

# Economic Impacts of Immigration in Japan

## 要約

The economic impact of immigration<sup>1</sup> has been a hotly debated topic in the developed countries. As such, it has been studied extensively, especially in the Western world. On the other hand, Japan has maintained a conservative stance on immigration. Despite so, Japan has been slowly, but steadily accepted more immigrants in recent years. According to table 1.1, the immigration population has almost doubled from 2000 to 2019. The principle of the immigration policy has been about welcoming only high-skilled workers. Regardless, less-skilled immigrants have been brought into Japan legally under different types of visas. Column 4 of table 1.1 calculates how much the growth in immigrants in each visa category contributes to the growth in immigrants of all visa categories. The numbers indicates that the less-skilled worker group has the largest growth<sup>2</sup>. In 2019, a new visa category was established to accept immigrant workers in specific industries. The targeted industries, and the fact that the visa was set up separately from other high-skilled visa categories show that it aimed at less-skilled immigrants. Thus, the increasing trend in immigration is expected to continue in the future and, hence, raises the need to estimate the impact that immigration has in Japan. This dissertation aims to do so in the following chapters.

Chapter 2 estimates the impact of immigrant population on bilateral trade between Japanese prefectures and foreign countries. Immigrants can increase trade value through two channels.

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<sup>1</sup> In Japan, foreign-nationals are referred to as foreigners. However, for consistency with the literature, this dissertation will refer to them as immigrants.

<sup>2</sup> International students are included in the less-skilled workers category due to their increasing participation in the Japanese labor market. In 2000, 7,923 international students were working (according to the “Foreign Employment Survey” by the Ministry of Health, Labour, and Welfare of Japan (MHLW)), out of 114,761 international students recorded (from “Statistic on Foreign Nationals Residing in Japan by the Ministry of Justice Japan). On the other hand, in 2019, 318,278 international students were working, out of 345,791 international students recorded. In other words, the share of international students in the labor workforce has increased from 6.90% to 92.04%. Note that the numbers may not be comparative since they are from different surveys. However, it still illustrates the fact that a large number of international students participate in Japan’s labor force.

First, immigrants can utilize knowledge of their home country to reduce bilateral trade costs and, in turn, improve trade. Second, immigrants bring with them preferences for goods from their home country. Thus, an increase in demand for goods from immigrants' country of origin leads to higher imports. Since imports is affected by both channels, immigrants are expected to have larger effect on imports. The empirical results confirm this implication. Another way to test the hypothesis is to categorize traded goods into consumer goods and industrial goods. As expected, estimation results confirm that immigrant population has a larger trade effect on consumer goods. Finally, estimating the impacts on the margins of trade reveals that an increase in immigrant population improves trade through both the intensive (defined as trade of existing goods) and extensive (defined as the number of traded goods) margins, but mainly through the intensive margin.

Chapter 3 shifts the focus to local economic growth. Specifically, growth of regional output is disaggregated into growth of several factor inputs, using production function approach. The panel estimation implies that immigrant workers only positively affect the total number of workers. On the other hand, utilizing Geographically Weighted panel regression (GWPR) shows that several of the economic effects induced by immigrants are masked. While the positive effects on labor force persist in most prefectures, local labor forces in the middle region do not benefit from an increase in immigrant workers. Capital-to-output ratio is negatively affected in many prefectures in the northern of Japan, which is the result of a positive impact on output growth, but not on capital growth. Both methods consistently indicate that an increase in immigrant workers expand the local labor force, without depressing wage. Using simple supply and demand theory, if the demand curve shifts to the right simultaneously then the supply curve shifts to right due to an increase in immigrant workers, then the wage level will remain unchanged. Finally, estimating the coefficients generated by GWPR on different groups

of immigrants indicate that the economic impact of immigration correlates with the industrial structure of each prefecture.

One of the commonly debated topics when accepting immigrant workers is the impact they have on the native workers. Chapter 4 tries to answer this question by utilizing the anonymized version of Japanese Population Census microdata. A panel data for 47 prefectures (30 large cities) in 2005, 2010, and 2015 is constructed by aggregating workers by skill groups, year, and prefecture (city). To avoid the “downgrading” effect, skill group is defined as industry-occupation combination, instead of education-experience. The results indicate a negative effect on the number of native workers at city-level but not at prefecture-level, implying that native worker responses to an increase in competition due to immigration by moving to nearby cities in the same prefecture. To better understand the impact on the natives, workers are further grouped into regular and temporary workers. Interestingly, regular workers are negatively affected by immigration, but not temporary workers. This discrepancy might be due to the characteristics of the employment contract. Since regular workers have better employment protection and possibly higher wage insensitivity, firms can become more profitable by replacing them with immigrant workers, who are more likely to accept lower wage and harsher working conditions. On the other hand, the number and the wage of temporary workers can be easily adjusted. Thus, while an increase in temporary immigrant workers do not affect the employment of their native counterparts, it is possible that the wage has been adjusted. However, it is not possible to confirm this hypothesis due to data availability. Finally, in contrast with previous literature, there is no evidence that immigration negatively affects the inflow of native workers.

Based on the above results, chapter 5 proposes policy changes that aim at integrating the current immigrants into the society. Specifically, I propose 1) supporting immigrants in

acquiring Japanese language skills, and 2) ensuring that children of immigrant receive sufficient education. The purposes are to alleviate the “downgrading” effect, as well as to cultivate high-skilled workers. Proper integration policy is essential in reaping the expected economic outcomes, and also to avoid future social problems. Finally, the dissertation ends by surveying research on another important effect of immigration: the fiscal impact. While an increase in immigrants raises tax revenue, it also raises spending on social benefits. Hence, it is important for welfare states to measure the impact of immigration on the public budget.