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Korea's Housing Supply: Issues and Resolutions

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Korea’s Housing Supply: Issues and Resolutions

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* Based on Song Inho, The Effects of the Volatility in the Housing Supply on the Construction Industry, Policy Study 2018-08, Korea Development Institute, 2018 (in Korean).
The periodic surges and dives in Korea's housing supply are weighing heavily on the construction industry and housing finance market. Previous sharp increases in the housing supply have entailed a spike in unsold new housing, exacerbating the financial soundness of construction firms as they struggle to offload their inventory during the following two to three years. This, in turn, has negatively affected housing finance-related institutions. The housing supply (building permits) in 2015-2017 exceeded the basic housing demand standards—the number of unsold new housing has continued to rise as the supply of housing completions and move-ins continue to enter the housing market. In addition, a reverse-jeonse phenomenon is expected this year, in which tenants may possibly encounter cash flow problems while landlords face growing pressure as they deal with increasing difficulties in finding new tenants and returning jeonse deposits on time.

Therefore, efforts are needed from the government in seeking measures to curb the volatility in the housing supply. Construction firms should be bound by a higher equity burden and housing finance-related institutions should be more specialized and have more responsibility. A demand-centric housing supply system, which can meet the needs arising from social change, including low birth rates, population aging and increasing single-person households, is required.

Korea's housing supply ratio, based on the number of households, and housing stock, based on population size, are rising rapidly on the back of large-scale provisions of apartments. The increase in Korea's housing supply ratio is mainly driven by the large-scale provision of apartments. The housing supply ratio exceeded 100% in 2009 and is expected to reach 106% by late 2019 (Table 1). This increase is largely attributed to the large-scale provision of apartments. Of the housing stock, apartments accounted for 37.7% in 1995 and 60.6% in 2017; proving their critical role in raising the housing supply ratio.
Housing stock per 1,000 persons marked 357 units in 2010 and is expected to record 412 units in 2019 (Table 2).

- 419 units in the US, 401 units in Australia, and 398 units in New Zealand (OECD, 2015).

Korea’s housing supply (building permits) is characterized by recurring peaks and troughs and high volatility.

- The housing supply exhibits sharp up- and downturns every four to five years (Figure 1).
- The annual standard deviation for the growth in the housing supply (based on the number of building permits in 1990-2018) is 23.1%, far above that for the growth in apartment sales prices during the same period (6.4%).

Table 1: Total Housing and Housing Supply Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (1,000 units)</th>
<th>Supply ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>17,656</td>
<td>100.5</td>
</tr>
<tr>
<td>2015</td>
<td>19,559</td>
<td>102.3</td>
</tr>
<tr>
<td>2016</td>
<td>19,877</td>
<td>102.6</td>
</tr>
<tr>
<td>2017</td>
<td>20,313</td>
<td>103.3</td>
</tr>
<tr>
<td>2018*</td>
<td>20,822</td>
<td>104.6</td>
</tr>
<tr>
<td>2019*</td>
<td>21,130</td>
<td>106.0</td>
</tr>
</tbody>
</table>

Note: 1) 2018* and 2019* calculated by author.
2) Housing supply ratio is defined as the total housing units/no. of households x 100. Generally, the ratio excludes officetels (75,000 in 2018 and 89,000 (scheduled) in 2019) and one-room units from the housing category, and hence, the actual housing stock may be underestimated.
3) The indicator for the housing supply ratio shows the quantitative level of housing stock but cannot show the state of distribution by region.

Table 2: Total Housing per 1,000 Persons

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2018*</th>
<th>2019*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Housing per 1,000 Persons</td>
<td>357</td>
<td>383</td>
<td>403</td>
<td>412</td>
</tr>
</tbody>
</table>

Note: 1) 2018* and 2019* calculated by author.
2) 2018: estimated 20,822,000 units and 51,623,000 persons.
3) 2019: estimated 21,331,000 units and 51,623,000 persons.

Source: Statistics Korea, Population Projections for Korea.

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Figure 1: Growth Rate for the Housing Supply

- The number of building permits in 2015-2017 far surpassed the basic housing demand (increase in households + number of housing losses) and the government’s mid- to long-term plan for housing provisions.
- The housing supply exceeded the basic housing demand by 358,000 units in 2015, 325,000 units in 2016, and 296,000 units in 2017 (Table 3).
In particular, as the housing supply ratio hovered above 100% in 2015-2017, the housing supply was unprecedentedly large and reached well beyond the government’s mid- to long-term plan for housing supply (Table 2).

Meanwhile, the number of housing supplied (via building permits) in 2015-2017 was particularly steep in Gyeonggi-do.

The recent spike in the housing supply is the outcome of a complex combination of factors including the government’s large-scale construction and supply of housing sites; long time gap between the designation of residential sites and the pre-sale phase; dependence on construction firms’ low cost of capital and high pre-sale prices and; the impact of demand-side factors on the housing economy.

The recent surge is owed to the mass supply of residential sites that were designated in the early to mid-2000s to the private sector in 2014-2015.

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1. As of May 2019, unsold new housings in Gyeonggi-do marked 7,620 units, accounting for 13% of the nation’s total. As such, if the region’s supply increases again, it is possible that the number of unsold new housing will also increase.
The period from the designation of residential sites to the commencement of pre-sales was extended from 6.8 years (average for 2000-2012) to 9.8 years (average for 2013-1H 2017). This means that a rapid supply of residential sites is possible at any point during the long time gap, depending on the condition of the housing economy.

Once construction firms secure land ownership and receive a guarantee from HUG, it becomes easy to construct large-scale apartments at a low cost of capital through pre-sales.

The percentage of equity capital burden in total project costs is approximately 30-35% in major advanced countries but 4.5-9% in Korea (Table 4).

In addition to the supply-side factors, those on the demand side, such as low interest rates and eased macroprudential regulations e.g. LTV and DTI, may also be behind the rapid increase in the housing supply.

Construction firms were dealt huge financial blows during past housing-supply surges as they struggled to deal with the growing number of unsold new units during a two- to three-year period; which had a significant negative impact on housing finance-related institutions.

For instance, about 25% of the top 100 construction firms filed for bankruptcy (including court protection and workouts) and 145 construction firms went out of business.

The rapid rise in bankruptcies significantly undermined the financial soundness of the financial industry, particularly that of savings banks. Numerous branches had to suspend operations as a result, which contributed in part to the considerable decline of real estate project financing (PF).

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**Table 4** Construction Firms’ Percentage of Equity Capital Burden in Total Project Costs (%)

<table>
<thead>
<tr>
<th></th>
<th>Korea</th>
<th>US</th>
<th>Japan</th>
<th>Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of equity capital burden to total project costs</td>
<td>4.5-9</td>
<td>30</td>
<td>30</td>
<td>35</td>
</tr>
</tbody>
</table>

Empirical Analysis

It has been found that surges in the housing supply (apartment pre-sales) increase the number of unsold new housing after completion, and there is a time gap of three years.

- According to an empirical analysis, a 10% increase in the homes for pre-sale—controlling the changes in demand conditions—raises the number of unsold new housing after completion by 3.8% (three-year time gap, Table 5).
  - Data also revealed that, as of May 2019, Korea had 18,558 unsold new housing units, up by 76.4% from 10,518 in late 2015.
  - This increase appears to have been driven by the surge in the housing supply in 2015 based on the three-year time gap.
- According to a scenario based on the empirical analysis results, there will be approximately 20,000-30,000 unsold new units in 2019 and 2020 (Table 6).

The increase in unsold new housing after completion can negatively affect the financial soundness of construction firms (Figure 5).

- Unsold new housing after completion hikes up sales promotion expenses and management fees which increases the cost-to-retail ratio and thus, decreases the net profit interest coverage ratio.\(^5\)

Moreover, the inflow of apartment completions and move-ins was found to pull down jeonse prices, particularly in non-capital regions. The continued decline in jeonse prices is an indication that a reverse-jeonse crisis is spreading, centering around non-capital regions.

\(^5\) Operating income divided by interest expense; 1 means that the entire operating income is being spent for interest payments.
According to an analysis of urban panels, a 10% increase in apartment move-ins from the long-term average could decrease jeonse prices by 0.6-1.21% (Table 7).


- Gyeonggi-do is expecting a move-in of 187,000 units for this year, up by approximately 12% from last year, and its median jeonse price is estimated to be 230 million won, down by 0.75-1.48% from last year, which is 20 million won down from late 2017 (250 million won).

If the reverse-jeonse crisis spreads, tenants may face more liquidity constraints and landlords may become further burdened by the pressure to refund jeonse deposits on time. This could also have negative repercussions for the financial soundness of institutions providing jeonse loans and guarantees for jeonse-deposit refunds.
The unprecedented rise in the housing supply in 2015-2017 is driving the recent increase in unsold new housing and decrease in jeonse prices. As such, preparations need to get underway for the potential risks to the construction industry and housing market.

- Regarding the projected 20,000-30,000 unsold new housing (approx.) for this year and next, construction firms and related financial institutions need to be prepared for the short-term potential risks.
- Meanwhile, both lessors and lessees alike will face cash flow problems as the inflow of housing completions for this year decreases jeonse prices and the reverse-jeonse phenomenon spreads later this year. Thus, the government should develop measures to protect tenants from the phenomenon and monitor the risk factors in institutions providing jeonse-related loans and guarantees.

With the housing shortage resolved and housing finance market developed, the government needs to seek out a way to prevent a recurrence of the housing supply surge.

- Complementary measures should be injected into the current housing supply market system to further raise the capital burden and responsibility of construction firms.
  - Above all, the capital burden for construction firms should be raised to the level of the leverage yield expected from pre-sale projects.
  - At the same time, financial institutions should have stronger autonomous expertise and responsibility so that construction firms are able to use project financing without relying on the pre-sale payments of consumers.
- Meanwhile, given that the time gap between the designation of the housing site and actual supply time increases, the government’s housing supply may escalate supply volatility. As such, the government should take a more cautious approach when planning to supply housing through the creation of residential sites.
  - The future direction of housing policies should focus on revitalizing urban areas.
- Furthermore, a small-sized housing supply is primarily needed to meet the new demand for various types of housing arising from evolving social trends such as the rapidly declining number of households; lowest birth rate in the world and; increasing single-person households.

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