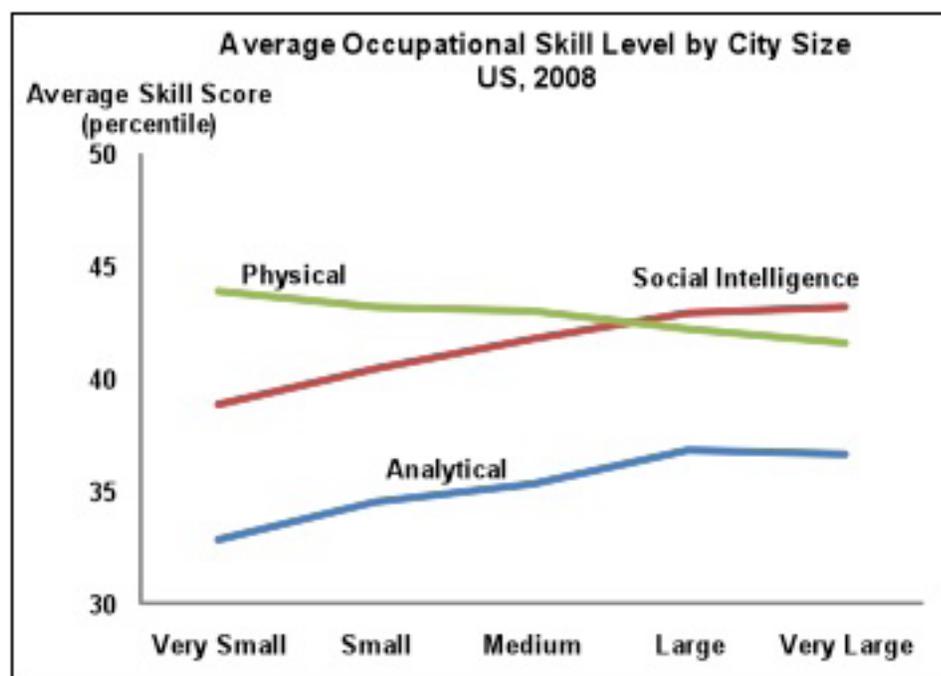


Cities of different sizes draw on different types of skills

In the third installment of the Martin Prosperity Institute's series on the creative content of occupations, the role of city size is examined. In previous Insights, it has been shown how the horizontal differentiation of skills is important for earnings. An occupation requiring high levels of analytical or social intelligence skills is associated with higher wages, while physical skills are not. This Insight now looks to how these three skills relate to city size.

It has been widely held that larger cities tend to host more highly educated and creative individuals (Florida, Mellander and Stolarick, 2008; Elvery, 2006). Skilled individuals may benefit from higher wages, efficiencies from proximity and diversity, economies of scale and positive spillover effects (Scott, 2009; Simon and Nardinelli, 1996). Skilled individuals attract other skilled individuals, which creates agglomeration effects in cities (Glaeser and Resseger, 2009; Jacobs, 1969; Lucas, 1988; Marshall, 1890).

However, the agglomeration of skills is not uniform across cities. Cities of different sizes draw on different types of skills. This distribution of skills is also a function of industry structure which can be driven by region size. Manufacturing is overrepresented in small and medium sized cities while knowledge and standardized services are more located in bigger cities. The chart below shows that larger cities have a mix of employment in occupations requiring higher average levels of analytical and social intelligence skills, whereas average physical skill content of occupations does not differ significantly by city size. Very large cities, defined by population greater than 2 million such as New York, NY or Washington, DC, draw most heavily on social intelligence skills.



Very small cities, defined by a population between 100,000 and 250,000 such as Odessa, TX or Alexandria, LA, tend to rely more on physical skills.

Furthermore, research in the working paper *Cities, Skills and Wages* indicates that social intelligence skills have become more strongly correlated with city size over time. From 1999 to 2008, the relationship between city-region size and social intelligence skills has increased, whereas the relationship with analytical skills has decreased. One potential explanation is that individuals in occupations drawing on analytical skills work far apart or close together. However, social intelligence skills rely on human interaction, which is much more effective in person than at a distance. The clustering and agglomeration of these skills will continue. Additionally, it can be said that physical skills have gone from no relationship in 1999 to a negative one in 2008 with regional size. This means that more the more populous the city-region, the lower the occupational content of physical skills.

The prevalence of thinking skills, such as analytical and social intelligence, in larger cities reinforces some of Jane Jacob's (1969) early thinking. She observed that thinking skills clustered in large cities, and that a major driver of economic growth is the ability to innovate—an ability that is derived from analytical and social intelligence skills.

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The Martin Prosperity Institute 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.