housing related to land reform, which strongly advocates private ownership. This makes it difficult to acquire privately-owned land for public housing development. In these states, housing is a commodity presumably

---

**Fig. 3. Proportions of Public Spending on Housing in Four Developmental States (1981-2015)**
Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017); National Statistics, Republic of China (2017)

**Fig. 4. GDP Growth Rate in Four Developmental States (1960-2016)**
Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017); National Statistics, Republic of China (2017)

**Fig. 5. Public Rental Housing Ratio in Four Developmental States (1980-2010)**
Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017)
Note: Data unavailable in Taiwan

**Fig. 6. Proportions of Public Spending on Housing to Total Spending and Public Rental Housing Ratio in Four Developmental States (1981-2015)**
Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017)
Note: Data unavailable in Taiwan
traded in the market, and the big public purse for a few recipients, along with high price tags, does not easily lead to a consensus on the provision of public rental housing.

On the other hand, two compact city-states (Hong Kong and Singapore) had the most public spending on housing and are known as the world's largest and second largest public housing providers, respectively. These city-states have strongly supported homeownership (Hong Kong's Home Ownership Scheme in 1973 and Singapore's Home Ownership Scheme in 1964), but large-scale public housing estates were also developed for public health, safety, and economic purposes. Whereas Singapore uses the Central Provident Fund of 1955 to afford housing development, Hong Kong uses revenues generated by real estate taxes. The Singaporean case is a successful model of a property-owning society with asset-based welfare, and the provident fund model has influenced neighbouring countries (Hong Kong, Malaysia, and Indonesia).

During the neoliberalism wave, many states pushed for integration into the global economy and underwent labour market restructuring. The economic openness strengthened housing market volatility (Hong Kong and Singapore) (Figs. 10. and 11.). Moreover, the realignment created employment insecurities and casualization that increased the numbers of irregular workers, which, in turn, increased demands for social services in times of economic uncertainty and market fluctuation. In the wake of economic crises, public housing was expanded to deal with a number of socially and economically vulnerable people, which escalated public spending on housing provision (South Korea).

3.3 Socio-demographic Sphere

One of the most important strands in the four housing systems is Confucianism, which influences the state-family relationship in housing provision and forms the pro-family orientation for a housing policy. While each family is responsible for acquiring housing, the state's direct housing provision is minimized, and the regulatory role of the national government in the housing market is enhanced. Thus, public rental housing in the developmental housing systems is only available to people in extreme circumstances, and it becomes marginalized and residualized.
Further, states have been experiencing socio-demographic shifts with regard to women’s socioeconomic status, the family structure (from a multi-generational family to a nuclear family, from a sole breadwinner father and stay-at-home mother to a dual earner family, and from family nuclearization to defamilization), and an increasing number of non-traditional households (e.g., elderly households, single-person households, female-headed households, and couples without children).

The most striking socio-demographic characteristics are declining birth rates and social aging, which have dwindled population growth (2015: 0.9% in Hong Kong, 1.2% in Singapore, 0.4% in South Korea, and 0.2% in Taiwan) (Figs. 12., 13. and 14.), decreased the average household size (2015: 2.9 in Hong Kong, 3.4 in Singapore, 2.5 in South Korea, and 2.8 in Taiwan) (Fig. 15.) and defined all four states as aging societies (2015: 15.1% in Hong Kong, 11.7% in Singapore, 13.1% in South Korea, and 12.5% in Taiwan). These demographic shifts have been partially facilitated by industrial restructuring (e.g. non-agricultural employment) (Figs. 16. and 17.) and closely related to women's increased participation in the labour force, which is associated with equal access to education and delayed marriage and childbirth. Thus, the pro-growth housing systems have been required to reorient their housing policies in a changing social sphere.
Fig. 16. Proportion of Non-agricultural Employment to Total Employment in Four Developmental States (1980-2016)
Sources: Census and Statistics Department, HKSAR (2017); Statistics Singapore (2017); Statistics Korea (2017); National Statistics, Republic of China (2017)

4. Institutional Shifts of Four East Asian Developmental Housing Systems

Although the four East Asian housing systems have some similarities, their historical pathways vary due to their unique characteristics. To identify these differences, a series of regression analyses were performed to identify the effects of economic and demographic factors on the housing systems, particularly housing price volatility and the proportion of public spending on housing to total spending, for which data are annually available for each state. The model used to determine these differences is shown in Equation 1 and the results of the multiple regression model used to determine these differences is shown in Table 2.

\[
\Delta \ln P_t = \alpha + \beta_1 \Delta \ln G_{it} + \beta_2 \Delta \ln T_{it} + \beta_3 \Delta \ln O_{it} + \delta + \epsilon
\]

P: Housing Price Index
G: GDP per capita
T: Total population
O: Old dependency ratio

Table 2 shows that the economic factor was statistically significant only for Taiwan, the demographic variables were statistically significant predictors for South Korea and Taiwan, and the explanatory power of the independent variables in the models explained 96% and 88% of the variance in the dependent variable, respectively.

In the regression model explaining the proportion of public spending on housing to total spending, statistical significance of the economic variables was found for Hong Kong and Singapore, and the demographic factors had statistically significant negative effects on the dependent variable for Singapore and Taiwan (Table 3). The regression equation explained 59% (Hong Kong), 20% (Singapore), and 12% (Taiwan) of the variation in the dependent variable.

Therefore, the statistical evidence implies that the housing systems in Hong Kong and Singapore, in which reliance on the global economy is much heavier than it is in the other two states, are likely to be sensitive to external factors, such as trade and economic prosperity. On the other hand, South Korea

Table 2. Summary of Regression Analysis for Variables Predicting (ln) Housing Price Index

| Variables             | RA 1 Hong Kong | RA 2 Singapore | RA 3 South Korea | RA 4 Taiwan |
|-----------------------|----------------|----------------|------------------|-------------|
| (Constant)            | -4.740         | 2.773          | 0.569            | 43.447      |
| (ln) GDP per capita   | 1.019          | 0.595          | 0.810            | 0.471       |
| (ln) Total Population | -1.814         | 3.161          | -0.289           | 2.208       |
| (ln) Old Dependency Ratio | 0.691       | 2.209          | 0.205            | -1.400      |

Note: R²=.554, R²adj=.493, F(3, 22)=9.119, p=.000 for RA1; R²=.686, R²adj=.643, F(3, 22)=15.990, p=.000, for RA2; R²=.960, R²adj=.955, F(3, 22)=177.048, p=.000 for RA3; R²=.889, R²adj=.879, F(3, 32)=85.775, p=.000 for RA4

Table 3. Summary of Regression Analysis for Variables Predicting Proportion of Public Spending on Housing to Total Spending

| Variables             | RA 1 Hong Kong | RA 2 Singapore | RA 3 South Korea | RA 4 Taiwan |
|-----------------------|----------------|----------------|------------------|-------------|
| (Constant)            | 0.283          | 0.029          | 0.029            | 0.108       |
| Trade (% of GDP)      | -0.030         | 0.011          | -0.777*          | 0.065       |
| GDP Growth Rate       | -0.117         | 0.113          | -0.130           | 0.006       |
| Population Growth Rate| 0.057          | 0.509          | 0.013            | -0.090      |
| Old Dependency Ratio  | 0.000          | 0.004          | -0.033           | -0.013      |

Note: R²=.634, R²adj=.586, F(4, 30) = 13.014, p=.000 for RA1; R²=.297, R²adj=.203, F(4, 30) =3.167, p=.028, for RA2; R²=.198, R²adj=.091 F(4, 30) =1.848, p=.146 for RA3; R²=.221, R²adj=.117, F(4, 30) =.2.128, p=.102 for RA4

Times for the RHMD model were the T statistic for the regression equation.
and Taiwan are likely to be influenced by internal factors, such as shifting socio-demographic landscapes.

5. Conclusion

Ever since a developmental path was strategically used for national survival in East Asian countries in the 1960s, four East Asian tigers have prioritized their national policies of strong economic growth, in which their developmental housing systems are firmly embedded. However, integration into the global economy required the developmental states to undergo institutional changes. Since the 1980s, democratization, political fragmentation, market fluctuations, casualization of employment, defamilialization, and demographic transitions have critically shaped these housing systems. In recent decades, a series of economic crises at the regional and global levels have revealed the institutional shortcomings of these states’ housing systems. Although social protection in the housing sector has been strengthened through electoral support, continuity is likely to be determined by fiscal constraints. It is expected that housing systems are relatively more influenced by and sensitive to global changes. Moreover, the developmental housing trajectories of the four states are similar yet distinct.

The conventional perception of the developmental housing systems changed from convergent to divergent in the wake of structural transformation. It is clear that politico-economic and socio-demographic forces have been driving the institutional shifts. Furthermore, the developmental housing systems have not successfully proved that they have sufficient resilience to handle the dynamics of the international forces being imposed upon them by factors more powerful than their internal factors. For example, there was a surge of communism in the region from the 1950s to 1970s, neoliberalism in the 1980s, integration into economic globalization since the 1990s, and global economic turbulence in the 2000s through the 2010s. Because many of the states are dealing with the escalating pressure of international competition, the four East Asian tigers will most likely redirect their housing policies by seeking a balance between economic growth and social functioning.

Acknowledgment

This research was supported by the National Research Foundation of Korea Grant funded by the Korean Government(NRF-2013S1A2A1A01033274)

Notes

1 The average annual trade volume from 1960 to 2016 was much larger in Hong Kong (2.8 times GDP) and Singapore (3.5 times), the world’s most open economies, than South Korea (0.7 times) and Taiwan (0.8 times).

2 The global foreign direct investment inflows between 1960 and 2016 was a lot higher in Hong Kong (26.5% of GDP) and Singapore (14.2%), the world’s freest economies, than South Korea (0.7%) and Taiwan (0.8%).

3 LH was formerly known for the Korea National Housing Corporation (KNHC) which was merged with the Korea Land Corporation (KLC) in 2009.

4 Taiwan was under authoritarian rule (1949-2000), South Korea (1961-1988), and Singapore (1963-present).

5 In the pre-AFC era (1960-1996), negative GDP growth was recorded only in South Korea (-1.5% in 1980) and Singapore (-0.6% in 1985).

6 The average annual public spending on housing in the period of 1981-2015 was higher in Hong Kong (3.2% of GDP and Singapore (2.5%) than South Korea (1.2%) and Taiwan (0.3%).

7 Public rental housing output in Taiwan has been extremely low (as low as 0.08% in 2010) (Social Housing Advocacy Consortium, 2010), yet its official data is unavailable.

8 Land reform was undertaken in Korea and Taiwan (1949).

9 All the developmental states joined the World Trade Organization in 1995 but Taiwan in 2002.

References

1) Bekebrede, G. and Mayer, I. (2006). Build your seaport in a game and learn about complex systems. Journal of Design Research, 5 (2), pp.273-298.

2) Boelhouwer, P.J. & van der Heijden, H.M.H. (1992). Housing Systems in Europe. Delft: Delft University Press.

3) Census and Statistics Department, HKSAR. (2017). Hong Kong Annual Digest of Statistics, K. G. - published by, www.censtatd.gov.hk.

4) Doling, J. (1999). Housing policies and the little tigers: How do they compare with the other industrialised countries. Housing Studies, 14 (2), pp.229-250.

5) Hirayama, Y. and Ronald, R. (2007). Housing and Social Transition in Japan. London: Routledge.

6) Hollliday, I. and Wilding, P. (eds.) (2003). Welfare Capitalism in East Asia: Social Policy in the Tiger Economies. New York: Palgrave Macmillan.

7) Kemeny, J. (1982). Myt of Home Ownership. London: Routledge Kegan & Paul.

8) Kemeny, J. (1991). Housing and Social Theory. New York: Routledge.

9) Kleinman, M. (1996). Housing, Welfare and the State. Cheltenham, UK: Edward Elgar.

10) Lee, H. (2017). Changing Korean housing system and its structural forces. Journal of Asian Architecture and Engineering, 16 (3), pp.519-526.

11) Mahoney, J. (2001). The Legacies of Liberalism. Baltimore: Johns Hopkins University Press.

12) National Statistics, Republic of China. (2017). Yearly data- statistical data, http://eng.stat.gov.tw/mp.asp?mp=5.

13) Pierson, P. (2000). Increasing returns, path dependence, and the study of politics. American Political Science Review, 94 (2), pp.251-266.

14) Priemus, H. (1983). Volkshuisvestingssysteem en woningmarkt [Housing system and housing market]. Delft: Delft University Press.

15) Social Housing Advocacy Consortium (2010). Taiwan shehui zhuzhai shuotie [Debating social housing in Taiwan]. Oct. 4, http://socialhousingtw.blogspot.com/2010/10/blog-post_04.html

16) Statistics Korea. (2017). Statistical information, http://kostat.go.kr/portal/english/index.action.

17) Statistics Singapore. (2017). Yearbook of statistics Singapore, www.stat.gov.sg.

18) van der Heijden, H., Dol, K., and Otseley, M. (2011). Western European housing systems and the impact of the international financial crisis. Journal of Housing Built Environment, 26, pp.295-313.

19) Takats, E. (2010). Ageing and asset prices. Bank for International Settlements Working Paper No. 318.

20) Nishimura, K. G. and Takats, E. (2012). Ageing, property prices and money demand. Bank for International Settlements Working Paper No. 385.

21) Torgersen, U. (1987). Housing: The wobbly pillar of the welfare state. In B. Turner, J. Kemeny, and J. Lundqvist (eds.), Between State and Market: Housing in the Post-Industrial Era, pp.116-126. Stockholm: Almqvist and Wiskell.