
Toronto: Innovation in the Megacity

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Regional Resilience under the Shadow of Globalization

- In a global world, location matters more
 - “The world is not flat, it is spiky” (Florida)
 - Innovation & research concentrated in a places with key knowledge assets – asymmetric knowledge capabilities
- But (older industrial) regions still face disruptive change & external shocks
 - Involves the ability to adapt to changes in competitive, market, technological or policy conditions
 - Globalization of production and technological innovation “exert a formative influence over how the economic landscape changes over time” (Martin)



Why City-Regions Matter

- City-regions are defined as:
 - the presence of a core city linked by functional ties to a hinterland – factors include economic, housing market, travel-to-work, marketing, or retail catchment factors
- International hierarchy of cities and regions is emerging
 - Much knowledge transfers between these regions
 - City-regions are repositories of leading edge knowledge for activities in which they are specialized
 - Regions are leading nodes for internationally distributed system of innovation
 - Play role as gateways for diffusing leading edge knowledge through their respective national urban and regional hierarchies



Cities as Centres of Innovation

- Knowledge economy demands proximity
 - Proximity fosters the flow of knowledge
 - “it is in cities that information is not just created, but sorted
 - where the ‘important’ information moves to the top of the enormous heap of banality”
- Diversity and specialization contribute to economic growth
 - The transmission of knowledge across diverse sectors stimulates growth in additional sectors (Jacobs)
- Medium-sized and smaller cities are more specialized
 - Established industries move to take advantage of lower land, transportation costs, etc. outside of large cities

Specialization versus Diversity as Sources of Growth and Innovation

- Specialization versus diversity affected by other factors
 - Point of insertion into global network of urban nodes
 - Evolution of the industrial structure towards knowledge-intensive activities
- Diversity, not specialization, contributes to employment growth
 - Transmission of knowledge across diverse sectors stimulates growth in additional sectors (Glaeser)
- Diversity across complementary industries sharing a common science base stimulates innovation
 - Degree of local competition for new ideas within a city also stimulates innovation (Audretsch & Feldman)
- Competition for new ideas within a city creates a conducive environment for innovative activity



Dynamic Cities are Globally Networked, Regionally Based

- Moving beyond specialization vs. diversity
 - Cities reconstituted as 'Schumpeterian hubs' of innovation and creativity (Veltz)
 - Emerging 'cognitive-cultural' economy (Scott)
- Shift from sectors and clusters . . .
 - to networks and knowledge platforms
- From local innovation capabilities . . .
 - to global knowledge networks
 - Global pipelines trump local buzz!
 - RIM Blackberry – 400 parts, 200 suppliers – where are they?



Toronto Region: Economic Overview

- Largest city in Canada
 - 6 million in the GTA – more than 8 in the GGH
- Most diversified economy
 - Transition from manufacturing to KIBS and cultural/creative industries
 - Strongest financial services sector in Canada
- Scores high on creative occupations & number of Bohemians (Florida)
- Some civic capital, but lacks cohesive development coalition
 - Lack of integration between civic associations & municipal government



Greater Toronto Area



1. Newmarket
2. Aurora
3. Richmond Hill

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Innovation in the Toronto Region

- Innovation patterns vary across sectors
 - Knowledge flows primarily intra-sectoral within autos and advanced manufacturing
 - Weak links to local research infrastructure
 - SMEs rely more on in-house R&D
 - Universities primarily contribute to local talent pool
 - Weak collaborative links with firms
 - Biomedical sector relies on inputs from related industries
- Toronto's cultural-creative sector
 - Strong inputs from local sources
 - Strength of the local talent pool
 - Primarily oriented to serving local/national market
 - Strong infrastructure of supporting institutions

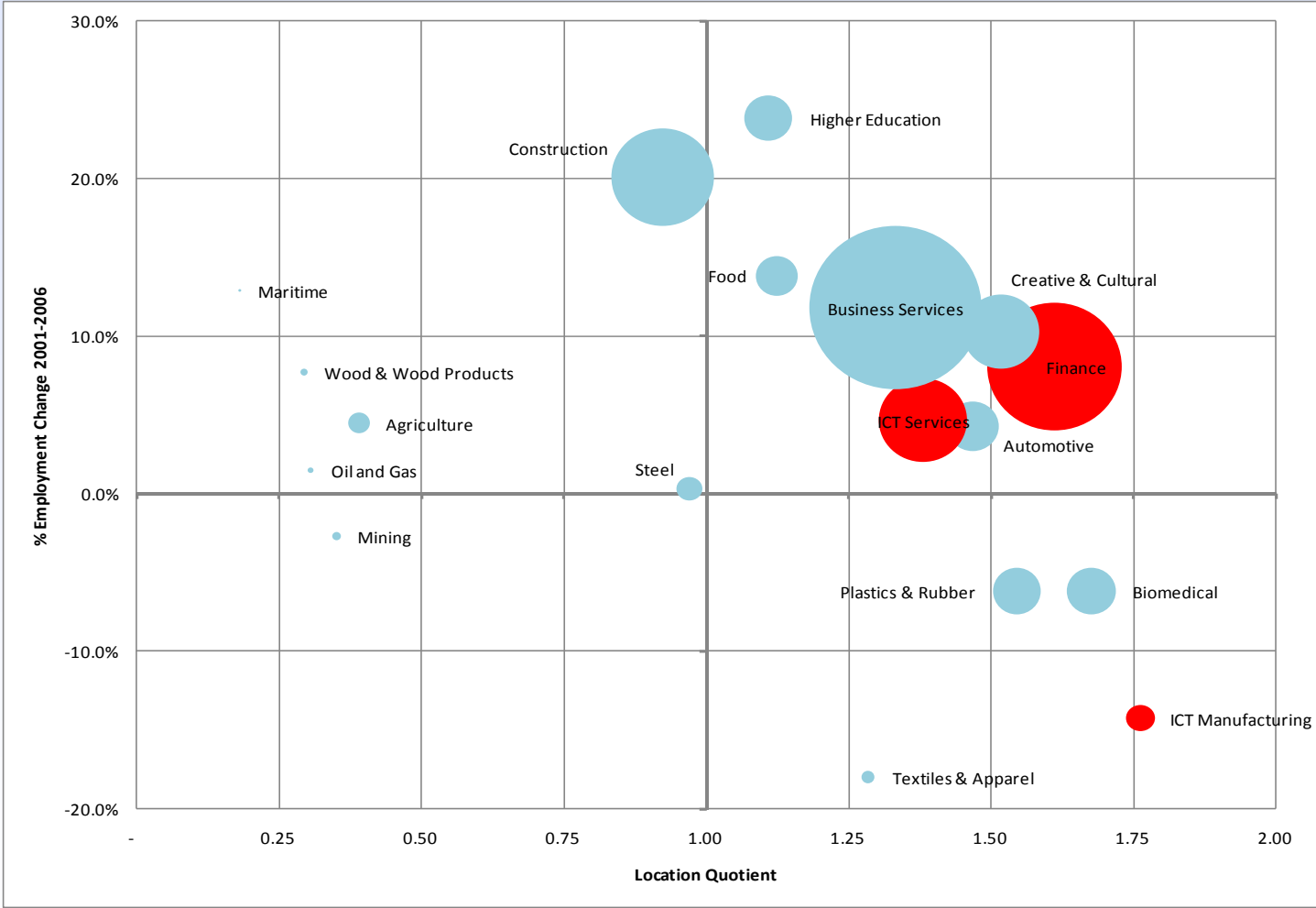


Key Toronto Region Economic Challenges

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



Toronto's Key Clusters



Innovation in Toronto's ICT & Financial Services Industries

- Strength of Toronto's ICT and Financial Services industries presumed source of resilience through recession and downturn
- Offset economic impact of losses in automotive and manufacturing
- Targeted as potential growth sector for future development of the city
- Focus on emerging 'white spaces' in growing industry (BCG Report)

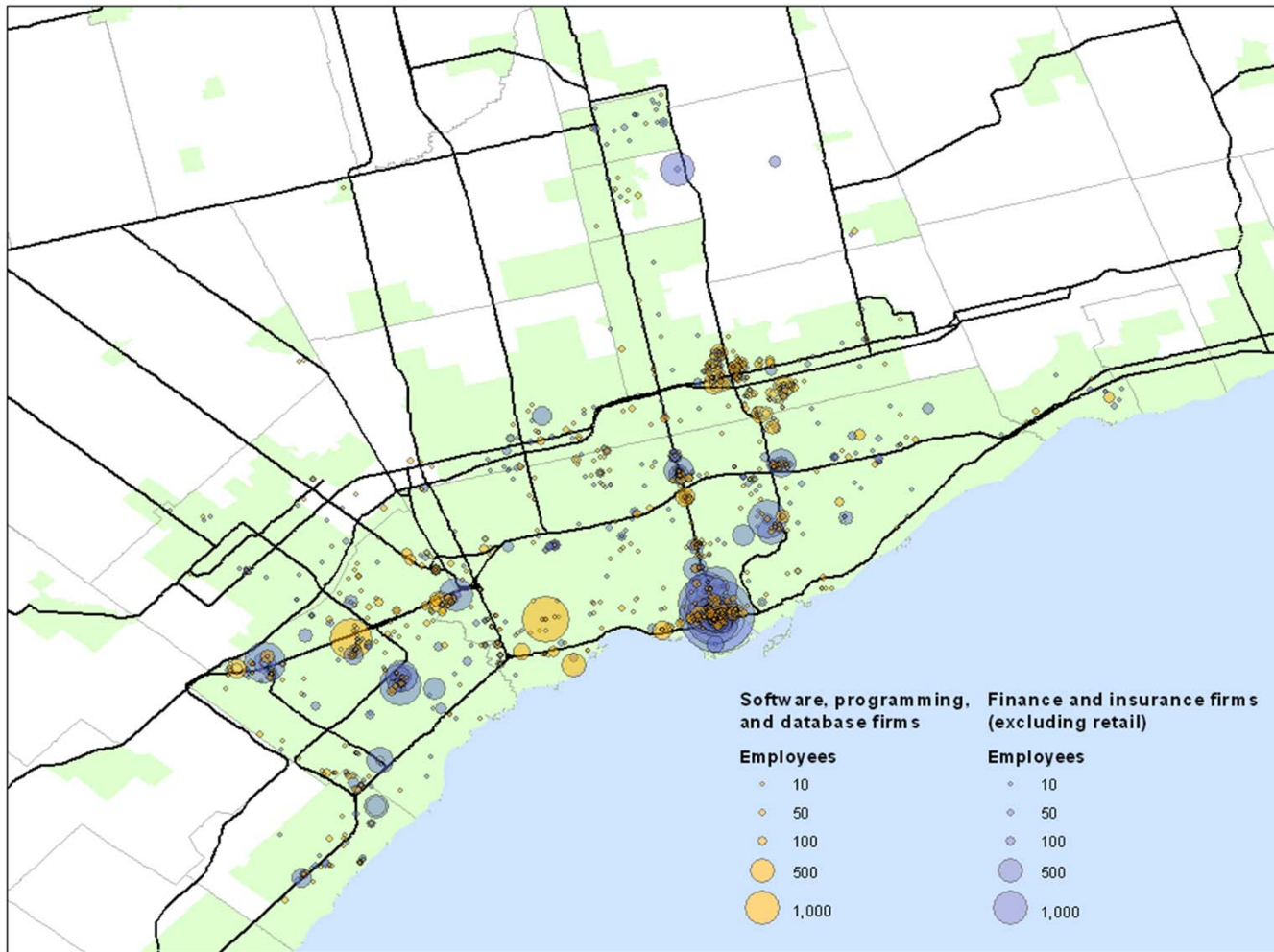


Toronto's ICT Cluster

- GTA
 - 11,500 firms in the ICT sector in Toronto
 - 605 manufacturing firms & 10,900 service firms
 - Employed 161,000 in 2009
 - Key firms include headquarters of most major MNCs
 - Bell Canada, IBM, Rogers, Nortel, Celestica, Xerox, HP, EDS, AT&T, Motorola, Clearnet, SGI, Microsoft, Siebel, ATI, Gennum
 - 500 firms are active R&D performers – 6,600 researchers
 - IBM Software Solutions Lab – 2500 employees
 - Xerox Research Centre in Sheridan Park
 - Cluster is geographically dispersed
 - From Markham to Oakville
 - Multiple, competing industry associations
 - representing different segments and interests



Location of FS & ICT Firms



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Diversity & Related Variety in Toronto's Urban Economy

- Presumption of strong demand & supply linkages between finance & ICT
 - Large deposit institutions and wealth management firms are heavy consumers of ICT infrastructure – Canadian telecoms & global providers
 - Rely on global or multinational consultants & suppliers
 - 100 firms that provide highly specialized e-commerce and IT security services to financial institutions
 - Algorithmics, Certicom, G&D Systems Canada, Rypple
- Large deposit institutions also innovate in-house
 - Interac – alliance of 5 major financial institutions
 - BMO –Cebra, Merx
 - Symcor started as alliance between BMO, RBC &TD



Sources of Resilience in Toronto

Financial Services

- Co-location of ICT and Financial Services is a product of factors that anchor each sector
 - Interaction between them is less significant
- Key ingredient for cross-sectoral knowledge flows
 - Depth and breadth of labour market depends on strength of educational institutions
 - TFSA – Centre of Excellence in Education for Financial Services
 - U of T involved with new Risk Institute
- Underlying quality of place
 - Ranked among top 5 most livable cities by Economist Intelligence Unit
- Superior performance due to national regulation
 - But faces global challenges – TMX-LME/Maple merger?

From the Creative Class to the Creative Economy

- Leading edge technologies facilitate shift to deroutinized production and outputs
 - In leading edge sectors
 - ‘Cognitive-cultural economy’ (Scott)
- Cities are breeding ground for new production or consumption oriented experiments
 - Reconstituted as ‘Schumpeterian hubs’
 - Cities reconstituted as ‘Schumpeterian hubs’ - “giant matrices for recombining resources in order to generate innovations.” (Veltz 2004)

Innovation in Toronto's Design and Cultural Industries

- Hub for large fashion, design and other creative industries
- Fashion designers work in film, art, dance and theatre doing costume design
 - seen as “more creative”, less commercial
- Synergies between publishing, design, music film and television
 - Magazines, books and digital media all feed off proximity to other cultural and creative industries

Institutional Underpinnings of Resilience

- Resilience is result of more than just market forces – involves interaction of three sectors
 - Private (firms)
 - Public (governments)
 - Civic (networks and associations – governance)
- Local governments and governance are central to these processes
 - Resilient regions are ones in which markets and local institutional structures continually adapt to changing environmental conditions,
 - including changes in the policy environment introduced by senior levels of government (NAFTA, WTO)



Collaborative Institutions

- Formal and information organizations that:
 - Facilitate exchange of information and technology
 - Foster cooperation and coordination (Porter and Henton)
- Enhance civic capital and improve competitiveness by:
 - Creating relationships and establishing trust
 - Creating collective institutions
 - Identifying common strengths and developing common agenda
- Civic associations draw upon civic capital created by these institutions
 - Generate trust by engaging key social partners in 'talk' – to build a set of shared understandings and expectations



Role of Civic Associations in Economic Development

- Key Networking Institutions
 - Promote awareness of city-region
 - Engage in dialogue of city's competitive position
 - Monitor & communicate market & technology trends
 - Develop mentoring programs for new firms/business people
 - Participate with multiple levels of government in strategic planning for the city region
- Emergence of local civic associations is critical step in the formation of civic capital
 - CivicAction Alliance, TRRA – Greater Toronto Area



Toronto CivicAction Alliance

- Meta-governance through CivicAction Alliance:
 - Not-for-profit non partisan group founded in 2002 to address Toronto region's economic and social future
- Private and community sector driven collaboration (more than 50 civic leaders)
 - Emerged from Mayor's summit on the future of the city
 - *Enough Talk: An Action Plan for the Toronto Region* (2003)
- Role of CivicAction Alliance
 - "convenes leaders of all different sectors to identify key areas that need attention and then identifies actions that can undertaken very quickly"
- Over 8000 people involved with CivicAction initiatives
 - Lobbies senior levels of government to get them involved
 - Greater Toronto Summit, 2011 – over 700 participants



Civic Leadership and Economic Planning

- Perception of CivicAction Alliance as civic 'champions' who could 'get things done'
 - Strong track record on series of successful projects
- But limited involvement with strategic planning efforts for economic development
 - No overlap with Mayor's advisory committee
 - Board of Trade expanding its role and scale
- Sectoral strategies have varied leadership
 - Strong in financial services and aerospace
 - Fragmented in ICT, biotech and fashion
- Regional stewards lack integration & cohesion



“One Size Does Not Fit All”

- Policy needs to be tailored to the circumstances of individual city-regions
- Cities & regions develop the organizational & institutional infrastructure for collective action
 - Identify and cultivate local assets
 - Undertake collective planning processes
 - Promote regional mindset to foster growth
- Drivers of economic change demand response from city regions
 - Formulate innovation-based strategic plans
 - Strategic management for cities and regions
 - Enhance factors of production that cannot easily be transferred from one city/region to another

