Economic Impacts of the B.C. Property Development Industry, June 2013

MNP LLP

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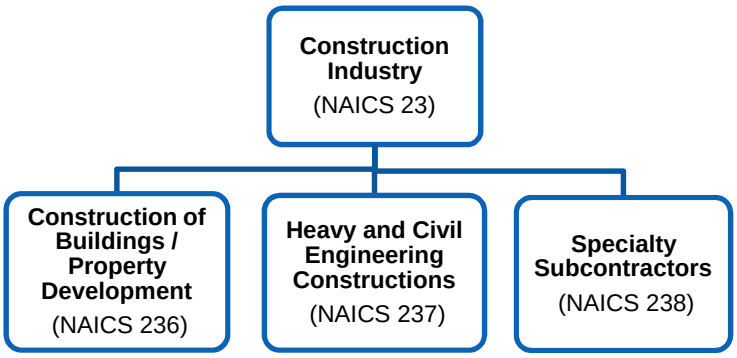
1.0 EXECUTIVE SUMMARY

In this report, MNP LLP (MNP) examined the economic impacts of British Columbia's (BC's) property development industry and its associated value chain.

1.1 INDUSTRY PROFILE

As shown in the figure on the right, the property development industry in BC is a subsector of the construction industry and includes all establishments that are primarily engaged in the construction of new buildings and alternation of existing structures. By definition, this includes the on-site assembly of prefabricated buildings and the construction of temporary buildings. Typical establishments in the industry include:

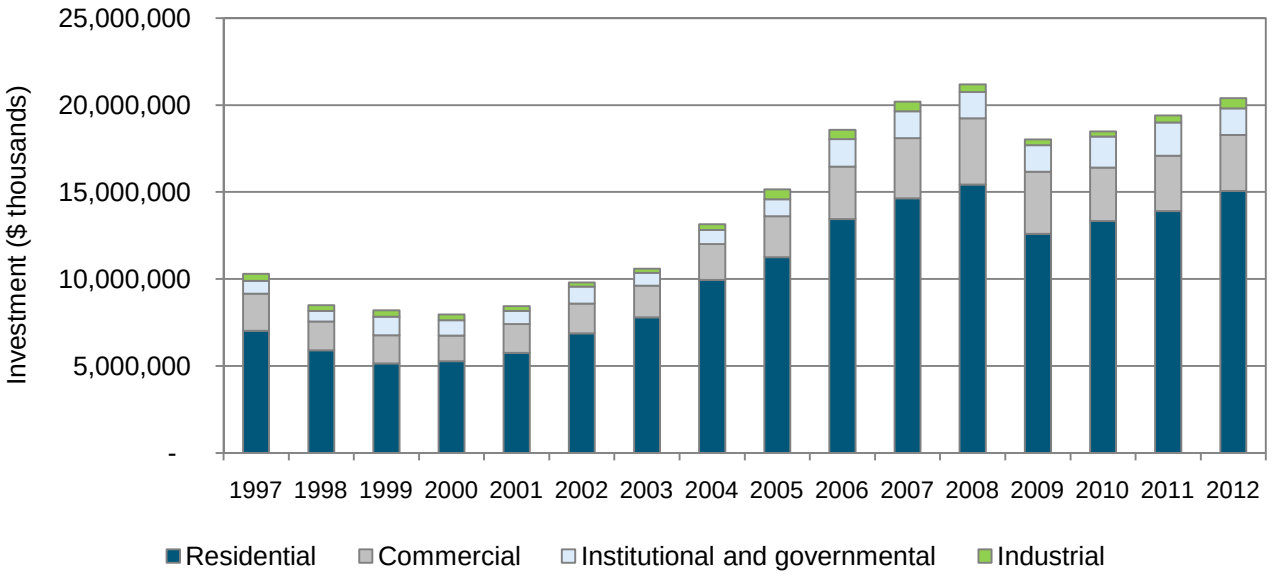


- Residential, commercial, institutional and industrial building general contractors.
- Construction management firms.
- Design-build firms.

For the purposes of this study the property development industry has been divided into four subsectors: residential, commercial, institutional and industrial.

As indicated in Figure 1-1, investments in building construction have increased steadily over the past 15 years. For example, since 2009, the industry has grown at an average annual rate equal to 4.2 percent.

Figure 1-1: Building Construction Investments in BC by Subsector (1997 - 2012)



Source: Statistics Canada, CANSIM Tables 026-0013 and 026-0016

1.2 ECONOMIC IMPACTS

MNP estimated the economic impacts of BC's property development industry in 2012 using relevant statistical methodologies and economic multipliers. For more information on our methodology, please see Section 4.1.

Summary of Economic Impacts

The economic impacts of the BC property development industry as a whole are summarized in the table below. The economic impacts by subsector (i.e. residential, commercial, industrial and institutional) are presented in Section 4.3 of this report.

Table 1-1: BC Property Development Industry – Total Economic Impacts (2012)

	Output ($ millions)	GDP ($ millions)	Employment (FTEs)	Federal Tax ($ millions)	Provincial Tax ($ millions)	Municipal Tax ($ millions)
Direct	20,400	8,166	106,876	639	670	634
Indirect and Induced	14,664	8,812	114,668	850	553	159
Total	**35,064**	**16,978**	**221,544**	**1,489**	**1,223**	**793**

Output, GDP and Employment Impacts

We found the following impacts related to output, GDP and employment:

- **Total output generated by the property development industry in the BC economy is estimated to be $35.1 billion.** Output directly generated by the sector is estimated at $20.4 billion, which supports a further $9.7 billion in indirect and $5.0 billion in induced impacts.
- **Total GDP generated by the property development industry in the BC economy is estimated to be $17.0 billion.** GDP directly generated by the sector is estimated at $8.2 billion, which supports a further $4.8 billion in indirect and $4.0 in induced impacts.
- **Approximately 221,544 direct, indirect and induced full-time equivalent positions (FTEs) are generated by the property development industry in the BC economy,** including approximately 107,000 in direct, 56,500 in indirect and 58,000 in induced FTEs.

Taxation Impacts

We estimated the aggregate direct, indirect and induced taxes generated by the BC property development industry at $3.5 billion.[1] Approximately 42 percent of the total is estimated to flow to the federal government, 35 percent to the provincial government and 23 percent to municipal governments.

Direct provincial tax impacts in Table 1-1 exclude the Property Transfer Tax (PTT), which is a land registration tax payable when an application is made to register changes to a certificate of land title. PTT is payable on the fair market value of the property being transferred.[2]

There are three types of charges that developers pay to BC municipalities and regional districts:

- **Development Cost Levies (DCLs).** DCLs are a growth-related charge on all new development. They are applied on a per square foot basis and are payable at Building Permit issuance. DCLs are collected from development to help pay for facilities made necessary by the growth such as:

[1] Tax impacts were estimated based on both Statistics Canada and BC Stats tax multipliers.
[2] Government of British Columbia. Property Transfer Tax. Retrieved from ttp://www.sbr.gov.bc.ca/business/Property_Taxes/Property_Transfer_Tax/faq.htm.

parks, childcare facilities, placement housing (social/non-profit housing) and engineering infrastructure.[3]

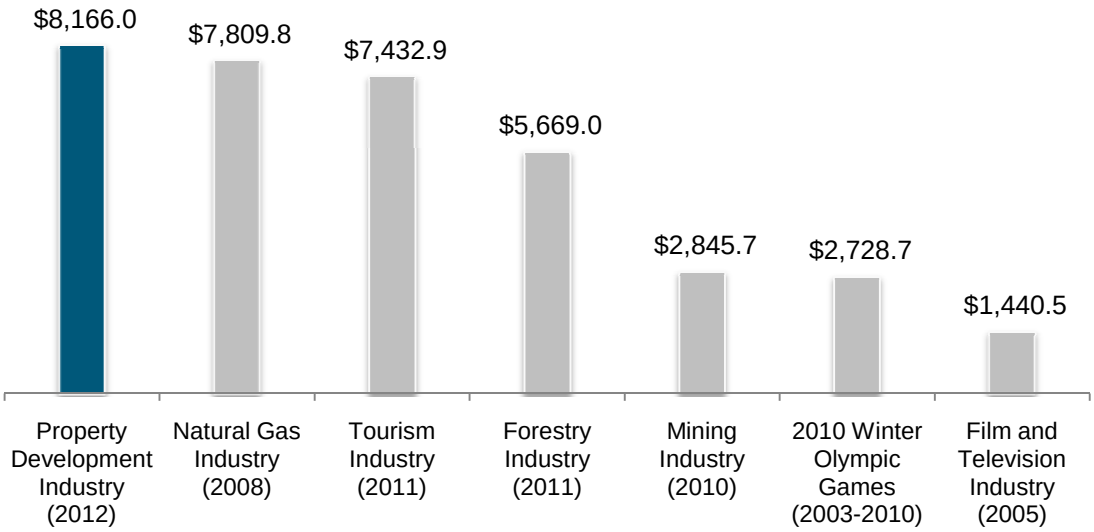
- **Development Cost Charges (DCCs).** DCCs are monies that municipalities and regional districts collect from land developers to offset that portion of the costs related to these services that are incurred as a direct result of this new development. Developers pay DCCs instead of the existing taxpayers who are not creating the demand and are not benefiting from the new infrastructure.[4]
- **Community Amenity Contributions (CACs).** CACs are collected by some municipalities, most prominently the City of Vancouver. CACs are voluntary in-kind or cash contributions provided by developers when municipalities grant additional development rights through rezoning. According to a City of Vancouver Administrative Report to the Standing Committee on Finance and Services, in 2011 CAC's in Vancouver totalled $180 million for public benefits such as affordable housing, community facilities and heritage preservation.[5]

The municipal tax impacts listed in Table 1-1 on the previous page include DCLs and DCCs but do not include CACs, because the latter are often in the form of in-kind contributions.

1.3 INDUSTRY COMPARISONS

To provide context, Figure 1-2 shows the estimated direct GDP contribution of the BC property development industry as compared to the BC natural gas industry, tourism industry, forestry industry, mining industry, the 2010 Winter Olympic Games and the film & television industry.

Figure 1-2: Comparison of GDP Impacts by Industry ($2012) (direct annual impacts unless otherwise stated)



Note: For the 2010 Winter Olympic Games, direct, indirect and induced GDP impacts over the period 2003 to 2010 are reported. GDP estimates have been adjusted to 2012 dollars.

[3] City of Vancouver. Supports Item No. 1(b) CF&S Committee Agenda June 12 2012: Administrative Report.
[4] Ministry of Community, Sport and Cultural Development. Local Government Department. Development Cost Charges.
[5] City of Vancouver. Supports Item No. 1(b) CF&S Committee Agenda June 12 2012: Administrative Report.

2.0 INTRODUCTION

2.1 BACKGROUND AND STUDY PURPOSE

The Urban Development Institute ("UDI") commissioned MNP LLP ("MNP") to carry out an economic impact study of the property development industry in British Columbia ("BC").

The scope of the study included:

- A high level definition of the BC property development industry including an industry value chain graphic and key industry statistics such as expenses, investments and building permits.
- Economic impacts of the BC property development industry based on industry investments (i.e. output, GDP, employment and taxation impacts at the direct, indirect and induced levels).
- Comparison of economic impacts of the BC property development industry to several other industries / initiatives.

2.2 OUR APPROACH

In preparing this report, MNP carried out the following activities:

- Conducted research through publicly available statistics, articles and reports including Statistics Canada, Industry Canada and BC Stats.
- Developed an economic impact model using published economic multipliers.
- Assessed the economic impacts arising through construction investments in the residential, commercial, institutional and industrial sectors of the property development industry in BC.

For a detailed description of MNP's economic impact model, please see Section 4.1 of this report.

2.3 ORGANIZATION OF THE REPORT

The remaining sections of the report are organized as follows:

- Chapter 3 provides an overview of the property development industry in BC and its sub-sectors.
- Chapter 4 outlines the economic impacts of the property development industry in BC.
- Chapter 5 compares the economic impacts (i.e. GDP, employment and tax revenue) of the property development industry in BC to other sectors of the economy.

2.4 REPORT LIMITATIONS

This report is not intended for general circulation, nor is it to be published in whole or in part without the prior written consent of MNP LLP ("MNP"). The report is provided for information purposes and is intended for general guidance only. It should not be regarded as comprehensive or a substitute for personalized, professional advice.

We have relied upon the completeness, accuracy and fair presentation of all information and data obtained from the UDI and public sources, believed to be reliable. The accuracy and reliability of the findings and opinions expressed in the presentation are conditional upon the completeness, accuracy and fair presentation of the information underlying them. As a result, we caution readers not to rely upon any findings or opinions expressed as accurate or complete and disclaim any liability to any party who relies upon them as such.

Additionally, the findings and opinions expressed in the presentation constitute judgments as of the date of the presentation, and are subject to change without notice. MNP is under no obligation to advise of any change brought to its attention which would alter those findings or opinions.

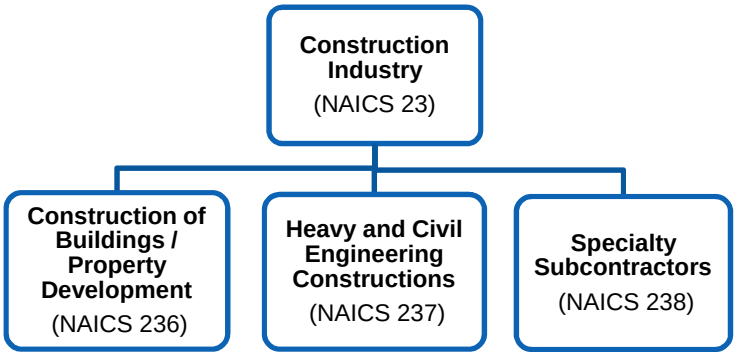
Finally, the reader must understand that our analysis is based upon projections, founded on past events giving an expectation of certain future events. Future events are not guaranteed to follow past patterns and results may vary, even significantly. Accordingly, we express no assurance as to whether the projections underlying the economic and financial analysis will be achieved.

3.0 INDUSTRY PROFILE

3.1 DEFINITION OF THE PROPERTY DEVELOPMENT INDUSTRY

As shown in the figure on the right, the property development industry in BC is a subsector of the construction industry and includes all establishments that are primarily engaged in the construction of new buildings and alternation of existing structures. By definition, this includes the on-site assembly of prefabricated buildings and the construction of temporary buildings. Typical establishments in the industry include:

- Residential, commercial, institutional and industrial building general contractors.
- Construction management firms.
- Design-build firms.



For the purposes of this study the property development industry has been divided into four subsectors: residential, commercial, institutional and industrial. Definitions of each subsector are provided in Table 3-1 below.

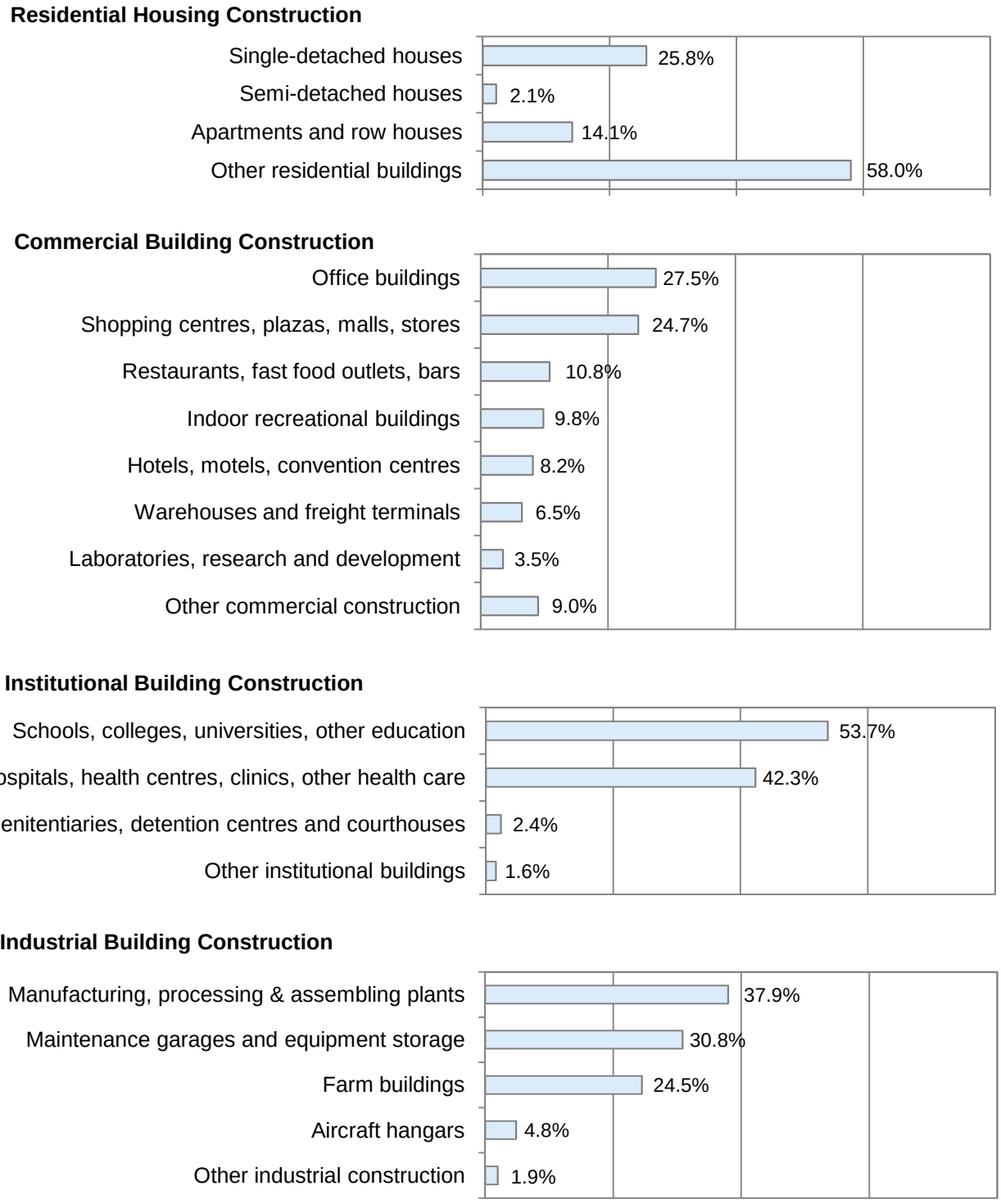
Table 3-1: Definition of the Property Development Industry Subsectors

Subsector	Definition
Residential Building Construction	Includes establishments primarily engaged in the construction or remodelling and renovation of single-family and multi-family residential buildings.
Commercial Building Construction	Includes establishments primarily engaged in the construction (including new work, additions and major alterations) of commercial buildings and related structures.
Institutional Building Construction	Includes establishments primarily engaged in the construction (including new work, additions and major alterations) of institutional buildings and related structures.
Industrial Building Construction	Includes establishments primarily engaged in the construction (including new work, additions and major alterations) of industrial buildings (except warehouses). The construction of selected additional structures, whose production processes are similar to those for industrial buildings (e.g., incinerators, cement plants, blast furnaces, and similar non-building structures), is included in this industry.

Source: Industry Canada, North American Industry Classification (NAICS) Definitions

For examples of the types of building construction in each subsector, please see *Figure 3-1: Breakdown of Capital Expenditures on Building Construction by Subsector, 2010*.

Figure 3-1: Breakdown of Capital Expenditures on Building Construction by Subsector (2010)



Source: Statistics Canada, CANSIM Table 029-0040

3.2 KEY INDUSTRY STATISTICS

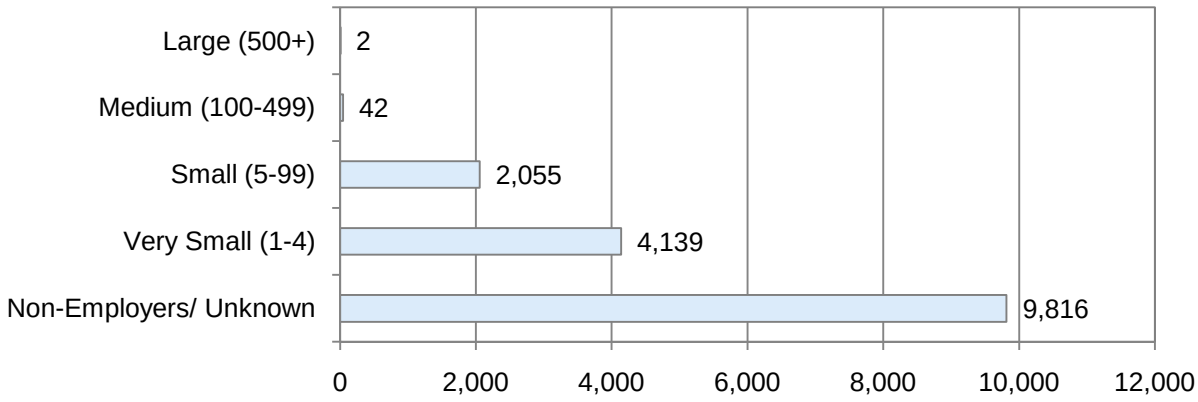
This section presents information on the number and size of establishments in the property development industry, key trends in the value of building permits over time as well as the value of investments in building construction activity by subsector.

Number and Size of Establishments

As of December 2011, there were 16,054 building construction establishments in the province of BC, which represented 18.4 percent of all building construction establishments in Canada.

The majority of building construction establishments in BC are owner operated businesses or are unable to be categorized by number of employees. Of the establishments reporting at least one employee, 66.4 percent are categorized as very small (with one to four employees), as indicated in Figure 3-2 below.

Figure 3-2: Number of Building Construction Establishments in BC by Employment Size (2011)

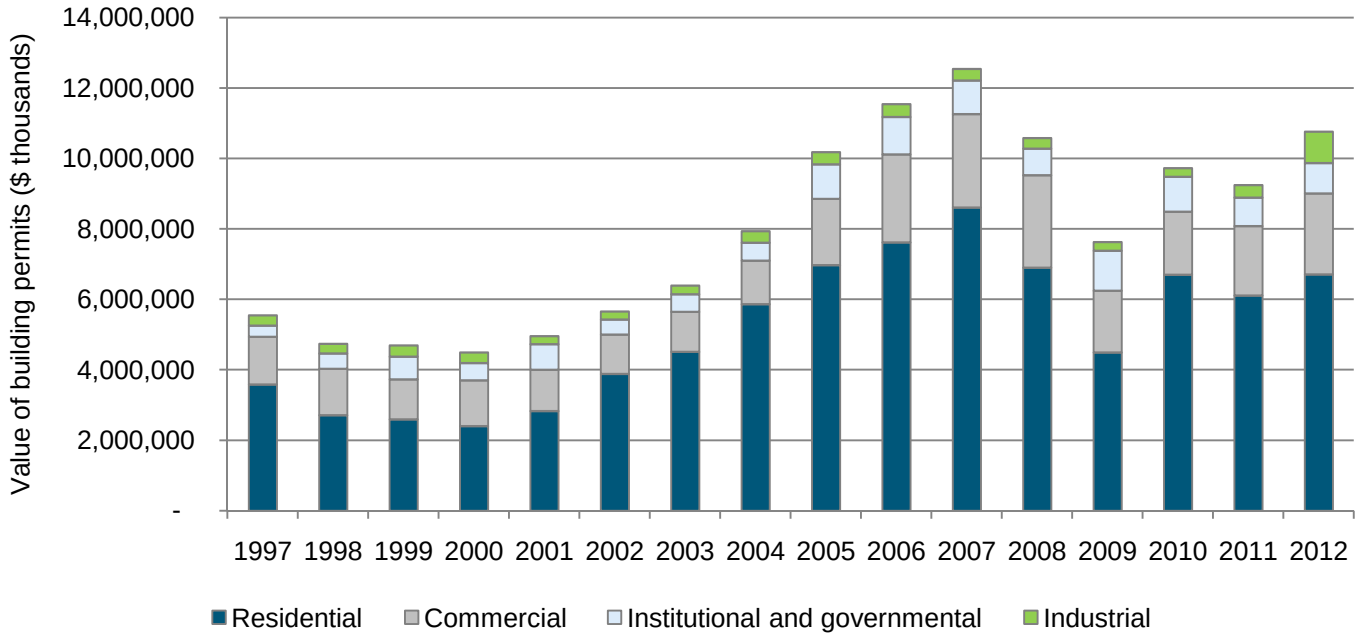


Source: Industry Canada, Canadian Industry Statistics

Value of Building Permits

A strong indicator of the growth of the property development industry is the value of building permits issued in the province. As indicated in Figure 3-3, the value of building permits has increased steadily over the ten year period from 1997 to its peak at $12.5 billion in 2007. While the value of building permits dropped substantially in 2009, the industry has experienced a steady recovery starting in 2010.

Figure 3-3: Value of Building Permits in BC by Subsector (1997 - 2012)

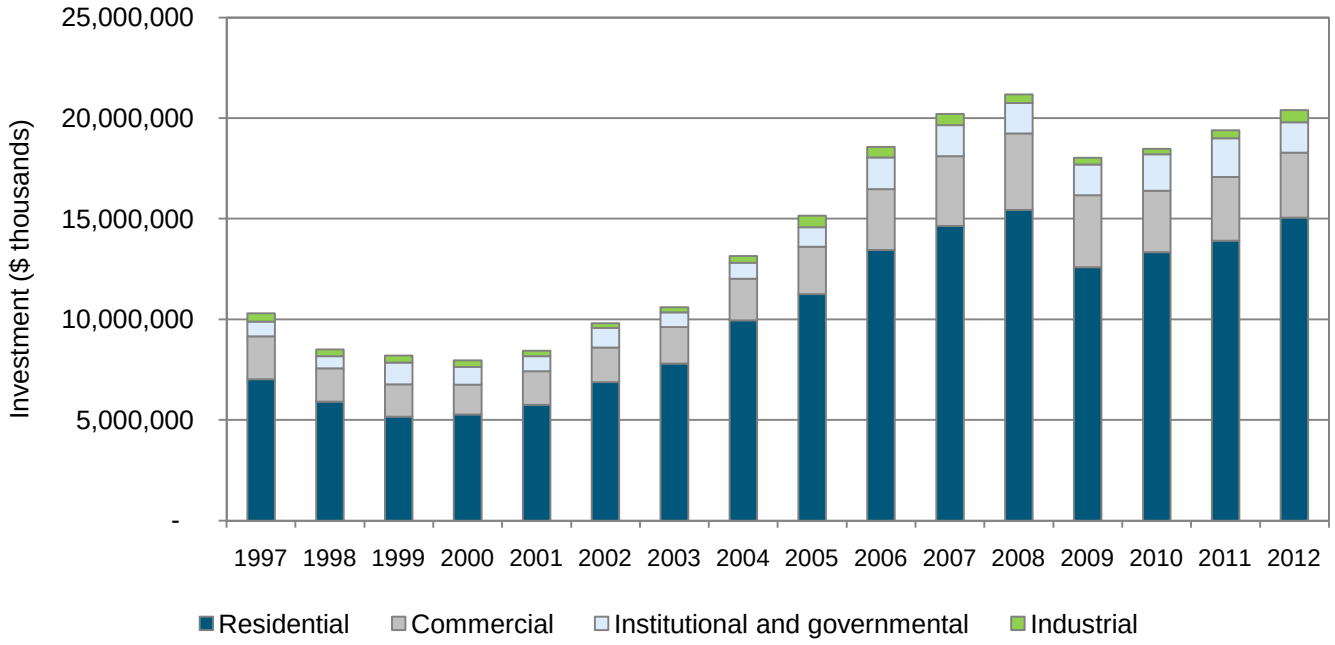


Source: Statistics Canada, CANSIM Tables 026-0006

Investments in Building Construction

Similarly, investments in building construction have increased steadily over the past 15 years as presented in Figure 3-4, with a decrease in 2009 during the economic downturn. In recent years, the property development industry has shown signs of recovery, with average annual increases in investment equal to 4.2 percent over the years 2010, 2011 and 2012.

Figure 3-4: Building Construction Investments in BC by Subsector (1997 - 2012)



Source: Statistics Canada, CANSIM Tables 026-0013 and 026-0016

Table 3-2: Annual Percentage Changes in Building Construction Investments in BC (2008 - 2012)

	2008	2009	2010	2011	2012
Residential	5.4%	-18.4%	5.9%	4.3%	8.3%
Non-residential	3.5%	-5.5%	-5.3%	6.7%	-2.7%
Total	4.8%	-14.9%	2.5%	5.0%	5.2%

Source: Statistics Canada, CANSIM Tables 026-0013 and 026-0016

3.3 INDUSTRY VALUE CHAIN

A value chain is a high-level model of how businesses receive raw materials as input, add value to the raw materials through various processes and distribute finished products to customers.

For the property development industry, direct impacts arise from the industry's core activities while the indirect and induced impacts arise from the linkages that exist with suppliers and other sectors. These related and ancillary sectors include trades services, engineering services, building material suppliers, land assessors, interior designers and others.

The value chain graphic in Figure 3-5 displays these linkages by illustrating the components of the sector and the individuals and organizations with which it interacts.

Figure 3-5: Property Development Value Chain

- Consultants, including:
  - Surveyors
  - Site Planners
  - Architects
  - Structural Engineers
  - Mechanical Engineers
  - Fire Code Consultants
  - Geotechnical Engineers
  - Acoustical Engineering
  - Energy Conservation Specialists
  - Certified Building Professionals
  - Civil Engineers
  - Landscape Architects
  - Traffic Consultants
  - Elevator Consultants
  - Telecommunications
  - Utilities
  - Municipal and Provincial Government Agencies
  - Interior Designers
  - Environmental Services

= Core Activities

= Services involved in multiple phases

Pre-Construction

- Land Purchase
- Property Marketing
- Design
- Building Program Development
- Permits
- Sales
- Leasing

- Title Companies
- Leasing
- Land Assessment
- Financial Services, including:
  - Accounting
  - Insurance
  - Financing
- Legal and Professional Services

Construction

- Project Management
- Building and Assembly
- Renovations

- Trades, including:
  - Carpenters
  - Masons
  - Electricians
  - Welders
  - Painters
  - Plumbers
  - Heating, Ventilation and Air Conditioning Technicians
  - Elevator Mechanics
  - Construction Managers
  - General Contractors
- Tooling
- Supplies, including:
  - Metal
  - Wood
  - Glass
  - Brick
  - Cement
  - Paint/Finishing
  - Hardware
  - Glues
  - Foam and Plastic
- Material Transportation
- Equipment and Machinery
- Financial Services, including:
  - Accounting
  - Insurance
  - Financing
- Legal and Professional Services

Sales and Marketing

- Marketing
- Sales
- Leasing
- Customer Service

- Financial Services, including:
  - Accounting
  - Insurance
  - Financing
- Legal and Professional Services
- Real Estate Agents
- Mortgage Brokers
- Advertising
- Media
- Marketing Support
- Communications
- Inspection Services

Interior Space and Design

- Interior Design
- Retail
- Wholesale

- Interior Designers
- Retail, including:
  - Furniture
  - Shelving, Storage and Organization
  - Lighting
  - Window Treatments
  - Appliances
  - Home Decorations
  - Electronics
  - Cookware, Bakeware and Flatware
  - Glassware
  - Accessories
- Wholesale, including:
  - Supplies
  - Equipment
  - Machinery
  - Furniture
  - Shelving, Storage and Organization
  - Lighting
  - Window Treatments
  - Appliances

Operations and Maintenance

- Utilities
- Services

- Utilities, including:
  - Gas and Electricity
  - Telephone and Internet
  - Cable
- Services, including:
  - Recycling and Waste Disposal
  - Cleaning Services
  - Gardening and Landscaping Services
  - Repairs and Maintenance
  - Property and Building Management
  - Security Services
  - Building Inspections

4.0 ECONOMIC IMPACT ANALYSIS

4.1 ECONOMIC IMPACT ANALYSIS METHODOLOGY

MNP's estimates of economic impacts have been developed using Statistics Canada's input-output model for BC. An input-output model is based on statistical information about the flow of goods and services among various industries, and is normally used "to simulate the economic impact on the business sector of an expenditure on a given basket of goods and services or the output of one of several industries."[6]

Input-output modeling is a widely-used and widely-accepted approach, making it recognizable by many different stakeholders and audiences. The structure of the approach also facilitates easy comparisons between reported results for different projects and facilities.

In general, economic impacts are viewed as being restricted to quantitative, well-established measures of economic activity. The most commonly used of these measures are output, GDP, government tax revenue and employment:

- **Output** is the total gross value of goods and services produced by a given company or industry measured by the price paid to the producer. This is the broadest measure of economic activity.
- **Gross Domestic Product (GDP),** or value added refers to the additional value of a good or service over the cost of inputs used to produce it from the previous stage of production. Thus GDP is equal to net output, or the difference between revenues and expenses on intermediate inputs. GDP is a more meaningful measure of economic impact, as it avoids double counting during each round of impacts.
- **Government Tax Revenues** arise from personal income taxes, corporate income taxes, consumption taxes (e.g. PST and GST) and indirect taxes on production (e.g. developer's fees and levies).
- **Employment** is the number of additional jobs created. Employment is measured in terms of full-time equivalents (FTE).

Economic impacts may be estimated at the direct, indirect, and induced levels.

- **Direct impacts** are due to changes to "front end" businesses that receive operating revenue as a direct consequence of an industry, group or organization. Direct impacts are related to original purchases or "direct sales" from primary suppliers.
- **Indirect impacts** are due to changes in the activity of suppliers. Indirect impacts include the spending that suppliers make when purchasing goods and services from their own suppliers (i.e. secondary suppliers) in order to meet the demand generated by property development establishments.
- **Induced impacts** arise from shifts in spending on goods and services as a consequence of changes to the payroll of the directly and indirectly affected businesses. In the case of the property development industry, induced impacts reflect the additional spending by the employees of suppliers (primary suppliers) and their suppliers' suppliers (secondary suppliers).

[6] Statistics Canada. (2013, April). *Input-Output Model Simulations (Interprovincial Model)*. Retrieved from http://www5.statcan.gc.ca/bsolc/olc-cel/olc-cel?lang=eng&catno=15F0009X.

4.2 ECONOMIC IMPACTS OF THE BC PROPERTY DEVELOPMENT INDUSTRY

The economic impacts of investments in the BC property development industry in 2012 are summarized in the table below.

Table 4-1: BC Property Development Industry – Total Economic Impacts (2012)

	Output ($ millions)	GDP ($ millions)	Employment (FTEs)	Federal Tax ($ millions)	Provincial Tax ($ millions)	Municipal Tax ($ millions)
Direct	20,400	8,166	106,876	639	670	634
Indirect and Induced	14,664	8,812	114,668	850	553	159
Total	**35,064**	**16,978**	**221,544**	**1,489**	**1,223**	**793**

Output

Total direct, indirect and induced output generated by the property development industry for the BC economy is $35.1 billion. Output directly generated by the sector is estimated at $20.4 billion, which supports a further $9.7 billion in indirect and $5.0 billion in induced impacts.

GDP

Total direct, indirect and induced GDP generated by the property development industry for the BC economy is estimated at $17.0 billion. GDP directly generated by the sector is estimated at $8.2 billion, which supports a further $4.8 billion in indirect and $4.0 billion in induced impacts.

Employment

Approximately 221,544 direct, indirect and induced full-time equivalent positions (FTEs) are generated by the property development industry in the BC economy including approximately 107,000 in direct, 56,500 in indirect and 58,000 in induced FTEs.

Overall Tax Revenue

Direct, indirect and induced taxes generated by the property development industry are estimated at $3.5 billion.[7] Approximately 42 percent of the total is estimated to flow to the federal government, 35 percent to the provincial government and 23 percent to municipal governments.

Please note that because tax revenues can regularly change due to modifications in tax policy, the tax revenue impacts in this report are estimates only and subject to change. They should be viewed as approximate in nature.

A. Federal Tax Revenue

Federal tax revenue directly generated by the sector is estimated at $639 million, which supports a further $850 million in indirect and induced impacts.

B. Provincial Tax Revenue

Provincial tax revenue directly generated by the sector is estimated at $670 million, which supports a further $553 million in indirect and induced impacts.

[7] Tax impacts were estimated based on both Statistics Canada and BC Stats tax multipliers.

Direct provincial tax impacts do not include any portion of the Property Transfer Tax (PTT), which is a land registration tax payable when an application is made to register changes to a certificate of land title.[8] In 2010/11, the BC government collected approximately $927 million through the PTT on the transfer of land title,[9] which included a portion paid by the property development industry.

C. Municipal Tax Revenue

Municipal tax revenue directly generated by the sector is estimated at $634 million,[10] which supports a further $159 million in indirect and induced impacts. These tax impacts include permitting and licensing fees, as well as developer charges in the form of Development Cost Levies (DCLs) and Development Cost Charges (DCCs). The impacts do not include Community Amenity Contributions (CACs), because they are often paid as in-kind contributions.

Development Cost Levies

DCLs are a growth-related charge on all new development. They are applied on a per square foot basis and are payable at Building Permit issuance. DCLs are collected from development to help pay for facilities made necessary by the growth such as: parks, childcare facilities, placement housing (social/non-profit housing) and engineering infrastructure.[11]

Development Cost Charges

DCCs are monies that municipalities and regional districts collect from land developers to offset that portion of the costs related to these services that are incurred as a direct result of this new development. Developers pay DCCs instead of the existing taxpayers who are not creating the demand and are not benefiting from the new infrastructure.[12]

Community Amenity Contributions

CACs are collected by some municipalities, most prominently the City of Vancouver. They are voluntary in-kind or cash contributions provided by developers when municipalities grant additional development rights through rezoning. According to the City of Vancouver, CACs are meant to help address the increased demands that may be placed on municipal facilities as a result of rezoning (from new residents and/or employees), as well as mitigate the impacts of a rezoning on the surrounding community. Examples of in-kind amenity contributions include childcare facilities or park space incorporated in the new development. Cash contributions may be put toward benefits such as these, and others including libraries, community centres, transportation improvements, cultural facilities and neighbourhood houses. Cash benefits are generally applied to off-site benefits in the surrounding community.[13]

Recent Increases in Developer Charges

DLCs, DCCs and CACs have all been increasing in recent years. The City of Vancouver's 2010 and 2011 reports to the Administrative Report to the Standing Committee on Finance and Services, estimate that CACs grew from $27 million in 2010 to $180 million in 2011. According to industry sources, CACs were upwards of $500 million in 2012.

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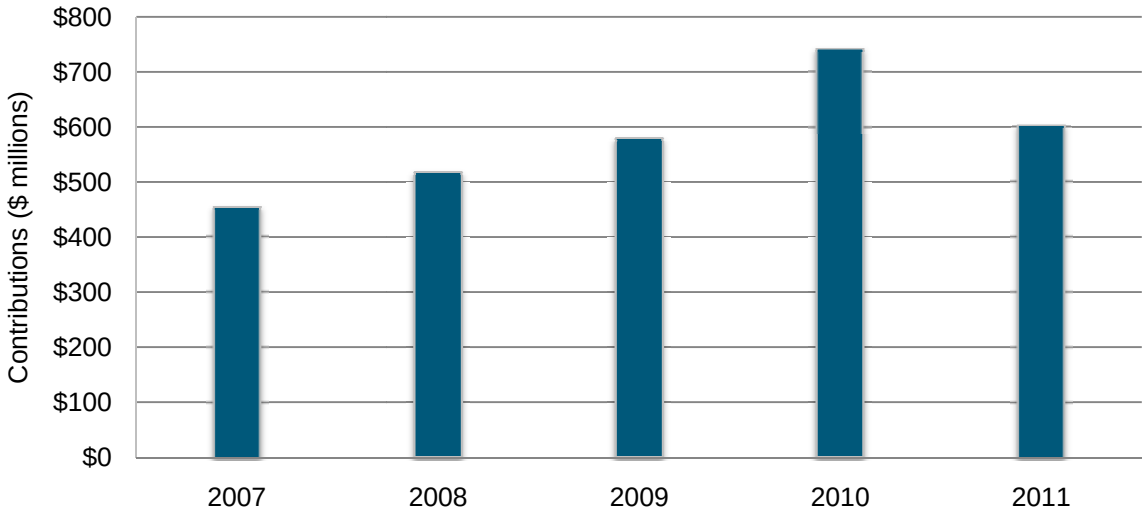
[8] Government of British Columbia. Property Transfer Tax. Retrieved from http://www.sbr.gov.bc.ca/business/Property_Taxes/Property_Transfer_Tax/faq.htm.
[9] Canadian Taxpayers Federation, Property Transfer Tax Statistics. Retrieved from http://www.taxpayer.com/blog/bc--property-transfer-tax-stats.
[10] Developer contributions to municipalities and regional districts in BC totalled $603 million in 2011 according to data obtained from the Ministry of Community, Sport and Cultural Development. Our estimate of direct municipal tax revenues are based on this 2011 figure, adjusted proportionally to account for a higher level investment in property development in 2012.
[11] City of Vancouver. Supports Item No. 1(b) CF&S Committee Agenda June 12 2012: Administrative Report.
[12] Ministry of Community, Sport and Cultural Development. Local Government Department. Development Cost Charges.
[13] City of Vancouver. Supports Item No. 1(b) CF&S Committee Agenda June 12 2012: Administrative Report.

Increases in developer contributions from 2007 to 2011 are shown in the graph below.

Figure 4-2: BC Developer Contributions (2007 - 2011)



Source: Ministry of Community, Sport and Cultural Development, Local Government Statistics

4.3 ECONOMIC IMPACTS BY SUBSECTOR

The economic impacts for each of the property development subsectors are presented below. The largest subsector in terms of economic impacts is residential housing development, followed by commercial property development. Together the residential and commercial property development subsectors account for almost 90 percent of total industry output, GDP and employment.

Table 4-3: BC Property Development Industry – Economic Impacts by Subsector (2012)

	Output ($ millions)	GDP ($ millions)	Employment (FTEs)
Residential			
Direct	15,060	6,093	81,340
Indirect and Induced	10,675	6,346	82,734
Total	**25,735**	**12,439**	**164,074**
Commercial			
Direct	3,228	1,253	15,437
Indirect and Induced	2,411	1,491	19,304
Total	**5,639**	**2,744**	**34,741**
Institutional			
Direct	1,512	587	7,232
Indirect and Induced	1,130	698	9,044
Total	**2,642**	**1,286**	**16,276**
Industrial			
Direct	600	233	2,867
Indirect and Induced	448	277	3,586
Total	**1,047**	**510**	**6,453**

5.0 INDUSTRY COMPARISONS

This section provides a comparison of the economic impacts of the BC property development industry to other large industries and initiatives in BC, including the following:

1. **Natural Gas Industry.** A study published by IHS Global Insight in December 2009 reports provincial economic impacts of the natural gas industry in Canada in the year 2008. According to the study, the sector was defined to include the following activities:
    - Natural gas and gas liquids extraction (production).
    - Support and drilling establishments (contractors) for upstream natural gas operations.
    - Natural gas pipeline transportation (long distance), including storage.
    - Natural gas distribution, including local utilities as well as marketers and brokers.
    - Natural gas engineering construction services for upstream, midstream, and downstream natural gas operations.

    The IHS study did not include taxation impacts, so MNP could not include the natural gas industry in the comparison of tax revenues.

2. **Tourism Industry.** On an annual basis, BC Stats publishes a Tourism Indicators report with key statistics related to the tourism industry. While the published employment and tax revenue estimates are not directly comparable to the results of this study, comparisons can be made to estimates of industry contributions to GDP.

3. **Forestry Industry.** For an estimate of industry GDP, estimates were compiled from Statistics Canada on the GDP of the following forestry subsectors: forestry and logging (NAICS 113), wood product manufacturing (NAICS 321) and paper manufacturing (NAICS 322). A comparable study of the economic impacts of the forestry sector was not available at the time of this study, so MNP could not include the forestry industry in the comparisons for employment and taxes.

4. **Mining Industry.** In October 2011, PricewaterhouseCoopers (“PwC”) completed a report that assessed the economic impacts generated by the BC mining industry in 2010. The economic impact modelling approach is consistent with the approach used in this study.

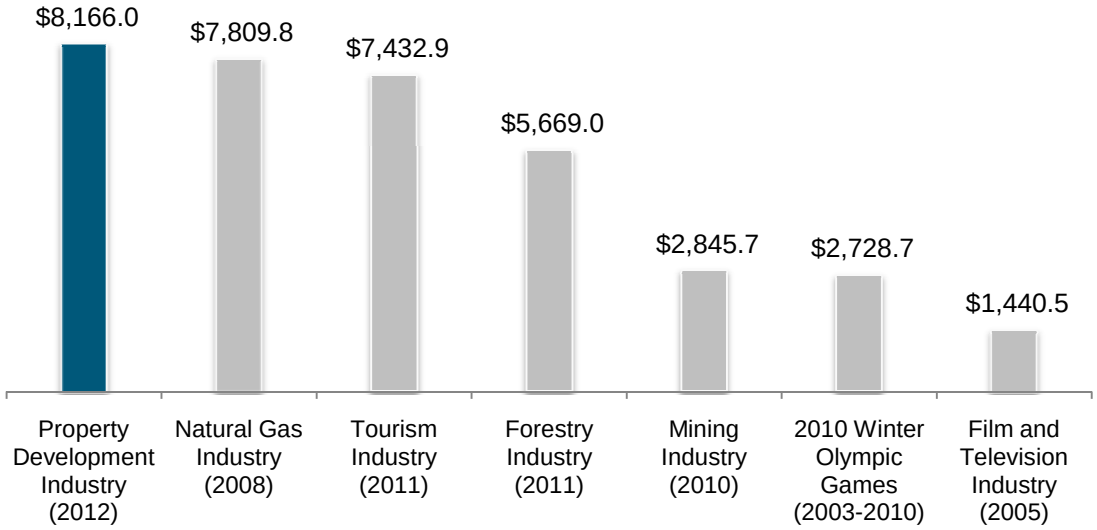
5. **2010 Winter Olympic Games.** In February and March 2010, BC was host to the 2010 Olympic and Paralympic Winter Games. A series of reports prepared by PwC estimates the economic impacts of the Olympics on the BC economy over the years 2003 to 2010. While direct economic impacts are not reported separated from total impacts, meaningful comparisons can still be made.

6. **Film and Television Industry.** In 2005 the Province of BC commissioned InterVISTAS Consulting Inc. to undertake a comprehensive economic study of the BC film and television industry. The study estimates the GDP and employment contribution of the industry based on a five year average of production spending. Only provincial tax revenues generated by the industry were included in the study, therefore the film industry was excluded from our comparison of industry tax revenues.

5.1 GDP COMPARISON

The property development industry represents a major contribution to the BC economy. As can be seen in Figure 5-1, the estimated direct GDP contribution of the industry is greater than estimated contributions of the natural gas industry, tourism industry, forestry industry, mining industry and 2010 Winter Olympic Games.

Figure 5-1: Comparison of GDP Impacts by Industry ($2012) (direct annual impacts unless otherwise stated)



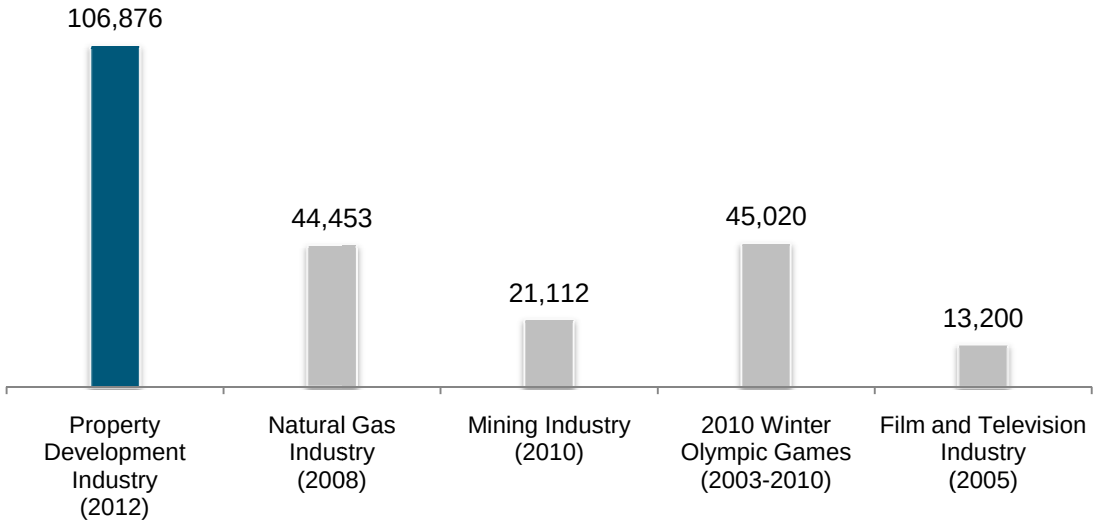
Note: For the 2010 Winter Olympic Games, direct, indirect and induced GDP impacts over the period 2003 to 2010 are reported.

GDP estimates have been adjusted to 2012 dollars.

5.2 EMPLOYMENT COMPARISON

As shown in Figure 5-2, investments in the property development industry in BC in 2012 contributed to more direct jobs in the BC economy than investments in the natural gas industry, mining industry and 2010 Winter Olympic Games over their respective periods of analysis.

Figure 5-2: Comparison of Employment Impacts by Industry (direct annual impacts unless otherwise stated)

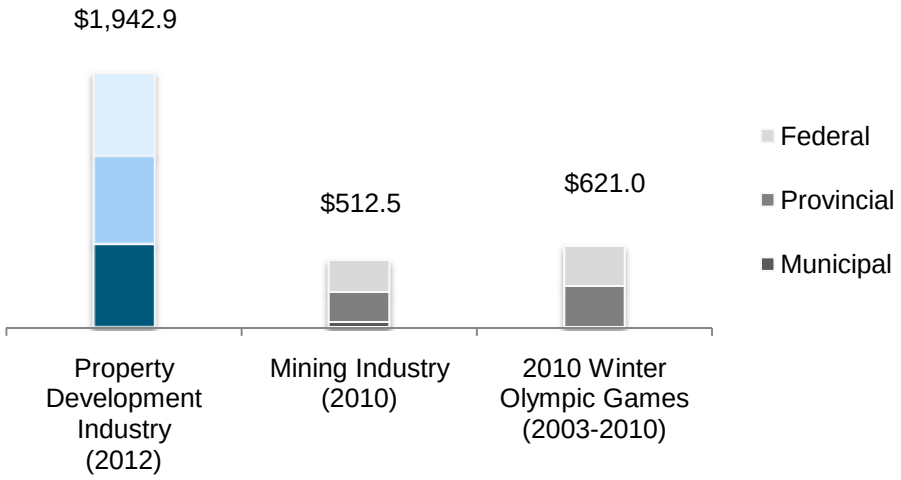


Note: For the 2010 Winter Olympic Games, direct, indirect and induced employment impacts over the period 2003 to 2010 are reported.

5.3 TAX REVENUE COMPARISON

As shown in Figure 5-3, tax revenues generated by the property development industry in BC are close to three times the tax revenues generated by the mining industry and 2010 Winter Olympic Games.

Figure 5-3: Comparison of Tax Revenues by Industry ($2012) (direct annual impacts unless otherwise stated)



Note: For the 2010 Winter Olympic Games, direct, indirect and induced tax revenues over the period 2003 to 2010 are reported. The estimate of direct tax revenues of the mining industry excludes mineral royalties.

Estimates of tax revenues have been adjusted to 2012 dollars.

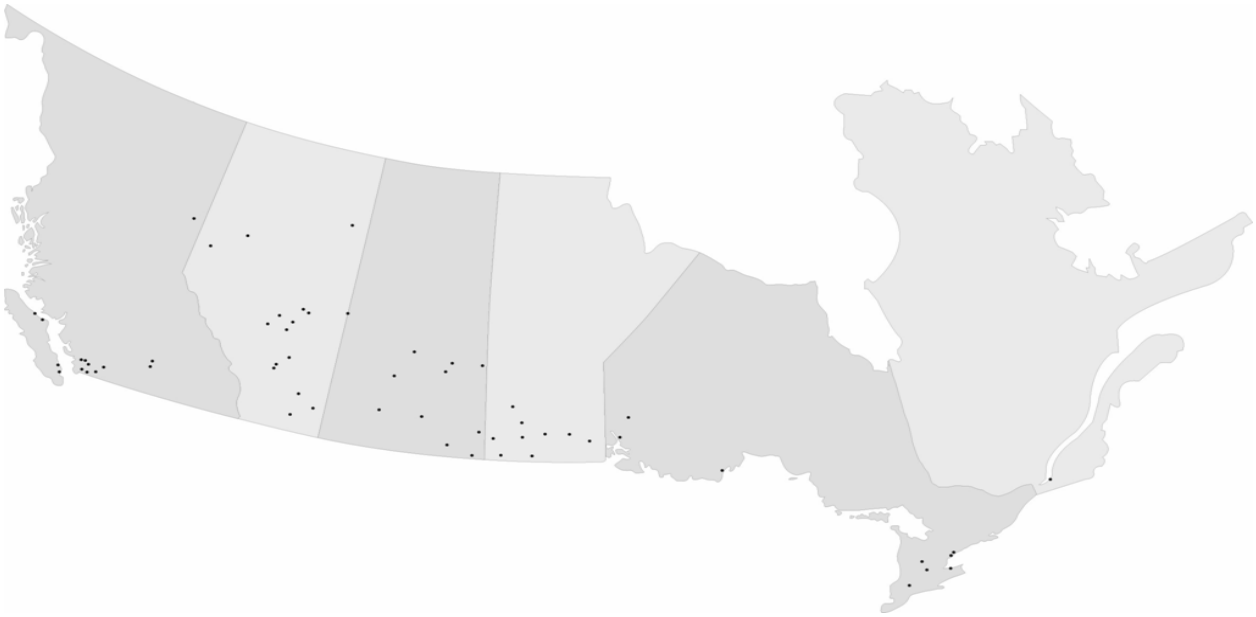
6.0 APPENDICES

APPENDIX A – ABOUT MNP

MNP is the fastest growing major chartered accountancy and management consulting firm in Canada. Founded in 1945, MNP has grown from a single office in Manitoba to more than 70 offices and nearly 3,000 team members across Canada.

MNP is a member of Praxity AISBL, a global alliance of independent firms, which enables us to access a broad range of industry specific expertise worldwide.

At MNP, our professionals are the driving force behind our success. They continue to demonstrate our culture and values which is integral to the way we conduct business, both internally and externally. As such, MNP is proud to be recognized for the fourth year in a row as one of the *50 Best Employers in Canada* by *Report On Business* magazine.



MNP's economics and research practice provides analysis and research services that encompass a wide range of statistical, economic and program evaluation applications. Our work helps clients make strategic decisions, evaluate programs and business alternatives, determine economic and financial contributions and develop public policy. Our team of economists, statisticians and business professionals has served clients from across Canada and the United States. Our expertise includes:

- Economic Impact Studies
- Statistical and Econometric Forecast Models
- Industry Analysis
- Cost Benefit Analysis
- Negotiation Support
- Overhead Studies
- Program Evaluation
- Market Analysis