Toronto's ICT Sector: Global Production Networks or Outsourcing & US Continentalism

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Overview of Presentation

- Key Definitions
- Major Research Questions
- Economic Overview of Toronto
- Highlights of the Toronto ICT Sector
- Major Findings of our Research
- Next Steps

Key Definitions

- Global Production Networks

  "entities that create a situation of interdependency among firms, "each set of which has unique innovational capabilities in some stages of production but not in others." (Breznitz and Murphree, 2011)

Major Research Questions

- What does the evidence gathered to date reveal about the extent to which Toronto's ICT sector is integrated into global production networks?
- What are the key drivers determining the competitiveness of ICT firms located in the Toronto region?

Economic Overview of Toronto

- Largest city in Canada
  - 6 million in the GTA – more than 8 in the GGH
- Most diversified economy
  - Transition from manufacturing to knowledge-based economy and cultural/creative industries
  - Strongest financial services sector in Canada
- Scores high on creative occupations & number of Bohemians (Florida)
- Greatest challenge is coordinating across large number of jurisdictions in region
  - New developments with Toronto Region BOT, CivicAction Alliance, Western GTA Alliance, etc.

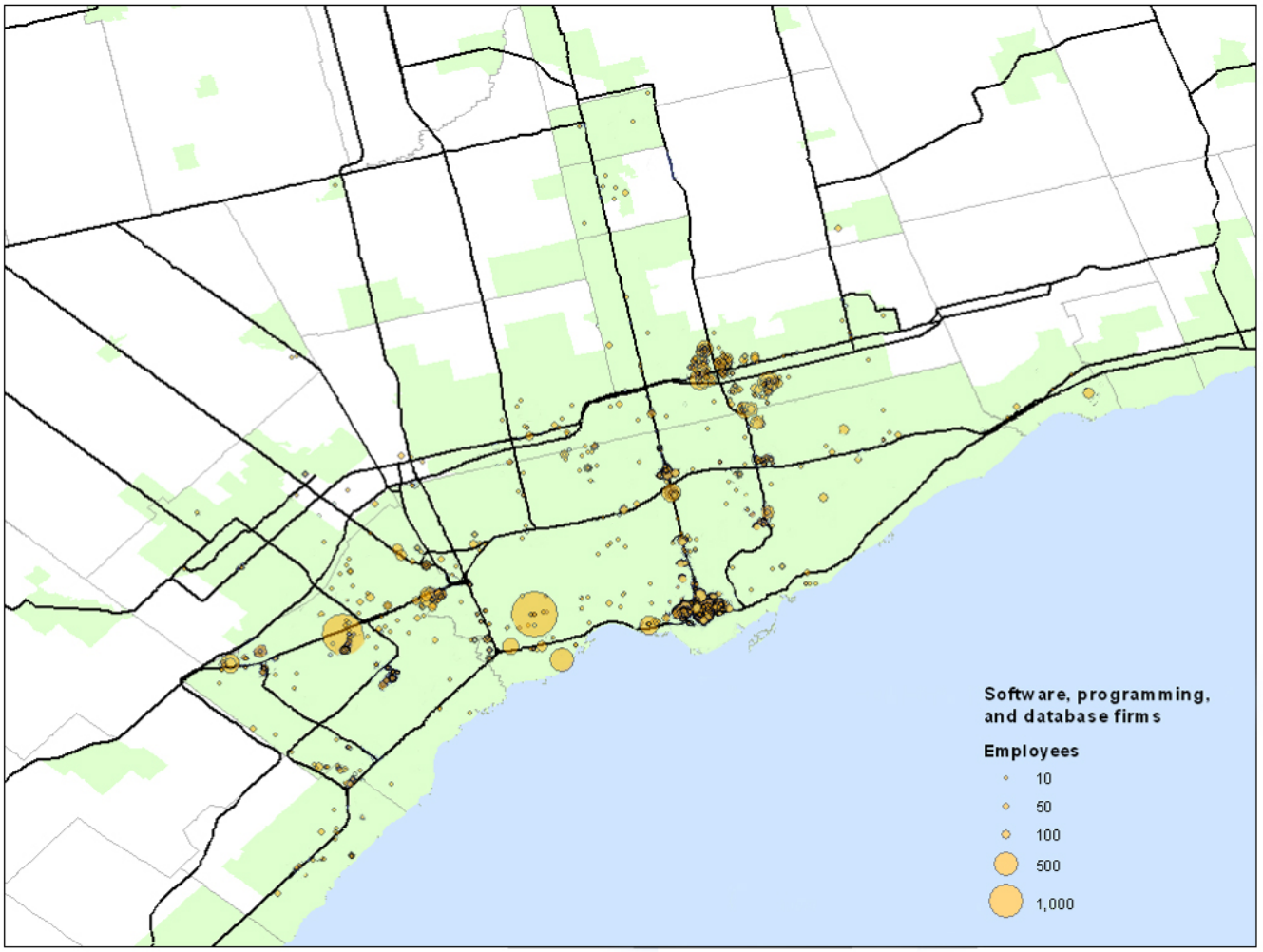
Key Economic Challenges in the Toronto Region

- Regional competitiveness:
  - Loss of traditional manufacturing base
  - Slow recovery from recession – rising unemployment, increase in part-time work
  - Mismatch between jobs and labour demand
  - Sprawl and transportation congestion (OECD report)
  - Strong research base, weak commercialization record
- Fiscal imbalance between needs and resources
- Infrastructure demands and utilization issues

Drivers of Toronto's ICT Sector

- GTA
  - 11,500 firms in the ICT sector in Toronto
    - 605 manufacturing firms & 10,900 service firms
  - More than 161,000 employees in Toronto ICT sector
  - Key firms include headquarters of most major MNCs
    - Bell Canada, Rogers, Celestica, Xerox, HP, AT&T, Motorola, Telus, Microsoft, Semtech
  - 500 firms are active R&D performers – 6,600 researchers
    - IBM Software Solutions Lab – 2500 employees
    - Xerox Research Centre in Sheridan Park-100 scientists
  - Cluster is geographically dispersed
    - From Markham to Oakville
  - Multiple, competing industry associations
    - representing different segments and interests

Location of ICT Firms in Toronto



Key Research Findings

- Global Production Networks versus Global Marketing Focus
- Firms describe themselves as being part of global production networks
- Many firms have offices around the world which reinforces such thinking
- Reality is: Firms producing products or services in Canada but marketing them globally
- One firm: global production network

Outsourcing of Manufacturing

- Manufacturing firms claiming to manufacture in Canada do not
- Firms have outsourced their manufacturing to either India or China due to cheaper labour costs
- A few firms have established manufacturing plants in Mexico
- Firms have also sent their R&D personnel to these countries

Continental Business Focus

- Many service provider firms do little actual business in Canada
- Can be headquartered in Toronto, but majority of revenue is from US markets
- Typical business breakdown is: 95 % business in US; 5% in Canada
- Few firms have 70% in North America, 25% in Europe, 5% Asia

Location of Research & Development

- Majority of service provider firms conduct R&D in Toronto or GTA
- Majority of software firm R&D also done in Toronto or GTA
- R&D includes everything from idea to offer
- For few firms, anything not of high innovation value done outside of Canada in Asia

Perspectives on Talent Development

- Great pool of STEM talent in Toronto
  - Toronto IT sector well positioned from a talent perspective
  - University co-op programs good at producing IT talent
- But IT firms still struggle to find good people
  - What skill sets do they need?
  - Lack of interpersonal skills
  - Lack of business skills
  - What monetary compensation should they offer?
  - Can't fill jobs in certain cities in Canada

Perspectives on Talent Development II

- Lot of key talent has moved to U.S. or Asia
- R&D talent, engineering talent, programming talent have all left
- As a result of this talent loss, not enough qualified applicants in software engineering, computer engineering, electrical engineering

What anchors these firms in Canada?

- Founders of the firm are Canadian
- Firm's customers outside of Canada like doing business with Canadians.
- Canadians seen as nice, polite, and trustworthy in business
- Over the years the firm has built a human capital skill set that would be difficult to replicate easily in other places

Canada's ICT Future in Global Production Networks

- ICT executives with over three decades of experience have stated they have never seen the Canadian industry as weak as it is today
- Before we think about global production networks, we have to further develop our ICT ecosystem
- Need more companies to start more companies to grow the ecosystem

Canada's ICT Future in Global Production Networks (Cont)

- Need to sustain this growth for a decade in order to develop a healthy Canadian ICT ecosystem
- Key question is:
  - Can we keep the talent here to do this?
- If we fail, no chance to ever start another Research In Motion because the thinking will be that it is never going to happen

Summary of Research Findings

- Little integration of Toronto's ICT sector into global production networks at the present time
- Outsourcing of mfg. & a continental business focus
- Toronto ICT firms have adopted a global marketing focus rather than a global production network focus
- While Toronto has a number of key drivers that contribute to IT competitiveness, a lot of key talent has moved to U.S. or Asia resulting in a shortage of highly skilled workers
- Before we think about global production networks, we have to develop our ICT ecosystem and sustain this growth over a decade.
- Key question is:
  - Can we keep the talent here to do this?

THANK YOU

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