

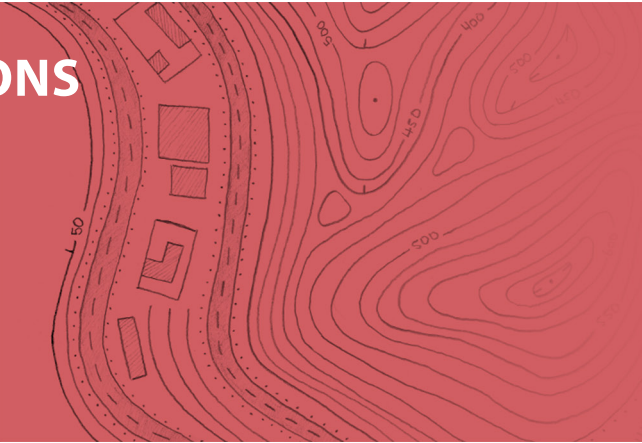
HIGHER EDUCATION INSTITUTIONS AND REGIONAL GROWTH IN NEW ZEALAND

An Executive Summary

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INTRODUCTION

Universities
Bring extra population
And more employment

Do universities and polytechnics lead to better economic outcomes in their local area? Using a sample of 57 New Zealand Territorial Local Authorities between 1986 and 2013 we find that Local Authorities with a greater share of equivalent full time students to working-age population experience faster population and employment growth. This is particularly true for universities, and holds even after controlling for a range of other factors that affect population and employment growth.

The researchers consider higher education institutions as a form of infrastructure which has the potential of improving both the local level of productivity and the local stock of amenities, leading to an inflow of people and jobs.

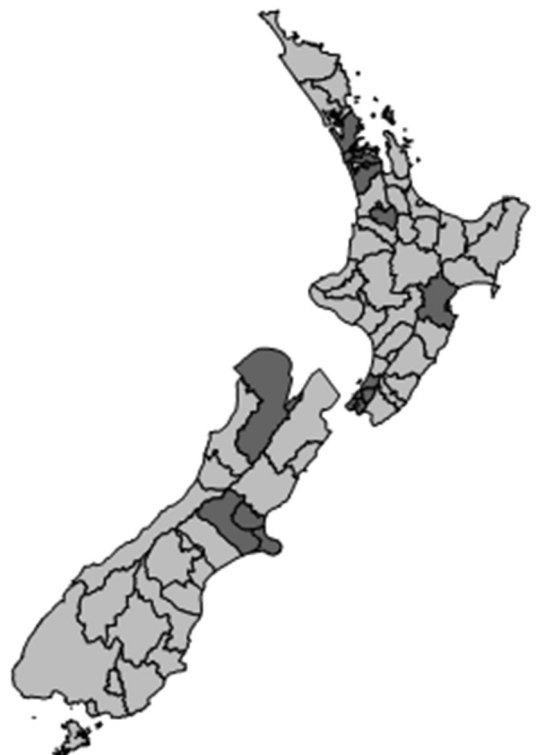
New Zealand's Territorial Local Authorities

METHODOLOGY

The sample consists of six waves of census data between 1986 and 2013, aggregated to 57 Territorial Local Authorities (TLA - defined as a cut). There are six amalgamated TLA groups: Auckland (amalgamation of all TLAs within the former Auckland Regional Council area), Greater Hamilton (amalgamation of Hamilton City with Waipa District), Napier-Hastings (amalgamation of Napier City and Hastings District), Greater Wellington (amalgamation of Kapiti Coast District, Porirua, Upper Hutt, Lower Hutt, and Wellington Cities), Nelson-Tasman (amalgamation of the Nelson City and Tasman District) and Greater Christchurch (amalgamation of Christchurch City, Banks Peninsula, Waimakariri, and Selwyn Districts).

In the map on this page shows the various New Zealand TLAs, highlighting the amalgamated areas in dark grey.

Because of limitations in the information available on equivalent full time student (EFTS) counts in wānanga and private training establishments in earlier periods, the sample does not include data from these institutions. However, the institutions that we do include account for over three quarters of the overall EFTS population in New Zealand.



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More importantly, they include almost the entire EFTS population enrolled towards qualifications at the bachelor degree level or above, and the vast majority of research and development produced by higher educational institutions.

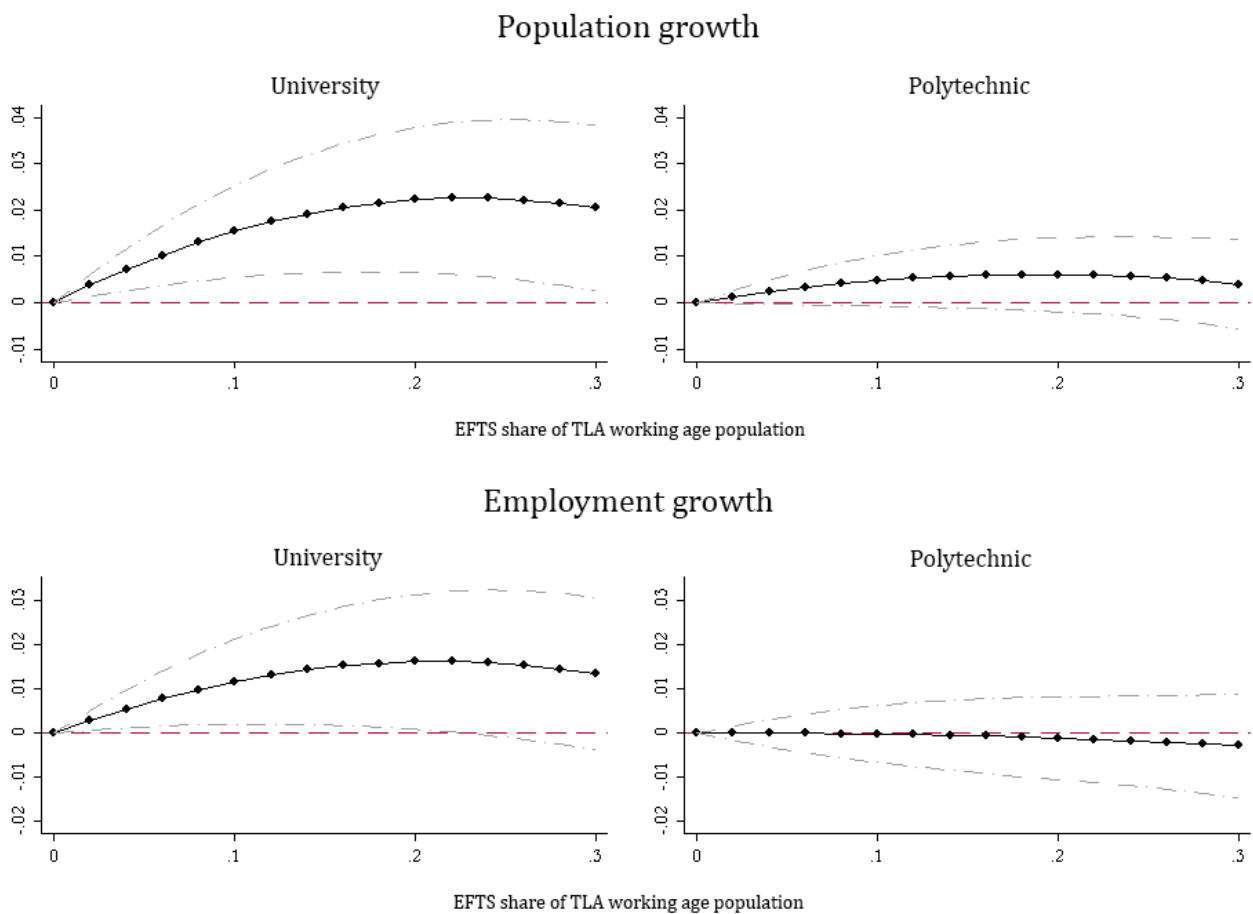
The researchers tested for robustness using alternative samples, variable definitions of higher educational institutions and estimation techniques. They controlled for local time-invariant factors, national and local time-variant factors and for lagged growth to control for the possibility of reverse causality.

In addition, to control for the possibility that variation in institution activity could be driven by perceived future potential (rather than current performance) of the area, they included the five, ten and twenty year official (medium) population projections that were publicly available in each period. Inclusion of these projections is a novel approach designed to capture the influence of time-variant factors that are otherwise unobservable to the researcher. This approach could be of use in other regional studies.

RESULTS

Results presented here are based on difference GMM (generalised method of moments) estimates.

There is a consistently positive relationship between university presence (measured by EFTS as a ratio of working age population) and local population and employment growth. At the mean, a one percentage point increase in the university EFTS share is associated with a 0.19pp (0.14pp) increase in the annual average population (employment) growth rate. There are some similarities for the effects of increases in polytechnic EFTS shares, but their association with growth is weaker and far less clear. Figure 2 plots the predicted population and employment growth effects associated with different university and polytechnic EFTS shares.



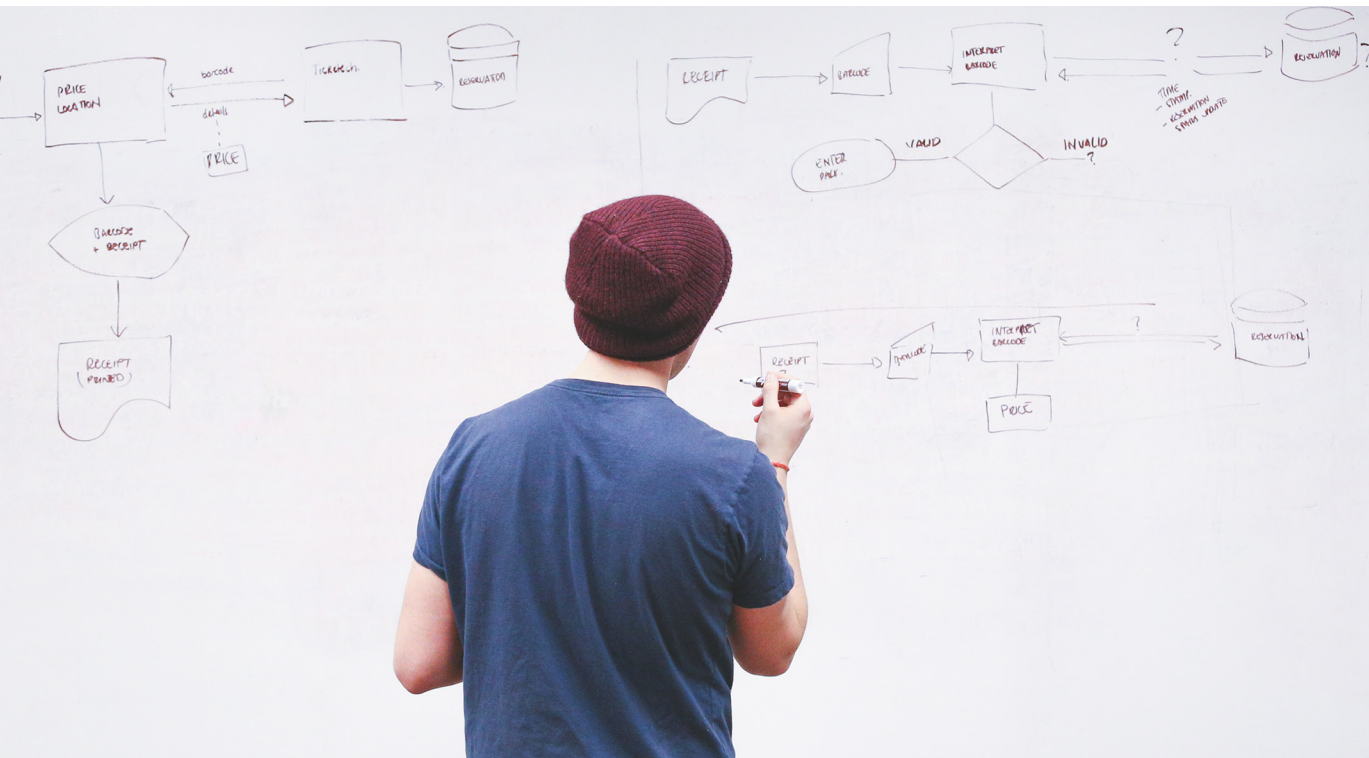


Note: Stronger red colours indicate faster positive growth, while darker blue colours indicate stronger negative growth.

The research found no evidence of a link between university presence and measures of innovation (such as patent activity) or urbanisation (such as population density) in affecting local growth. Similarly, the research found no evidence that university presence affected the industrial (sectoral) structure of the local economy.

A natural extension to this work (subject to obtaining suitable data) would be to analyse whether differing courses of study within universities and polytechnics have differing effects on local population and/or employment growth. Investigation into the complementarities between these differing courses of study and local characteristics (such as urbanisation or innovative activity) should be of strong interest.





CONCLUSION

Holding all else equal, Local Authorities with a greater share of equivalent full time students (relative to their local working-age population) grow faster both in terms of population and employment. This is particularly the case for universities, although polytechnics may also have a minor effect.

Spillovers from higher education institutions to their hosting areas may occur if agents located nearby can more cheaply and easily utilise their intellectual output. Holding all else equal, the productivity of these local agents can be expected to increase, leading to faster growth in these areas.

We observe that university locations tend to have a high share of workers with at least a bachelor degree. However there is no statistically significant difference in the share of working age population having a vocational qualification when university locations are compared with locations that have a polytechnic but no university, or with areas that have no higher education institutions. This suggests that vocationally-qualified workers are less likely to congregate in locations where their qualifications were earned, while degree-qualified workers are more likely to congregate in cities with universities.

Based on these results, local policy-makers wishing to support local employment and population growth may wish to facilitate the expansion of their higher education institutions. This support may have particular growth dividends for the six cities in New Zealand that host major university campuses.

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