

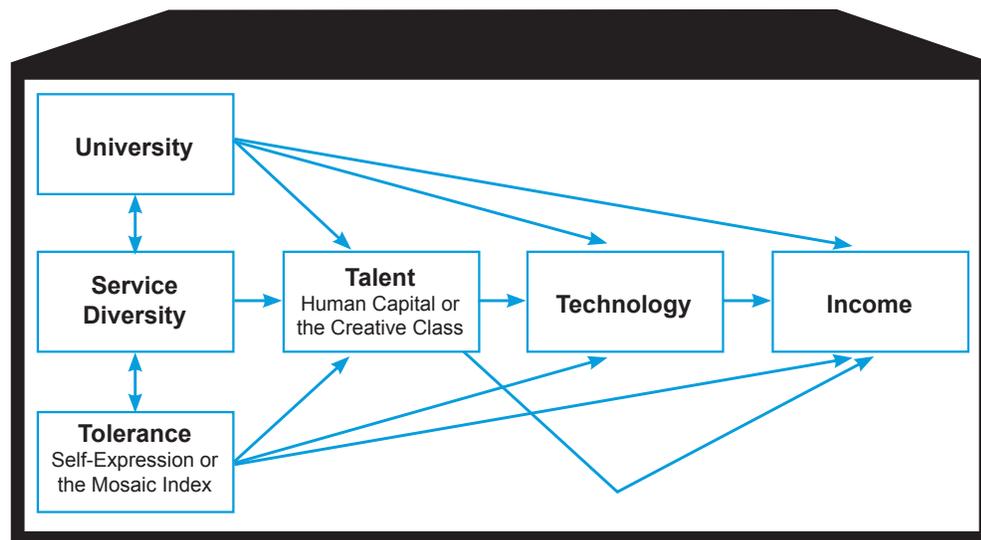
## Inside Canada's Black Box of Regional Development

Creative Class/ Human Capital/ Income/ Service Diversity/ Technology/ Tolerance/ University

What do these terms have in common and how do they contribute to regional prosperity? These terms are often studied independently; however, a closer look reveals that they are all interconnected and form an economic ecosystem that facilitates regional development.

In order to begin to understand this ecosystem, we differentiate the terms listed as either Outcome factors (Talent, Technology and Income per capita) or Regional Setup factors (University, Service Diversity, and Tolerance). To observe the system we created an interactive model where we can quantify the impact that specific occupational groups such as managers, business and finance, health and arts, and cultural occupations have on the ecosystem. (See diagram below).

### The economic ecosystem



In this ecosystem the Outcome factors are directly affected by:

- **Talent** – the size of universities, the diversity of consumer services and tolerance
- **Technology** – quality of talent, universities, the diversity of consumer services, and tolerance
- **Income** per capita, which approximates regional economic development and is dependent on universities, tolerance, talent and technology

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Using economic modeling techniques the significance of these linkages on income per capita can be measured and reveal some very interesting results for Canadian metro regions. The model reveals that the largest impact on regional economic development comes from two major factors: 1) Talent, as measured by human capital and how this manifests by the share of the workforce in the Creative Class; 2) Tolerance, as measured by self-expression variables and the Mosaic Index as the proportion of the total population that is foreign born and an indicator of the ability of a region to attract and retain the immigrants needed to diversify the talent pool. Not surprisingly, the university used as a Regional Setup factor, is found to be a talent producing factory but has a weaker than expected effect on technology. With these two factors the path is laid to creating technology. These high level results verify and validate the importance placed on talent in theories of economic development.

Regional development is shaped by the 3Ts of technology, talent and tolerance. In the economic ecosystem, the Talent factor can be replaced by occupations to understand the regional returns associated with specific types of economic activity. The Creative Class is composed of people who are generally paid to think and includes occupations related to Technology, Arts and Culture, Professional and Managerial and Education (TAPE). Using TAPE occupations, the system showed that certain types of jobs have a larger direct impact on regional income per capita than might have been expected, while others work through technology to ultimately increase incomes/wages.

Interestingly, Professional Occupations in Natural and Applied Science are the most highly correlated with technology and higher income per capita in Canadian regions. Regions need people employed and engaged in research, development and related activities.

Managerial occupations of all types also play important roles within the ecosystem; they help to organize assets, and promote innovation and commercialization. All three managerial categories within the talent factor showed a positive and significant correlation with technology and regional income per capita. As the share of the workforce classified as managers increases, there is a trend towards higher income per capita.

Broadly speaking, the results of the economic modeling suggest that for Canada, the Universities, Service Diversity, and Mosaic/Self-Expression jointly create an environment of tolerance and diversity that helps to attract the Creative Class. As members of the Creative Class, scientists and managers are among the most important occupations for regional economic development. However, we find that the effects of these occupational groups on incomes to be weaker compared to the results from comparable studies of the U.S. (Florida et al, 2008) using a similar methodology. This may be the result of lower productivity levels, since wage levels tend to be a reflection of economic productivity.

*The Martin Prosperity Institute ([martinprosperity.org](http://martinprosperity.org)) at the [University of Toronto's Rotman School of Management](#) is the world's leading think-tank on the role of sub-national factors – location, place and city-regions – in global economic prosperity. Led by Director [Richard Florida](#), we take an integrated view of prosperity, looking beyond economic measures to include the importance of quality of place and the development of people's creative potential.*

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