

Clusters lead to higher wages, more valuable and unique products and stronger global competitiveness

Productivity gets rolling



In Part 6 of the Financial Post's 12-part series on Canadian competitiveness, Roger Martin, dean of the Joseph L. Rotman School of Management, at the University of Toronto, explains how sector clusters, such as local film industries, are essential for driving the economy, boosting productivity and fostering competitiveness.

BY ROGER MARTIN

Government advisors and policymakers seem to agree on one element of economic policy: the cluster. This word regularly rises from boardroom tables and conference lecterns, cited as the solution to all that ails the economy.

The notion of companies being clustered is garnering attention for good reason — clusters drive economic prosperity. However, the goal of creating a cluster is not yet part of a vision for future economic progress. Creating an environment where existing firms can become clusters is the key to sustainable prosperity.

Since the popularization of the term "cluster" in *The Competitive Advantage of Nations*, by Harvard Business School professor Michael Porter, there has been much confusion about what makes up a cluster. The word is so popular it has become synonymous with successful business practices. However, a cluster is not simply a single, well-performing firm, or a growing geographic area.

A cluster is a constellation of similar firms, their customers, suppliers, research and training institutions and other physical infrastructure all located near each other. A good example is the entertainment industry in Toronto.

The lines of white trucks on the city's streets are now a familiar sight. The caterers, costumers, production crews, actors and producers are the core of the cluster, but it also includes those working in related companies, such as talent agencies, and marketing and promotions firms. You know a cluster is forming when catering companies serving nothing but movie shoots establish themselves.

Ten years ago, such a business would have starved in Toronto. Now there are multiple competitors, as with providers of on-site trailers for actors, and movie set security services, and on and on.

All told, more than 46,000 people in the Toronto area earn their living in the entertainment cluster, making it third in North America behind New York and Los Angeles for movie shoots. (See "Planting the seeds so clusters can develop and flourish".)

A cluster provides the pressure and support necessary to cajole the participant firms into relentless upgrading of the services they supply. This upgrading results in more innovation in products and processes, greater productivity and enhanced competitiveness on a global level.

The pressure comes from companies in the same location competing with each other in an environment in which all firms face the same regulations, labour costs, tax regime, physical infrastructure, closeness to customers and so on.

With a level playing field on all of these dimensions, companies must innovate and upgrade in order to stand out from the crowd of competitors. And with a crowd to serve them, customers are emboldened to be demanding and sophisticated —



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which further drives innovation and upgrading on the part of the battling firms.

However, the cluster also generates its own support for upgrading — a nice counterbalance to the pressure. The movie production company is supported in doing its job better by the film equipment firms that try to outdo each other. Similarly, the production company is supported by the caterers, location services and so on. These suppliers are supported by another layer of specialized suppliers and so on.

Support also comes from specialized resources available to the competing firms, including universities and colleges, such as George Brown's acting program. The Location Library, operated by the Ontario Media Development Corp., which helps production companies find locations to shoot productions, is yet another example.

WHAT IS NOTEWORTHY IS THERE IS A CONSISTENT LINK BETWEEN CLUSTERS AND HIGHER WAGES

If there were but one production company operating in Toronto, none of this would exist, nor would any of the pressure. The lone company in one city competing against a strong cluster in another is largely out-matched because it benefits from neither the pressure nor the support of the cluster.

Another example of this dynamic relationship is Ontario's automotive parts manufacturing industry. It is a critical part of the automotive cluster, which is the province's third-largest industry and an important part of the economies of Toronto, Windsor, Kitchener, Oshawa and St. Catharines.

Companies such as Magna Interna-

tional, Linamar and ABC Group serve both Canadian and U.S. vehicle manufacturers. Automotive parts manufacturers face intense pressure from a very demanding set of customers — the world's leading automakers.

These customers demand more and more from their suppliers — increasingly exacting precision and quality standards, research and design support, and just-in-time delivery.

Price pressure from vehicle manufacturers is also relentless. Rivalry between automotive parts manufacturers is also intense — and their customers capitalize on this rivalry.

The parts makers also gain support from this agglomeration of customers, competitors and supporting institutions.

Customers' demands for stronger partnerships benefit parts manufacturers by giving them the opportunity to develop expertise in specific automotive niches.

Ontario's industry has access to a well developed network of high-quality steel, plastics and rubber suppliers. Automotive parts manufacturers draw on a highly skilled workforce — although there is a continuing challenge in recruitment and retention.

The industry will benefit from Auto21, part of the federal government's Networks of Centres of Excellence. Located at the University of Windsor, Auto21 brings together researchers from across the country to strengthen ties with vehicle and parts manufacturers in selected areas of research, which include materials and manufacturing, design processes, and intelligent systems and sensors. Parts makers should benefit from innovations developed by this network.

Policymakers are attracted to clusters because of the evidence linking them to high wages. In his U.S. research, Mr. Porter found a consistent link between clustered industries and higher-than-average wages — as much as US\$16,000 a year higher.

The evidence links clusters to higher productivity, more valuable and unique products and stronger global competitiveness, which in turn justifies higher wages.

Research at the recently formed Institute for Competitiveness and Prosperity focuses on understanding cluster dynamics and the role clusters play in driving economic progress.

Our recent working paper has mapped the clusters that are powering growth in Ontario, with an eye to understanding how the province's government, citizens and corporations can create the best possible environment for clusters to emerge, grow and strengthen.

Roger Martin is the chairman of the Institute for Competitiveness and Prosperity and the dean of the Rotman School of Management at the University of Toronto. The Institute recently released its first working paper that compares Ontario's clusters with those in Canada and the United States.

Planting the seeds so clusters can develop and flourish

It is no surprise that recent research at the Institute for Competitiveness and Prosperity shows Hollywood as the centre of North America's entertainment industry. But what is surprising is the strength of Toronto's entertainment cluster.

Toronto has the third-largest number of entertainment employees in North America. It employs 46,000 workers compared with 60,000 in New York and 170,000 in Los Angeles.

The entertainment cluster includes people working in film and television production, live theatre, music recording, as well as spin-off industries, such as film distribution, camera, public relations and marketing, and musical instrument production.

The industry in Toronto is anchored by its large and robust film and television production business, which contributes an estimated \$1-billion to Ontario's economy each year. Nearly half of all production dollars (\$442.7-million in 1999) spent in Ontario went to foreign film and TV production.

It is true that some of the foreign film and TV production is drawn by the cheap Canadian dollar and the resulting cost savings rather than the broad competitiveness of the Toronto cluster.

However, local companies have established a strong and growing position in global entertainment markets. For example, powered by aggressive, export-oriented firms such as Alliance Atlantis Communications Inc., Corus Entertainment and CHUM Ltd., Toronto has become the second-largest exporter of television programming among cities in North America.

The aggressive competition between local companies prepares them to compete globally.

Most Torontonians know how competitive the local television market is, but few know that CHUM Ltd., for example, sells its original programming to more than 100 countries.

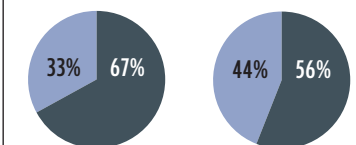
Toronto is also now known as an international centre for film, with the respected Toronto International Film Festival, which is considered one of the top two or three film festivals in the world. It is a must-attend event for many of the world's dominant players in the film industry.

Recently, the entertainment industry has been attracting attention as a burgeoning economic power that requires new approaches to economic development, due in part to media convergence.

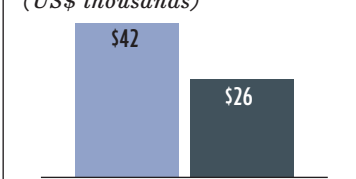
The lines between book publishing and multi-media production, for example, are blurring. The digital nature of all media production has created new opportunities for crossovers between industries. Music producers can now work with multi-media producers to create a whole new kind of music product.

RESULTS FROM THE U.S. CLUSTER MAPPING PROJECT 1999

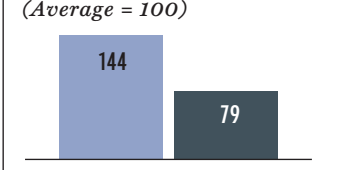
Share of Employment Share of Income



AVERAGE WAGE (US\$ thousands)



PRODUCTIVITY (Average = 100)



NOTE: Productivity based on 1997 data. SOURCE: PORTER, CLUSTER MAPPING PROJECT, INSTITUTE FOR STRATEGY AND COMPETITIVENESS, HARVARD BUSINESS SCHOOL

The Ontario Media Development Corp., launched in February, 2001, focuses on building links between producers of various media in an effort to further exploit the technological benefits of convergence. By acting as a facilitator, government can plant the seeds for both the pressure and support that will drive the cluster forward. Roger Martin

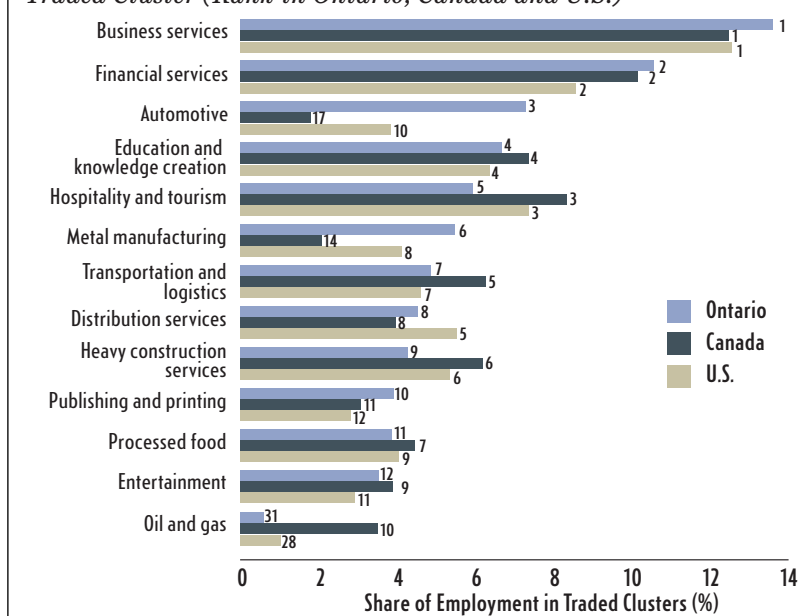
SERIES GUIDE

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ONTARIO'S LEADING CLUSTERS RELATIVE TO CANADA AND THE U.S.



SOURCE: CANADIAN BUSINESS PATTERNS, CLUSTER MAPPING PROJECT, INSTITUTE FOR STRATEGY AND COMPETITIVENESS, HARVARD BUSINESS SCHOOL

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