Does immigration raise house prices? A question of correlation and causation

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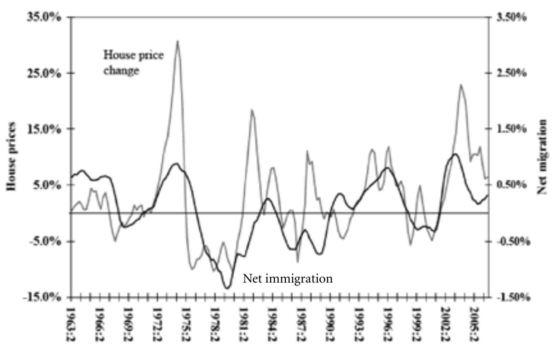
International migration is an important socio-economic phenomenon for most countries. A large body of research has focused on immigrant outcomes – what happens to migrants in their new countries? How long do they settle? Are they 'better off' socially and economically? One stream of migration research at Motu Economic and Public Policy Research, led by Steven Stillman and David C. Maré, focuses on the impact of immigration on the New Zealand born population and on earlier migrants. This work has explored whether immigration affects where New Zealanders choose to live, and whether it reduces employment opportunities or wages for New Zealanders. In both cases, it appears that immigration has little impact. This article focuses on immigration and house prices. For this question, it takes a little longer to untangle the factors involved.

The big picture

Migration in and out of New Zealand creates significant fluctuations in housing demand. Between 1986 and 2006, permanent and long-term immigrants added an average of 0.1 percent annually to the New Zealand population, compared with a natural increase (from births minus deaths) of 0.8 percent annually. In general, any population growth increases demand for housing.

However, in contrast to New Zealand's relatively steady natural increase, migration flows vary markedly throughout the period. In 1986, migration outflows roughly offset the natural increase, whereas in 1996, 2002 and 2003 migration added more to the population than the natural increase. The important observation for this research is that these periods of high net immigration into New Zealand were also periods of high house price growth. This relationship is shown in Figure 1.

Figure 1: Changes in house prices and net immigration



Source: Coleman & Landon-Lane (2007)

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The correlation between high immigration and house price growth is strong: our findings indicate that a one percent increase in population from migration at the national level is associated with a 12.6 percent increase in house prices. The word 'associated' is used purposefully in the previous sentence because it is widely believed that immigration *causes* house price increases. For example, the Reserve Bank's December 2007 Monetary Policy Statement refers to "a strong housing market fuelled by the combination of a sharp increase in immigration and an extended period of unusually low global interest rates" (Reserve Bank of New Zealand 2007).

Yet as any aspiring economist or statistician will know, a correlation between two events does not require that one causes the other. In this instance, an alternative explanation for parallel increases in migration and house prices at a national level is that both events are influenced by a third factor. We refer to this factor as 'business cycle effects': put simply, business cycle effects are how well the economy is doing in a given year.

Looking locally

One way to determine the relative impacts of immigration and business cycle effects is to look locally since the business cycle typically impacts all areas of the country simultaneously. If immigration is causing house price increases, we might expect to see this effect more clearly in local areas with higher net migration. This is evident in a number of overseas studies (e.g. Saiz 2003, 2007; Ottaviano & Peri 2007). In effect, we are taking a microeconomic approach to what was before a macroeconomic observation. Our analysis looks at local areas, specific populations and specific parts of the house price distribution to better understand what is happening in the data.

The analysis uses demographic data from the 1986, 1991, 1996, 2001, and 2006 New Zealand censuses, housing sales data from Quotable Value New Zealand and housing rents data from the Department of Building and Housing. The census data records an individual's place of birth, current usual residence and residence five years previously. From this information we classify individuals as 'new immigrants' (born overseas and living overseas five years previously), 'previous immigrants' (born overseas but living in New Zealand five years previously), 'returning New Zealanders' (New Zealand born but living overseas five years previously) or 'local New Zealanders' (New Zealand born and living in New Zealand five years previously).

Each individual is linked to a Labour Market Area (LMA). Newell and Papps (2001) divide New Zealand into LMAs using an algorithm where most people who live in an LMA work in it, and most people who work in an LMA live in it. This definition of a local area was chosen as optimum for the effects we are interested in. Two additional definitions – territorial local authorities and regional councils – were included as a check on the findings.

Finally, we control for possible house price increases from migration in specific parts of the house price distribution. This takes into account the possibility that different population groups may affect high-price or low-price housing but not change overall prices. We also separate rents and sales prices.

Findings

The relationship between increases in house prices and migration looks quite different at a local level. Local population increases from all sources are positively correlated with local house price increases, but the link is much smaller than what is found at the national level: a one percent increase in population is correlated with only a 0.2–0.5 percent increase in house prices.

This effect all but disappears when we include controls for demographic changes in each area. This suggests that house prices are moving in ways that we would expect given observable changes in population characteristics such as age composition, overall incomes and qualification levels. Increases in income levels, for example, are positively correlated with increases in house prices.

If we separate population growth into the four sources described above (new immigrants, previous immigrants, returning New Zealanders, and local New Zealanders), a more interesting picture emerges. Population increases from three of these groups, including both immigrant groups, again show no significant link with house price increases – and some appear to be slightly negatively correlated. However, population increases attributed to returning New Zealanders are strongly correlated with house prices: a 1 percent population increase from returning New Zealanders is associated with a 9.1 percent increase in house prices. (This figure drops slightly to 7.6 percent if we control for demographic changes as before.)

An effect on house prices from returning New Zealanders fits with the demographic characteristics of this group, though the large size of the effect is surprising. Returning New Zealanders are more likely than other groups to own their own homes and more likely to be aged 25-64 (a prime age bracket for purchasing your own home). They are also more likely to work full time.

These findings clearly differ from those of similar studies in the United States, where foreign-born immigration has been shown to lead to higher local house prices (e.g. Saiz 2003, 2007; Ottaviano & Peri 2007). As further support, however, the findings are consistent with related Motu research, which suggests that immigration also has little impact on the labour market.

Alternative explanations

If immigration does not cause rising house prices, how else can we explain the clear correlation between the two factors at a national level? As introduced above, one explanation is to attribute both immigration and house price increases to unspecified 'business cycle effects'. In this scenario, immigrants are more likely to come to New

Zealand when the country's economy is doing well and overall house prices are increasing.

Another possibility is that house prices adjust quickly across local areas even where immigrants are unevenly distributed. The five-yearly census data is a reasonable time period for this to occur. We hope to explore this possibility further in future work.

Questions to consider

1. How might immigration decrease wages for New Zealanders? How might immigration increase wages for New Zealanders?
2. Why might immigration and house prices move together?

Further reading

A more detailed analysis of the link between house process and migration in New Zealand is presented by Stillman & Maré (2008).

Useful websites

House price data are available from www.qv.co.nz, and migration statistics can be sourced from www.stats.govt.nz

References

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