Development of a Method to Estimate the Housing Supply/Demand Based on the Characteristics of the Region

Period of research: FY2015 to 2017

FUJIMOTO Hidekazu, Head   KOBAYASHI Hideyuki (Ph. D.), Researcher
UTSUMI Koya (Ph.D.) Researcher, Housing Planning Division, Housing Department

Keywords: Housing stock, estimation of the future, vacant house, measurement evaluation

1. Background and Purpose

In the context of a seriously declining population, the number of houses has already exceeded the number of households and the increase in the number and ratio of vacant houses has become problematic (Figure 1). Under such circumstances, it is necessary to map out a housing plan where existing housing stock is fully utilized. However, as the characteristics of the residents and the trend of such stock vary from region to region, it is important to map out an appropriate housing plan based on the actual situation and tailored to the characteristics of the region.

In this research, in order to obtain detailed information on housing stock, we are going to estimate the approximate number of houses that will be needed (housing demand) and of the houses that will exist (housing supply) in the future based on statistical data.

2. Research Details

We estimate (A) the stock of housing by the type of house (housing supply) and (B) the number of households by the type of household (housing demand) both in the future by using existing statistical data (Figure 2). By grasping the balance between (A) and (B) (balance between housing supply and demand), it will be possible to concretely examine the policies related to (i) grasping the number of vacant houses by region in the future, (ii) setting a target for the supply of new houses, and (iii) setting a target for the utilization of existing housing stock.

3. Current Status and Plan

We paid attention to the status of housing stock (houses where someone resides and vacant houses) and changes over time and, as a result, developed a method to grasp the actual figure to estimate (A) the stock of housing (Figure 3). (This has already been submitted as paper to the Architectural Institute of Japan.) Hereafter, we will continue to grasp the housing supply and demand based on the characteristics of each region and promote research that contributes to the appropriate management of housing stock in the future.
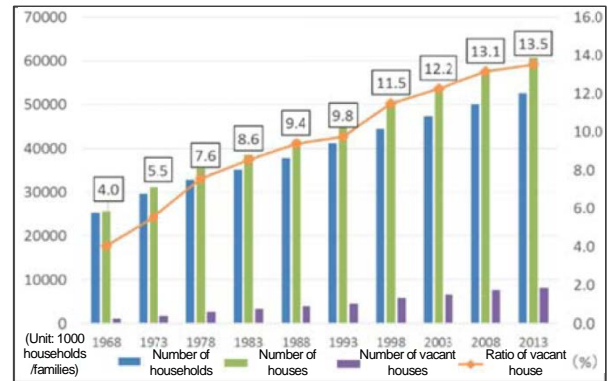

Figure 1: Transition of Number of Households, Houses and Vacant Houses and Ratio of Vacant House
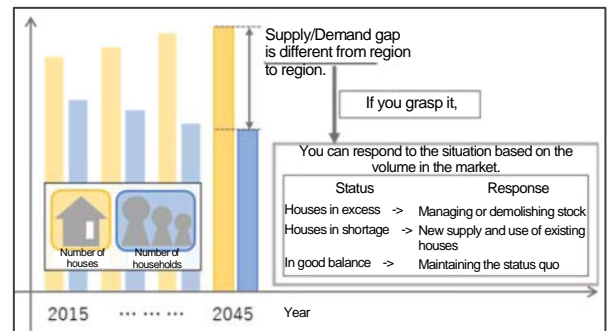

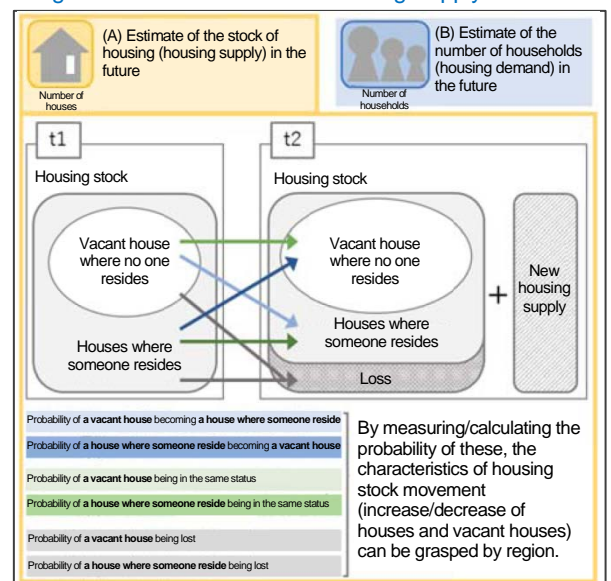Figure 2: Schematic View of Housing Supply/Demand

Figure 3: Schematic View of How to Grasp and Estimate Housing Supply