

Greater Vancouver Economic Scorecard: Indicators

Background

- The main purpose of this report is to assess Greater Vancouver's strengths and weaknesses in attracting labour and business investment.
- The report benchmarks Greater Vancouver against 19 other global metropolitan regions on 32 indicators grouped into two categories: Economy and Social.
- The indicators and comparator regions were chosen, in part, to reflect Greater Vancouver's status as Canada's gateway to the Asia Pacific.

Ranking Methodology

- This study uses a report card-style ranking of A-B-C-D to assess the performance of metropolitan areas for each indicator and each category.
- The Conference Board assigned a grade level by calculating the difference between the top and bottom performer of each indicator and dividing the figure by four.
- A metropolitan area received a scorecard ranking of "A" on a given indicator if its score was in the top quartile, a "B" if its score was in the second quartile, a "C" if its score was in the third quartile, and a "D" if its score was in the bottom quartile. A metropolitan area was assigned an "n.a." if data were unavailable for that indicator.

Economic Indicators

- 21 of the 32 indicators in the Scorecard assess general economic performance, five of which focus on the relative performance at local ports and airports. They include:
 - **After-tax income per capita** (purchasing power parity) — A metro area's average after-tax income divided by total population.
 - **After-tax income growth** (per cent) — Average annual growth of disposable income per capita from 2007 to 2011.
 - **Employment growth** (per cent) — Five-year average annual growth in total employment, measured from 2009 to 2013.
 - **High-tech employment share** (per cent) — The information and communications technology sector's share of total employment.
 - **Inbound airport cargo tonnage per US\$1 million of GDP** — Used to gauge the performance of a metro area's airport as a cargo gateway.
 - **Inbound airport seats per capita** — Overall seat capacity of incoming non-stop flights to the metro area, divided by total population.
 - **International visitors** (thousands) — Total number of international visitors to the metro area, averaged from 2010 to 2013.
 - **KPMG's Total Tax Index** (United States = 100) — Total taxes paid by similar corporations in a particular location and industry, calculated as a percentage of total taxes paid by similar corporations across the United States.
 - **Labour productivity** (2007 dollars, purchasing power parity) — Real GDP divided by employment; the amount of goods and services produced per worker.
 - **Labour productivity growth** (per cent) — Average annual increase in labour productivity from 2009 to 2013.
 - **Marginal effective tax rate** (METR) on capital investment for businesses (in percentages) — The tax rate a corporation would pay on one additional dollar of return on capital investment. A high METR makes a region less attractive to corporate investment.
 - **Market size** (trillions of dollars, purchasing power parity) — Total income of the population within a 500-mile radius of the metro area.

- **Number of cruise vessel calls** — Number of cruise vessel calls received by each region's port(s), based on 2014 data.
- **Number of participants at international association meetings** — The number of participants in meetings organized or sponsored by international organizations with at least 50 participants.
- **Office rents** (US\$ per square foot) — Total rental cost of downtown Class A office space.
- **Port cargo tonnage per US\$1 million of GDP** — Total trade (imports and exports in tonnes) at each metro area's port(s) per US\$1 million of GDP.
- **Port container traffic (TEUs) per US\$1 million GDP** — Container throughput is a volume measure expressed in twenty-foot-equivalent units (TEUs) per US\$1 million of GDP.
- **Real GDP per capita** (2007 dollars, purchasing power parity) — GDP (the overall value of goods and services produced within the metro region) divided by total population.
- **Real GDP per capita growth** (per cent) — Average annual increase in real GDP per capita from 2009 to 2013.
- **Unemployment rate** (per cent) — Percentage of the labour force not working, based on 2014 data. Shanghai data are for 2013.
- **Venture capital investment per US\$1 million of GDP** — Average investment in new start-ups per US\$1 million of GDP.

Social Indicators

- The remaining 11 of the 32 indicators in the Scorecard measure a region's social performance, including several quality of life attributes:
 - **Air quality** (mg/m³) — Average accumulation of fine particulate matter that is 2.5 microns in diameter and less. Based on 2012 data.
 - **Comfortable climate index** — A measure of how far the average maximum temperature strays from 15°C in the winter and from 25°C in the summer, adjusted for hours of sunshine. Metro areas with mild weather and lots of sunny days score higher.
 - **Commuting time of a round trip to work** (minutes) — The average time of a trip to and from work.
 - **Homicide rate** — Number of homicides per 100,000 people.
 - **Housing affordability** (median house price divided by median household income) — The higher the ratio, the less affordable housing is in a given metro region.
 - **Income inequality** — Using the Gini coefficient, it represents the income distribution of a metro area. A Gini coefficient of 0 represents perfect income equality, while a coefficient of 1 represents perfect inequality.
 - **Proportion of population 25 to 34 years old** (per cent) — This age cohort is highly mobile and tends to be well educated. A metro area with a large proportion of this age grouping will be attractive to other young adults and will be better positioned for the future.
 - **Proportion of population, age 25 and over, with at least a bachelor's degree** (per cent) — Metro areas with a highly educated population are more attractive to other highly educated people.
 - **Proportion of population employed in cultural occupations** (per cent) — This indicator is a proxy for access to culture. A metro area with a high proportion of cultural workers will be better able to attract people seeking "fun" places to live.
 - **Proportion of population that is foreign born** (per cent) — Immigration is key to boosting the future workforce. Immigrants tend to be attracted to tolerant and diverse metro regions and regions that already boast a large immigrant population.
 - **Travel to work: public transit, walking, and other non-auto commuting** (per cent) — Proportion of the employed labour force that does not drive to work. A region that offers access to good public transit, bike paths, and walking paths, will be more attractive.

Greater Vancouver Economic Scorecard: Economy and Social Rankings

Background

- The main purpose of this report is to assess Greater Vancouver's strengths and weaknesses in attracting labour and business investment.
- The report benchmarks Greater Vancouver against 19 other global metropolitan regions on 32 indicators grouped into two categories: Economy and Social.
- 18 of 19 comparator regions were selected because they are major transportation gateways similar to Greater Vancouver. Calgary is the only metro region without an outsized transportation sector and is included in the rankings because of its relative proximity to Greater Vancouver makes it a key competitive measuring stick.
- 21 of the 32 indicators in the Scorecard assess general economic performance, five of which focus on the relative performance at local seaports and airports.
- 11 of the 32 social indicators in the Scorecard measure a region's social performance, including several quality of life attributes.

Ranking Methodology

- This study uses a report card-style ranking of A–B–C–D to assess the performance of metropolitan areas for each indicator and each category.
- The Conference Board assigned a grade level by calculating the difference between the top and bottom performer of each indicator and dividing the figure by four.
- A metropolitan area received a scorecard ranking of "A" on a given indicator if its score was in the top quartile, a "B" if its score was in the second quartile, a "C" if its score was in the third quartile, and a "D" if its score was in the bottom quartile. A metropolitan area was assigned an "n.a." if data were unavailable for that indicator.

Economy Ranking

Ranking	Metropolitan area	Grade	Ranking	Metropolitan area	Grade
1	Singapore	A	11	Sydney	C
2	Hong Kong	A	12	Rotterdam	C
3	Shanghai	A	13	Toronto	C
4	Calgary*	A	14	Halifax	C
5	Seattle	B	15	Barcelona	C
6	Copenhagen	B	16	Montréal	C
7	Houston*	B	17	Portland	C
8	San Francisco	B	18	Los Angeles	D
9	Greater Vancouver	B	19	Manchester	D
10	Seoul	C	20	Miami	D

*Results for Calgary and Houston do not take into account the impact of the collapse in oil and gas prices.

- Greater Vancouver finishes in ninth place with a “B” grade in the Economy category.
- Singapore’s top spot in the Economy category is partly due to its first-place finishes on three indicators: real GDP per capita growth, employment growth, and the unemployment rate. Two other Asian metro areas — Hong Kong and Shanghai — round out the top three.
- Several U.S. metro regions also earn high grades in the Economy rankings: Houston — an oil and gas industry hub — as well as Seattle and San Francisco — high-tech hubs — finish in the top 10.
- Calgary ranks fourth, making it the top-ranked Canadian metro region. But neither Houston’s nor Calgary’s ranking take into account the negative impact of the steep decline in oil and gas prices.
- U.S. metro areas also account for three of the bottom five metro regions, with Miami finishing last. In particular, Los Angeles, Manchester, and Miami are this category’s three “D”-rated metro areas. Miami’s low rankings can be largely attributed to the disproportionate force with which it was hit by the 2008–09 global recession.

Greater Vancouver’s Economy Performance

Indicator	Grade	Ranking
KPMG’s Total Tax Index	A	3 (12)
Office rents (\$ per square foot)	A	5 (17)
Port cargo tonnage per \$1 million of GDP	B	3 (19)
Labour productivity growth	B	7 (20)
Employment growth	B	11 (20)
Venture capital investment per \$1 million of GDP	C	4 (11)
Port container traffic (TEUs) per \$1 million GDP	C	5 (19)
Real GDP per capita growth	C	7 (20)
Number of cruise vessel calls	C	7 (18)
After-tax income growth	C	8 (19)
Number of participants at international association meetings	C	8 (19)
Inbound airport cargo tonnage per \$1 million of GDP	C	9 (20)
High-tech employment share	C	9 (19)
Unemployment rate	C	10 (20)
Inbound airport seats per capita	C	10 (20)
Marginal effective tax rate on capital investment for businesses	C	10 (17)
International visitors	C	11 (20)
Labour productivity	C	12 (20)
After-tax income per capita	C	13 (20)
Real GDP per capita	C	14 (20)
Market size	D	16 (20)

- Of the 21 Economy indicators, Greater Vancouver receives two “A”s, three “B”s, fifteen “C”s, and one “D”.
- The region gets an “A” for office rent per square foot. Its affordable office rents on a square foot basis trails only Montréal’s among North American metro regions.
- Although Greater Vancouver also earns an “A” grade on the KPMG’s Total Tax Index, as local businesses enjoy relatively low statutory labour costs, the region is much less competitive when it comes to the marginal effective tax rate on capital, earning a “C” grade on an indicator designed to measure incentives for business investment.
- Greater Vancouver performs relatively well on the transportation-oriented indicators. In particular, Greater Vancouver can boast

North America's top-ranked port for both container traffic and tonnage, relative to the size of its economy. It receives a "B" grade for port cargo tonnage per \$1 million of GDP and "C" grade for port container traffic per \$1 million GDP.

- Greater Vancouver is home to Canada's largest cruise port and receives a "C" grade for the number of cruise vessel calls.
- Activity at Greater Vancouver's airport is middle of the pack, with "C" grades for inbound airport cargo tonnage per \$1 million of GDP and inbound airport seats per capita.
- Greater Vancouver ranks fourth (out of 11 metro areas for which data are available) on venture capital investment per \$1 million per GDP, but it remains well behind leaders San Francisco, Houston, and Seattle.
- The results of the Economy ranking also reveal that Greater Vancouver suffers from relatively low levels of real GDP per capita and labour productivity, its small market size (for which it gets a "D" grade), and its low share of high-tech workers. To boost its productivity levels, Greater Vancouver could look for ways to improve its innovation.

Social Ranking

Ranking	Metropolitan area	Grade	Ranking	Metropolitan area	Grade
1	Barcelona	A	11	Calgary	B
2	Copenhagen	A	12	Hong Kong	B
3	Sydney	A	13	Rotterdam	B
4	Portland	A	14	Seoul	B
5	Toronto	A	15	Halifax	B
6	Seattle	A	16	Singapore	B
7	Greater Vancouver	B	17	Los Angeles	B
8	Manchester	B	18	Miami	C
9	Montréal	B	19	Houston	C
10	San Francisco	B	20	Shanghai	D

- Greater Vancouver ranks seventh overall with a "B" grade, placing it higher than all its Canadian counterparts except Toronto.
- Two European metro areas emerge at the top of the field in the Social category: Barcelona and Copenhagen. Barcelona, the top-ranked metro region, has the best climate in the scorecard and earns two more "A" grades for a low homicide rate and low income inequality. Although Copenhagen has the worst climate, it more than makes up for it with high numbers of people aged 25 to 34, high numbers of the population with at least a bachelor's degree, and high numbers of people working in the cultural sector.
- Rounding out the top five regions are Sydney, Portland, and Toronto.
- The bottom three metro areas are Miami, Houston, and Shanghai. All three all have long commute times and relatively unequal income distributions. Miami and Houston also suffer from relatively high homicide rates.

Greater Vancouver's Social Performance

Indicator	Grade	Ranking
Air quality	A	1 (20)
Proportion of population foreign born	A	2 (19)
Homicide rate	A	9 (20)
Proportion of population employed in cultural occupations	B	10 (20)
Climate	B	12 (20)
Proportion of population with at least a bachelor's degree	C	9 (20)
Non-car commuting	C	8 (17)
Average travel time to and from work	C	10 (19)
Income inequality	C	11 (20)
Proportion of population aged 25-34	D	7 (19)
Housing affordability	D	15 (17)

- Of the 11 social indicators, Greater Vancouver receives three "A"s, two "B"s, four "C"s and two "D"s. Its ranking confirms that Greater Vancouver is one of the world's most liveable metro regions, though it does have some vulnerabilities that need to be addressed.
- The region gets high scores for its clean air, large proportion of foreign-born residents, and low homicide rate — all of which are attractive to potential residents.
- But anyone contemplating a move to the region faces exorbitant housing costs. It ranks 15th out of the 17 metro regions for which data were available on housing affordability and gets a "D" grade — only Shanghai and Hong Kong are less affordable. The region's expensive housing acts as a major barrier to retaining and attracting high-end talent and business investment.
- Greater Vancouver gets its other "D" grade in the proportion of the population aged 25-34 years, while it also earns a "C" grade for the proportion of the population aged 25 and over with at least a bachelor's degree, which is a proxy for educational attainment. The region's performance in these indicators could be linked to its poor housing affordability, which limits Greater Vancouver's attraction to younger people who could represent its future.
- Long commute times are also adding to Greater Vancouver's difficulties in attracting high-end talent. The benchmarking analysis shows that Greater Vancouver's performance in this area is relatively poor — it gets "C" grades for the average commute time to and from work and for the proportion of the workforce that non-car commutes. The metro area needs to rethink its regional public transit plans after a taxing-and-funding proposal was soundly rejected in a 2015 plebiscite.

Greater Vancouver Economic Scorecard: Traded Cluster Analysis

Background

- The main purpose of this report is to assess Greater Vancouver's strengths and weaknesses in attracting labour and business investment. This includes an in-depth analysis of Greater Vancouver's main traded clusters.

Cluster Analysis Methodology

- Traded clusters are groups of related industries that are located near one another and draw an advantage from their mutual proximity and connections. They service markets beyond the region which they are located and are key drivers of economic growth.
- A cluster analysis involves two main steps: 1) computing location quotients and 2) conducting a shift-share analysis.

Greater Vancouver's Traded Clusters

- An empirical analysis identified five traded clusters for Greater Vancouver:
 1. Transportation
 2. Tourism
 3. Information and culture.
 4. High-tech
 5. Finance and insurance

Transportation

- The importance of Greater Vancouver's role as Canada's Pacific Gateway to Asia cannot be overstated.
- The region's geographic location on the West Coast, combined with major truck and rail access to a number of North American cities, makes it an excellent location for the movement of goods to and from the United States, the Pacific Rim, and several other countries around the world.
- The Port of Vancouver is Canada's largest, busiest, and most diversified port, connecting the country to more than 160 trading economies annually, mainly those in the Asia-Pacific region.
- The Vancouver International Airport offers 121 non-stop destinations worldwide, served by 54 different airlines.

Tourism

- Greater Vancouver is an attractive destination for tourists from across Canada and the world with over 9 million overnight visits in 2015, and ranks as one of the region's five traded clusters. Spending by tourists on accommodations, food, travel, and activities has a significant impact on Greater Vancouver's economy, with overnight visitors generating a total economic impact of \$6.1 billion in 2013, supporting over 66,000 jobs.¹
- China has emerged as one of the major sources of tourists to Greater Vancouver. Overnight visits from China to Greater Vancouver have increased at an average annual rate of 21 per cent between 2010 and 2014.
- Greater Vancouver is also the largest cruise port in Canada. More than 805,000 cruise passengers landed in Vancouver in 2015, accounting for one-third of all cruise port traffic in the country.
- Conventions also add to tourism activity. Between 2009 and 2013, conventions attracted an annual average of over \$324 million in overnight visitor spending in Greater Vancouver.

- Greater Vancouver also benefits from its proximity to Whistler, as travellers to Whistler usually spend time in Vancouver. In 2014, Whistler and the surrounding area hosted approximately 2.7 million visitors, who spent \$1.44 billion. About 85 to 90 per cent of all employment in Whistler is generated by visitor consumption goods and services and generates more than half of Whistler's overall GDP.

Information and Cultural Industries

- Information and cultural industries, the third cluster identified by our analysis, includes the television, sound recording, and motion picture industries, including visual effects and animation.
- This is a growing industry in Greater Vancouver and the reason why the region competes for the nickname "Hollywood North" with Toronto.
- In 2014, approximately 34,500 people worked in the information and cultural industry in the Vancouver region.
- Greater Vancouver is currently fourth in terms of total production spending behind Los Angeles, New York, and Toronto. Over the past few years, foreign producers have spent approximately \$1.1 billion annually in B.C.
- Television and film companies are drawn to Vancouver because of its scenery, expertise of the local workforce, proximity to Los Angeles, and its competitive tax incentives, which lower production costs.
- While the industry has become increasingly reliant on the help of the federal and provincial governments, the Provincial Government has recently reduced the basic production tax credit and the digital animation and video editing (DAVE) tax credit citing the drop in the Canadian dollar. But, the proliferation of tax credits and subsidies raises questions about the sustainability of such policies because they tend to create a race to the bottom

High-Tech Industry

- The high-tech sector, the fourth traded cluster, has been playing a growing role in Greater Vancouver's economy.
- Greater Vancouver's overall information and communications technology (ICT) sector is a rapidly expanding part of the region's economy. The number of high-tech businesses grew by 1.9 per cent per year from 2009 to 2013. There were a total of 6,226 high-tech businesses in Greater Vancouver in 2014.
- In the past five years, employment in the ICT sector has risen by 4 per cent per year, with over 64,000 employed in the industry by 2015.
- High-tech companies are attracted to Greater Vancouver by such things as the highly skilled workers who call the region home and its proximity to both Seattle and Silicon Valley.
- The industry encompasses major global players, such as Amazon and Microsoft, as well as homegrown firms like Hootsuite and TELUS.

Finance and Insurance

- Greater Vancouver's finance sector has been rising in prominence internationally, ranking 14th in the Global Financial Centres Index in 2014.
- In 2015, 59,300 people worked in the finance and insurance industry, generating nearly \$34 billion in GDP.
- Rising trade with China opens up the possibility that Vancouver could become a direct trade settlement hub using Chinese currency, the renminbi (RMB). This would result in increased trade between the two countries.

¹Tourism Vancouver, Tourism Data for Metro Vancouver: 2013 Results, 9.

Greater Vancouver Economic Scorecard: Challenges and Opportunities

Benchmarking Results

- Greater Vancouver places ninth out of 20 in the overall ranking.
- The region places ninth in the Economy category and seventh in the Social category.
- Singapore is the overall leader.
- Although Calgary is the highest ranked Canadian metropolitan region in 4th place, all indicators in this report end in 2014 or earlier, so this analysis does not take into account the impact of the steep decline in oil and gas prices.

Greater Vancouver's Challenges

- Despite Greater Vancouver's bright near-term economic outlook, the region's long-term performance will depend on the ability of its leaders to deal with seven important challenges revealed in our study:
 1. Underinvestment in roads and public transit infrastructure — Long commute times and congestion are adding to Greater Vancouver's difficulties in attracting high-end talent. Failure to address the inadequate investment in transit and road infrastructure could keep talent and business investment away as well as negatively impact the movement of goods.
 2. Poor housing affordability — One of the highest profile challenges facing Greater Vancouver is the deteriorating affordability of housing. Concerns have been raised that foreign investment is a key factor behind skyrocketing home prices, but data to study such claims are lacking because foreign purchases of real estate have not been officially tracked. The lack of available land will be difficult to overcome, given the region is bordered by the Pacific Ocean, the coastal mountains, the U.S. border and the Agricultural Land Reserve.
 3. Land scarcity for trade-enabling port expansion — The supply of vacant land suitable for trade and goods movement could be exhausted within 10 years. Growing pressures on the availability of industrial land will increasingly conflict with Greater Vancouver's role as a preferred gateway to Asia and the jobs and wealth this trade creates.
 4. Low labour productivity levels — Greater Vancouver disappoints when it comes to its labour productivity level, an important driver of living standards. To boost its productivity levels, Greater Vancouver could look for ways to improve innovation.
 5. Educational attainment rates that fall short of the scorecard leaders — Despite its many post-secondary institutions, the region earns only a "C" grade in terms of its population 25 and over with at least a bachelor's degree. Greater emphasis on advancing educational attainment in the region could also help boost its labour productivity levels.
 6. High marginal effective tax rate on capital for businesses — The region is also saddled with a high marginal effective tax rate on capital, an indicator designed to measure incentives for business investment. This could be another piece of Greater Vancouver's low productivity puzzle.
 7. Fewer head offices than cities of comparable size — Greater Vancouver performs relatively poorly when it comes to attracting head offices, although HQ Vancouver — a partnership between the Government of Canada, the Province of British Columbia, and the Business Council of British Columbia aimed at luring Asian businesses into relocating their head offices to Vancouver — has enjoyed some early success.

Regional Approach Needed to Address Challenges

- One prerequisite for successfully addressing these challenges would be greater regional coordination among the municipalities that make up Greater Vancouver.
- For example, poor transit infrastructure, poor housing affordability and the dwindling availability of industrial land are problems that are not specific to a single municipality — they affect the entire Greater Vancouver region.
- If these problems are ever to be resolved, the region's municipalities will have to come together to discuss these issues and develop a coordinated plan to tackle them. Not only would this increase the chances that these issues will be resolved, it would also allow the Greater Vancouver metro region to better leverage its competitive strengths.

MOVING FORWARD: GREATER VANCOUVER BOARD OF TRADE POLICY PRIORITIES

- The Board of Directors of the Greater Vancouver Board of Trade has carefully considered the Scorecard and its findings. GVBOT intends to focus its public policy efforts on improving and enhancing Greater Vancouver's performance in certain aspects of the Scorecard, and have identified the following areas for our immediate attention:
 - **Gateway Resources:** Greater Vancouver is Canada's gateway to Asia, a natural position which offers immense economic opportunity. To retain this enviable position, it's of national importance that we continue to invest in transportation infrastructure so we are a highly efficient and environmentally responsible gateway. We also must ensure that there is available land to provide access and to accommodate infrastructure.
 - **Housing Affordability and Public Transit:** One of Greater Vancouver's biggest challenges is the high cost of housing. Improved public transit infrastructure could make additional affordable options more accessible. Solutions to address housing affordability and transit infrastructure will assist with attracting and retaining necessary and valuable human capital in Greater Vancouver.
 - **Human Capital:** Greater Vancouver has successfully been using technology and knowledge to leverage more traditional industries. To continue, Greater Vancouver needs to attract, develop and retain a well-educated and diverse workforce. In particular, this means increased focus on education, immigration, social infrastructure and the participation of women and indigenous peoples in the economy.
 - **Regional Coordination:** The Scorecard highlights Greater Vancouver's relative strength and competitiveness as an economic region. Going forward, we need improved regional coordination and accountability to ensure optimal decisions for and investments into our collective future.