



COLLABORATING FOR INVESTMENT ATTRACTION IN THE TORONTO REGION

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EXECUTIVE SUMMARY

Established in February 2017, Toronto Global is a leading investment attraction agency in Canada, and one which is designed to act on behalf of all of the municipalities that comprise the Toronto Region. The underlying rationale for the establishment of this regional agency is two-fold: a belief that foreign direct investment (FDI) in any one part of the Toronto Region stands to benefit all sub-regional municipalities, and an understanding that a collective regional value proposition is stronger than the sum of its parts.

This research paper provides both quantitative and qualitative analysis of the economic impact of FDI into the Toronto Region, providing data-driven support for this rationale. It also contributes to knowledge of how the regional economy operates, as well as an understanding of how both foreign and domestic firms weigh location decisions. These insights highlight how firms at home and abroad view the Toronto Region's strategic assets, which strengthens Toronto Global's ability to describe the region's value proposition to potential investors.

Quantitative Insights

A multi-regional input-output (MRIO) model was used to understand the regional distribution of economic impacts – value added (GDP), gross output, employment, wages, taxes and imports – associated with recent FDI projects in the Toronto Region. The MRIO used in this analysis was specifically designed to consider the unique industrial bases of the regional municipalities that make up the Toronto Region, as well as the inter-industrial interdependencies that exist between them.

The report analyzes seven FDI projects across the Toronto Region, spanning several high value-added industry sectors. These included three investments made in York Region (GM's Automotive Software and Research Centre, IBM's Soft-Layer Data Centre and Huawei's expanded Canadian headquarters focusing on telecommunications infrastructure and networks), two in the City of Toronto (Cisco's ICT research and development facility and startup incubator and Thomson Reuters' new Toronto Technology Centre), one in Durham Region (Hans Steel manufacturing facility) and one in Mississauga (Roche's Global Pharmaceutical Development site). Because large firms rarely announce a specific investment figure as part of a new expansion, the model imputed a value to the investment, based on the number and type of jobs announced by the companies.

The results generated by the MRIO model offer several important insights:

- The model showcases that FDI, regardless of location, benefits the region as a whole. While the host jurisdiction sees the greatest share of economic benefits associated with any investment project, all regional jurisdictions ultimately benefit in terms of employment creation, taxes, the purchase of supplies and services as well as other benefits, to varying degrees.
- The City of Toronto is typically the second largest beneficiary (after the host jurisdiction) of economic impacts in the examples of investment projects undertaken in other parts of the GTA, reflecting its anchoring role within the region. The magnitude of benefits accrued outside the host jurisdiction is generally proportional to the size of the jurisdiction and diversity of its economy. Being well connected to the host jurisdiction also helps to increase the level of economic benefits other jurisdictions receive from an investment project. For example, Peel Region receives the third largest impact for investment undertaken outside its borders, which can be attributed to its diverse industrial base and high degree of connectivity between the City of Toronto and York Region.
- The magnitude of the economic return on investment for a project does not depend on the size or location of the initial investment. Investment projects generating more than a 100% return in value added span all jurisdictions and all investment levels.
- Between 78 and 98% of the economic impacts of an FDI project (i.e. value-added, gross output, employment, wages, and imports) fall within the borders of the Toronto Region, giving some indication that the region truly does operate as an economic entity. Importantly, the modelling results suggest that over 83% of the jobs generated by the investment projects remained in the Toronto Region.
- The federal and provincial governments receive a far greater proportion of the tax revenue generated by an FDI project than do local municipal governments. The tax revenue collected by the province is roughly three times that of municipal governments (makes sense since the Province and Federal governments derive their revenue from a wider tax base, including income and other taxes not available to the municipalities)

Qualitative Insights

While the Multi-Regional Input-Output (MRIO) modelling is useful for analyzing and comparing the distribution of economic impacts of various FDI projects across the Toronto Region, the approach is static and therefore unable to capture the dynamic impacts that accrue to the region from the establishment of these new operations. The model results do not illustrate, for example, the linkages between industries and jurisdictions and how greenfield investment may affect them over time. These structural changes to the regional economy may represent more meaningful effects than changes in income at an aggregate level can demonstrate.

To address this concern, the quantitative findings were supplemented with a qualitative analysis that included: (1) a review of scholarly literature regarding global outsourcing, the formation of global production networks and regional economic development and (2) in-depth firm-level interviews with many of the multinational enterprises (MNEs) examined in the quantitative analysis, as well as a few others to include investments in additional locations and industries.

The purpose of the literature review and the interviews was to explore the factors that may have led these companies to locate specific operations in the Toronto Region and to examine the extent to which these firms are articulating with local domestic firms and ultimately contributing to the functional upgrading of the Toronto regional economy (and, conversely, the integration of the regional economy into the broader global economic system). The scholarly literature on global production networks (GPNs) and strategic coupling offer a conceptual scaffolding on which to develop these ideas.

GPNs are defined as a means of economic organization through which firms coordinate the production of goods and services across multiple geographic locations. GPNs are comprised of many actors and activities that transform tangible materials and intangible inputs into manufactured products and/or services for customers. Controlled by “lead” or “focal” firms which often take the form of large multinational corporations (MNCs), GPNs are international in scope, and the activities contained within them can range from resource extraction and materials processing to conceptual design and high-end fabrication and services.

Lead firms heading GPNs make decisions to “land” particular functions in particular locations based on the potential of said locations to generate profitability and flexibility for the lead firms and their GPNs overall. This “landing” process is referred to in the scholarly literature as “strategic coupling” as it depicts a process whereby economic functions are distributed in space to those locations which offer the lead firms various strategic advantages (e.g., lower costs, faster time to market, quality levels, access to experienced labour etc.). Regional institutions (such as agencies like Toronto Global) play a critical role in aligning the region’s assets to the strategic needs of lead firms and their associated partners and suppliers.

Viewed from the perspective of GPNs, regional prosperity becomes far more than simply optimizing the economic mix of activities within the region itself, and instead involves a given regional economy’s ability to occupy a position in given GPNs that convey to the region the highest possible levels of value creation and value capture. This involves matching the assets of the regional scale with the strategic needs of the GPN. The most favourable GPN value positions are typically those involving highly complex activities such as research and development and investments in data analytics, cloud computing and other forms of advanced information technology, which cannot easily be replicated by other regions.

For strategic coupling to succeed, the local subsidiary must become embedded into the local supplier and innovation networks to continually add value to the production process. This relationship benefits the local economy by allowing domestic firms to access markets, capital, technology, knowledge and capabilities beyond their home economies. By tapping into a GPN, firms reap economies of scale by focusing on particular tasks/functions for an entire GPN as opposed to only those for regional firms. Through the upgrading of skills and production processes or the introduction of new technological capabilities or organizational innovations, a region can improve its position within the value network (i.e., functional upgrading) allowing it to attract even more investment. The MNEs interviewed for this study – IBM, Cisco, General Motors, Huawei, Thomson Reuters, Siemens, Festo – have each located valuable research and development activities in the Toronto Region, embedding a critical component of their Global Production Network (GPN), and in particular high-value-added aspects of their supply chain, in the region.

Viewed through a strategic coupling lens, the region boasts numerous advantages enabling it to attract R&D investment from top global firms. With four universities and five colleges, the Toronto Region has a steady enrollment of more than a quarter of a million postsecondary students annually. A recent report by PwC report ranks Toronto fifth out of 30 cities in intellectual capital and innovation and tenth in technology readiness, just behind San Francisco, Tokyo and Paris.

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Global firms such as IBM, Cisco, General Motors, Siemens or Huawei are looking for an ecosystem of businesses and talent on which they can build to help strengthen their product offerings. Multinational enterprises that choose to locate within the GTA inevitably develop connections across the entire region through university partnerships, talent recruitment and business operations. This makes a regional approach to investment attraction all the more pertinent.

The strength and breadth of the Toronto Region’s universities in particular are key strategic assets for firms looking to invest in R&D. Cisco, GM and IBM all describe the value of building relationships with university researchers and startup firms that can feed into and help grow a local innovation ecosystem. Huawei has committed to investing \$10 million annually in university research funding in Canada, with \$3 million earmarked for the University of Toronto to collaborate on a diverse range of projects, from cloud computing, biomedical engineering, materials science and theoretical physics.

Developing a world-class research centre is an effective way for a region to boost its cost-capability ratio advantage. The knowledge and capability that comes with a leading university and a community of innovative startups cannot easily be matched elsewhere, giving the region a unique edge in attracting R&D mandates from multinational corporations. Lead firms must be able to tap into many sources of innovation to develop ideas and products that can compete in the global marketplace. By building a world-renowned research and startup community, the Toronto Region has given itself a winning value proposition for multinational corporations looking for top research talent.

Collaborating for Investment Attraction in the Toronto Region

Cross-industry partnerships are another big draw for lead firms. In the case of Huawei, the Toronto Region offers the advantage of having both a well-established automotive sector and a strong tech sector. As the company seeks to expand into the field of autonomous and smart vehicle technology, this combination offers significant opportunities for growth. Few regions around the world are as well-positioned to enable a lead firm to develop and roll out new technologies in this field. Cisco also chose the Toronto Region to leverage its stronghold in financial information systems and computing, partnering with IBM and TD Bank to grow its fintech capabilities. And, with a focus on machine automation, Toronto Region's diverse economy provides Festo with a diverse set of customers for its Industry 4.0 solutions while augmenting the region's attractiveness to firms who see value in increased productivity through sophisticated automation of production.

Many of the firms interviewed highlighted the GTA's large technical talent pool as a motivator to locate in the region. Lead firms often examine a region's ability to quickly and effectively fulfill skill and labour requirements when making location decisions. As IBM notes, Canada has the largest (software) developer population outside of the US, making it a strategic location in which to invest and carry out research. Ontario in particular, it says, boasts a stock of 200,000 highly skilled tech workers, and graduates about 4,500 tech students from its universities each year. Thomson Reuters points to this as the main factor behind its decision to open the Technology Centre in Toronto. The company has a goal of building a 1,500 person research team, which it says few locations in the world could accommodate.

The case studies often show how firms will build on their initial investment to broaden their presence across the region and further afield. Huawei's early success with its R&D program in Kanata led it to expand its research footprint all across Ontario, taking advantage of the specialized skillsets found in both the Ottawa and Toronto Regions. Siemens Canada located its head office in Oakville, yet it has set up operations, subsidiaries and a distribution network throughout the GTA. The diversity and range of the company's operations means that an investment in any one municipality is likely to have multiple spillover effects across the region.

The case studies in this report illustrate that lead firms base their location decisions on much more than what any one jurisdiction alone can offer. Global firms such as IBM, Cisco, General Motors, Siemens or Huawei are looking for an ecosystem of businesses and talent on which they can build to help strengthen their product offerings. MNEs that choose to locate within the GTA inevitably develop connections across the entire region through university partnerships, talent recruitment and business operations. This makes a regional approach to investment attraction all the more pertinent.

Conclusion

The quantitative and qualitative insights provided in this report offer strong support for having a collaborative regional approach to investment attraction in the Toronto Region from the point of view of both foreign firms and (sub)regional municipalities. Foreign firms consider the value proposition of the region overall when making a location decision and in turn not only inject jobs, value added and taxes, but more importantly, can transform and upgrade the entire regional economy through the investments they make and the local (and global) connections they form.

The MNEs interviewed for this report provide evidence that this transformation is underway in the Toronto Region. The decision by leading global multinationals to locate part of their advanced research and development activities in the GTA will offer tremendous economic benefits to the Toronto Region for years to come. While all jurisdictions across the region see a substantial rise in income and jobs as a result of these FDI projects, the most significant outcome of these investments is the transformation that comes with being part of a global production network. These investments signal an intent by these firms to embed critical elements of their business – and the market access, talent and intellectual capital that goes with them – into the fabric of the region. In turn, these projects offer much greater benefits than the sum of their parts.

This report shows that to attract investment from MNEs, city regions must think globally. The leading firms of today weigh location decisions on the basis of what strategic assets regions as a whole – not just particular jurisdictions – can offer them in the context of a highly competitive international marketplace. Working together to strengthen and promote the region's business and talent ecosystem will allow each jurisdiction to prosper while creating a winning value proposition to attract global firms.

Authors:

Richard J. DiFrancesco, Ph.D., M.C.I.P., R.P.P.
Department of Geography & Planning, University of Toronto

David A. Wolfe, Ph.D.
Innovation Policy Lab, Munk School of Global Affairs, University of Toronto

Econometric Research Ltd

About Toronto Global:

Toronto Global is a not-for-profit investment attraction group that supports the expansion of foreign-owned businesses to the Toronto Region. Representing the Cities of Toronto, Mississauga and Brampton, as well as the Regions of Durham, Halton and York, Toronto Global works with the Government of Canada, the Province of Ontario, and municipal partners to offer complimentary and customized services to growing international companies. Services range from sharing market research and intelligence that support decision-making, to facilitating local connections to support the establishment of operations. Toronto Global actively promotes the competitive advantages of the Toronto Region as an ideal location for corporate expansion.