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**Final Report**

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**A Comparison of Contributions to the Canadian  
Economy of Key Bulk Commodity Shippers  
and  
Rail Freight Carriers**

by

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Submitted to:  
Western Canadian Shippers' Coalition

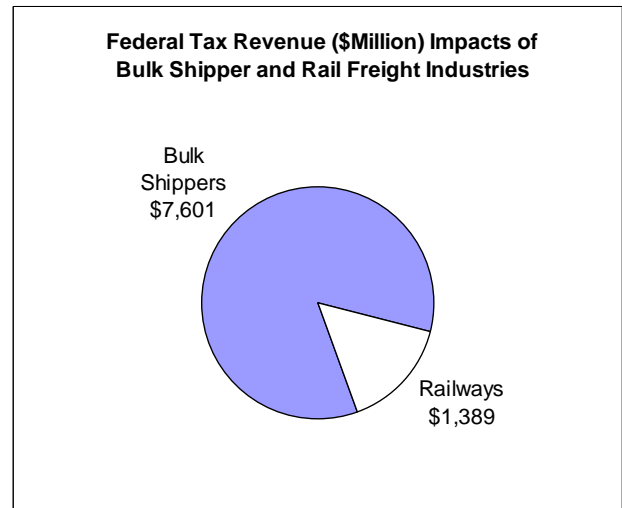
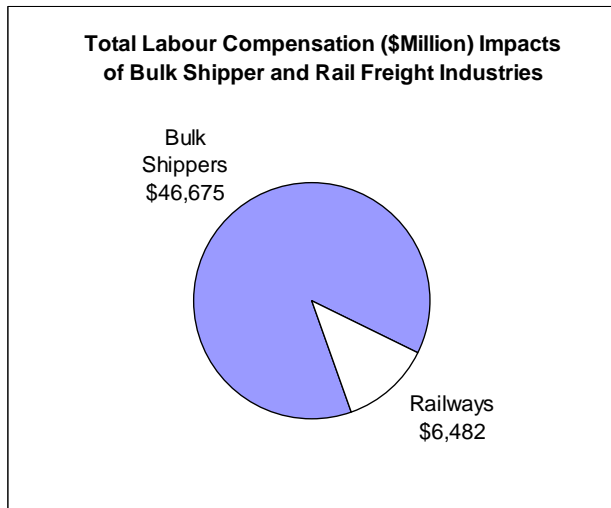
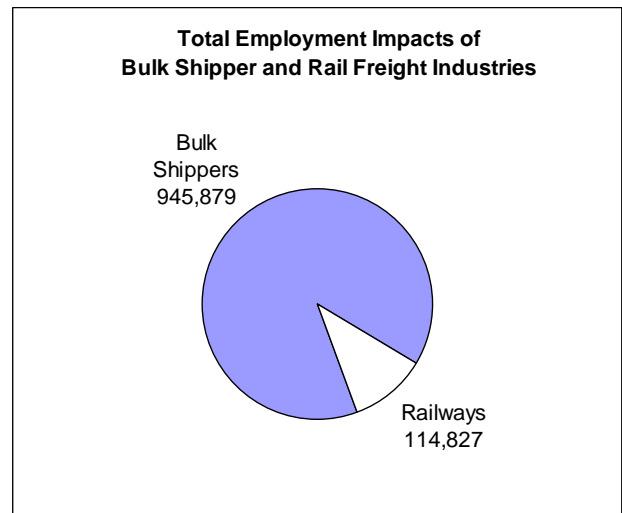
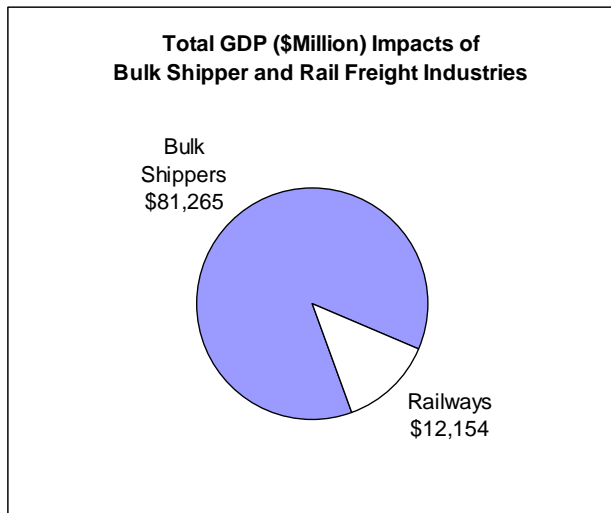
# A Comparison of Contributions to the Canadian Economy of Key Bulk Commodity Shippers and Rail Freight Carriers

## Executive Summary

This study compares the contribution to the Canadian economy of four key bulk shipping industries – Oilseed & Grain Farming, Coal Mining, Wood Products Manufacturing, and Pulp & Paper and Paper Products Manufacturing – with the contribution of the rail freight industry – CN and CP and regional railways. The economic contribution - GDP, number of workers employed, wages and salaries paid - includes not only the direct impact of the industries themselves but also the indirect impacts on industries up the production chain and the induced impacts of labour income spent.

The combined direct, indirect and induced economic impacts from the rail freight industry are approximately \$12 billion in GDP, 115,000 jobs paying \$6.5 billion in labour compensation and \$1.4 billion in federal tax revenues.

The total impacts of these four key Canadian bulk shipping industries contribute over \$81 billion to Canadian GDP, and close to 1 million jobs that pay nearly \$47 billion in labour compensation. This activity generates \$7.6 billion in federal tax revenues.



## **A Comparison of Contributions to the Canadian Economy of Key Bulk Commodity Shippers and Rail Freight Carriers**

Bulk commodity industries make a significant contribution to the Canadian economy not only in terms of the output produced, but also in persons employed and tax revenues generated. The Western Canadian Shippers Coalition (WCSC) has asked for a measurement of the impact on the national economy of key industries that are representative of the bulk shipping industry, compared with the impact of the Canadian rail freight industry. This study will characterize the contribution of each to Canadian Gross Domestic Product (GDP), employment, employment earnings and federal government revenues in order to give a better idea of the impact on the economy of each sector.

The importance of a sector to the economy begins with its *direct* impact, which includes the sales of products by the industry itself, the number of people it directly employs, the wages and salaries and profits earned in the operation of the industry itself, and the taxes it pays.

There are also the *indirect* impacts: These are purchases the industry must make in order to undertake its production (its 'inputs'), and also the purchases the industries producing these inputs must make, in turn, to facilitate their production ('inputs into inputs'), and so on back along the production chain. Included in these indirect impacts are such things as the purchase of energy, and the purchase of a wide range of accounting, financial, insurance and scientific services. Also included are all inputs required to produce the industry's purchased inputs – for example, the replacement parts that are needed to maintain the machinery used in the industry, the steel that goes into those parts and the energy and transportation services needed to produce the steel. In many cases, this 'backward chain' of inputs into inputs into inputs is extensive.

Finally there are the *induced* economic impacts. Briefly, these are the economic impacts that result from the spending of wages and salaries by workers employed both directly in

the industry in question and indirectly in all of the supplier industries. To the extent that these consumer goods and services are produced in Canada, there is a further economic impact on the country. Moreover, this level has a backward input chain to it as well, since consumer goods or services require their own inputs which may also be produced in Canada and generate further wage earnings.

Using public reports available from Statistics Canada, as well as special calculations performed by the Input-Output Division of Statistics Canada, it is possible to obtain reliable calculations of the direct, indirect, and induced impacts of industries of interest in Canada. To maintain reliability, cautious assumptions have been used where necessary in determining elements such as federal tax take or production and re-spending by consumers.

### **Industries to be Examined**

The WCSC indicated there are a number of Canadian industries that undertake a significant amount of bulk shipping in Canada. After investigating the availability of data for several Canadian industries, four representative bulk shipping-intensive industries were selected for comparison with the rail freight industry. Those industries are as follows (together with Statistics Canada North American Industry Classification codes):

Oilseed and Grain Farming (NAICS 1111)

Coal Mining (NAICS 2121)

Wood Product Manufacturing (NAICS 321)

Paper (Pulp & Paper and Paper Products) Manufacturing (NAICS 322)

Rail Transportation (CN and CP and regional railways – a subset of NAICS 482)

These industries are defined by statistical agencies in order to capture their nature as an industry not their propensity to ship their production in bulk. It is recognized that not every item produced by the listed industries is shipped in bulk (although the vast majority is). As indicated, the industries are intended to be representative of bulk shipping industries and constitute a conservative estimate.

We use data from 2007 as it is the most recent year for which statistics are reliably available (since the figures for 2008 are still subject to significant revision). Efforts have been made to assure the data are consistently defined across all of these industries. Various Statistics Canada publications and surveys were used to collect the information necessary to define the direct impacts of the industries. These include:

- 1) the Taxation Data Program, the Labour Force Survey and *Farm Cash Receipts* (Oilseed and Grain Farming);
- 2) *Canada's Mineral Production*, the Survey of Employment, Payroll and Hours and *Principal Statistics-Coal Mines* (Coal Mining);
- 3) the Annual Survey of Manufactures (Wood Product Manufacturing and Pulp & Paper and Paper Products Manufacturing) and
- 4) *Rail in Canada* (CN and CP and Regional Rail Transportation).

### **Direct Impacts of the Industries**

As shown in Table 1, the Oilseed and Grain Farming industry directly produced \$11.5 billion of output in 2007 while employing 39,100 people. This generated nearly \$1 billion in direct total labour compensation (including supplementary labour income), while direct Gross Domestic Product resulting from the Oilseed and Grain Farming industry was nearly \$3 billion in 2007.

The Coal Mining industry directly produced over \$2.7 billion of output in 2007 while employing 5,844 people that generated over \$500 million in direct labour compensation. Direct Gross Domestic Product resulting from the Coal Mining industry was nearly \$2.2 billion in 2007.

The Wood Products Manufacturing industry directly produced over \$28.5 billion of output in 2007 while employing nearly 110,000 people. The industry generated over \$6.2 billion in direct labour compensation and generated Direct Gross Domestic Product of nearly \$10 billion in 2007.

**Table 1: Economic Impacts of Representative Bulk Shipper Industries**

- All dollar amounts are in millions of 2007 Canadian dollars unless indicated
- Employment is in person-years

	<b>Oilseed &amp; Grain Farming</b>	<b>Coal Mining</b>	<b>Wood Products Manufacturing</b>	<b>Pulp &amp; Paper and Paper Products Manufacturing</b>	<b>TOTAL</b>
<b>Output/Revenue</b>	\$11,479	\$2,735	\$28,545	\$30,922	\$73,682
<b>Direct Impacts</b>					
Employment	39,100	5,844	109,994	70,015	224,953
Total Labour Compensation	\$967	\$525	\$6,224	\$5,855	\$13,570
Gross Domestic Product	\$2,998	\$2,156	\$9,670	\$8,929	\$23,753
<b>Indirect Impacts</b>					
Employment	69,131	3,930	157,226	151,893	382,180
Total Labour Compensation	\$2,976	\$202	\$8,207	\$7,961	\$19,345
Gross Domestic Product	\$5,571	\$372	\$13,565	\$14,267	\$33,774
<b>Induced Impacts</b>					
Employment	45,479	7,326	148,680	137,261	338,746
Total Labour Compensation	\$1,847	\$298	\$6,039	\$5,575	\$13,760
Gross Domestic Product	\$3,187	\$513	\$10,419	\$9,619	\$23,738
<b>Total - Direct, Indirect and Induced Impacts</b>					
Employment	153,710	17,100	415,900	359,169	945,879
Total Labour Compensation	\$5,790	\$1,025	\$20,470	\$19,391	\$46,675
Gross Domestic Product	\$11,756	\$3,042	\$33,653	\$32,814	\$81,265
<b>Federal Tax Revenues</b>					
Personal Income Tax	\$385	\$94	\$1,536	\$1,537	\$3,551
Corporate Income Tax	\$424	\$155	\$904	\$919	\$2,403
Employment Insurance Contributions	\$71	\$9	\$205	\$170	\$455
Indirect Tax	\$239	\$28	\$491	\$434	\$1,192
<b>Total</b>	\$1,119	\$286	\$3,136	\$3,061	\$7,601

The Pulp & Paper and Paper Products Manufacturing industry directly produced over \$30.9 billion of output in 2007 while employing over 70,000 people. The industry generated nearly \$5.9 billion in direct labour compensation and generated Direct Gross Domestic Product of over \$8.9 billion in 2007.

These four industries combined directly produced close to \$74 billion in output in 2007 while employing nearly 225,000 people and directly generated nearly \$24 billion in Gross Domestic Product in the country in 2007.

As shown in Table 2 the rail freight industry generated nearly \$10.2 billion in rail revenue in 2007 while employing approximately 31,000 people, with a direct contribution to GDP of nearly \$5.6 billion.

### **Indirect Impacts of the Industries**

The purchased inputs required for an industry's operation constitute the indirect economic impacts. Each industry has a different mix of purchased inputs. Utilizing Statistics Canada's latest Input-Output data the impacts of each industry's purchases back up the production chain were calculated. The sum of these indirect economic impacts is considerable, often exceeding the industries' direct impact on GDP. The impacts are spread across a wide range of industrial sectors in the country (see Appendix A for details).

Table 1 demonstrates that the indirect impact of the Oilseed and Grain Farming industry amounts to over 69,000 jobs, close to \$3 billion in total labour compensation and over \$5.5 billion in GDP.

The indirect impact of the Coal Mining industry is over \$370 million of GDP with close to 4,000 people employed and over \$200 million paid in labour compensation.

**Table 2: Economic Impacts of the Rail Freight Industry**

- All dollar amounts are in millions of 2007 Canadian dollars unless otherwise indicated
- Employment is in person-years

<b>Rail Output/Revenue</b>	\$10,185
<b>Direct Impacts</b>	
Employment	31,151
Total Labour Compensation	\$2,734
Gross Domestic Product	\$5,584
<b>Indirect Impacts</b>	
Employment	36,487
Total Labour Compensation	\$1,831
Gross Domestic Product	\$3,263
<b>Induced Impacts</b>	
Employment	47,189
Total Labour Compensation	\$1,917
Gross Domestic Product	\$3,307
<b>Total - Direct, Indirect and Induced Impacts</b>	
Employment	114,827
Total Labour Compensation	\$6,482
Gross Domestic Product	\$12,154
<b>Federal Tax Revenues</b>	
Personal Income Tax	\$579
Corporate Income Tax	\$531
Employment Insurance Contributions	\$56
Indirect Tax	\$223
<b>Total</b>	<b>\$1,389</b>



The indirect impact of the Wood Products Manufacturing industry is estimated to be nearly \$13.6 billion of GDP, with over 157,200 people employed and over \$8.2 billion in labour compensation.

Total indirect labour compensation earned as a result of the Pulp & Paper and Paper Products Manufacturing industry in 2007 is estimated to be nearly \$8 billion from the roughly 152,000 jobs created. The indirect GDP impact is over \$14.2 billion from this industry.

The combined indirect impact from these four bulk shipping intensive industries is substantial. Spending on suppliers by these industries generates over 382,000 jobs with a total labour compensation of over \$19.3 billion. The total impact on Gross Domestic Product is nearly \$33.8 billion.

The indirect impact of the rail freight industry (Table 2) is estimated to be nearly \$3.3 billion of GDP in 2007, generating a total of approximately 36,500 jobs. The upstream impacts on total labour compensation exceed \$1.8 billion.

### **Induced Impacts of the Industries**

The final economic contribution generated by these industries is the ‘induced’ impact. This is economic activity that is generated when employees of both the industry and its upstream providers spend wages (after tax, and savings). There is an additional minor effect as those working to provide consumer goods and services to industry employees and the upstream employees in turn spend their own after-tax wages. Since the Input-Output system of Statistics Canada is used to generate the impacts of an “average” consumer, the induced average labour compensation earned from all these industries is the same.

Calculations show (see Table 1) that for the Oilseed and Grain Farming industry the induced employment impact is nearly 45,500 jobs, over \$1.8 billion in labour compensation and nearly \$3.2 billion in GDP. For the Coal Mining industry induced impacts exceed 7,300 jobs, nearly \$300 million in labour compensation and over \$510

million in GDP. The induced impacts of the Wood Products Manufacturing are nearly 150,000 jobs, over \$6 billion in labour compensation and over \$10.4 billion of GDP. The Pulp & Paper and Paper Products Manufacturing industry generates induced employment gains of over 137,000 positions, nearly \$5.6 billion in labour compensation and over \$9.6 billion of GDP.

The total induced impact in 2007 from these four bulk commodity industries is comparable to the indirect impact on employment and the direct impact on GDP and total labour compensation. The spending of wages by those employed generates a total of nearly 340,000 jobs, \$13.8 billion in labour compensation and over \$23.7 billion of GDP.

The induced impact of the rail freight industry in 2007 (see Table 2) is estimated to be \$3.3 billion of GDP, with employment impacts of nearly 47,200 jobs.

### **Total Impacts**

Combining the direct, indirect and induced results provides the total employment and GDP impacts as measured in 2007 (see Table 1). The Oilseed and Grain Farming industry generated over 153,700 jobs and nearly \$11.8 billion in GDP, with total labour compensation nearing \$5.8 billion. The Coal Mining industry generated a total of 17,100 jobs with total labour compensation of over \$1 billion and over \$3 billion of GDP. The Wood Products Manufacturing industry generated nearly 416,000 jobs and \$33.7 billion in GDP. The Pulp & Paper and Paper Products Manufacturing industry created direct, indirect and induced employment impacts of nearly 360,000 jobs and over \$32.8 billion of GDP.

These four industries together produced nearly \$74 billion of direct output in 2007 and directly employed nearly 225,000 workers, generating a total of nearly 946,000 jobs and \$81.3 billion of GDP in Canada. Total labour compensation generated directly, from suppliers and from the spending of earned incomes from these four industries is estimated to be \$47 billion.

The total direct, indirect and induced impact of the rail freight industry in 2007 (see Table 2) is estimated to be 115,000 jobs with a total labour compensation of nearly \$6.5 billion, and \$12.2 billion in GDP.

### **Impacts on Federal Government Revenue**

The 2007 tax revenues generated are summarized in Tables 1 and 2.

The \$11.5 billion of output by the Oilseeds and Grain Farming industry resulted in a total of over \$1.1 billion in federal tax revenues. The bulk of the tax revenues are generated by personal and corporate income taxes but a number of indirect taxes (including the GST and gasoline tax) are also significant. The Coal Mining industry contributed a total of over \$285 million federal taxes, the bulk of which comes from corporate income tax. The Wood Products and Pulp & Paper and Paper Products Manufacturing industries each generated roughly \$3.1 billion in federal taxes, with half coming from personal income taxes. These four industries through their economic activity together generated over \$7.6 billion in federal tax revenues. Over \$3.5 billion comes from personal income tax, \$2.4 billion from corporate income tax, \$450 million from Employment Insurance premiums, and nearly \$1.2 billion from the GST and a number of other indirect taxes.

The \$10.2 billion in output generated by the rail freight industry in 2007 resulted in nearly \$1.4 billion in federal tax revenues. Approximately \$580 million of the tax revenues is from personal income taxes and \$530 million from corporate income taxes.

### **Conclusion**

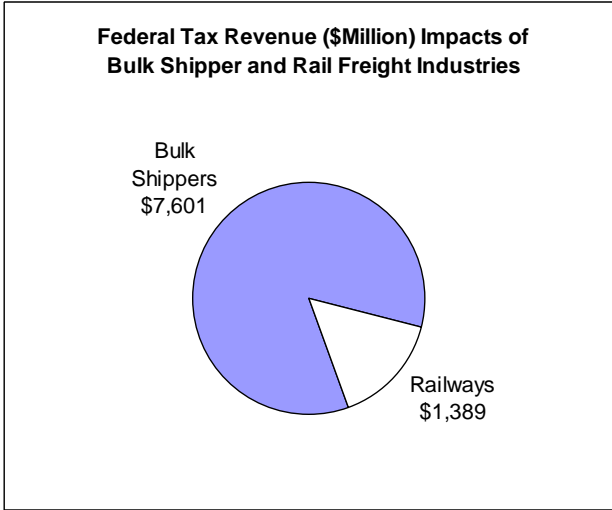
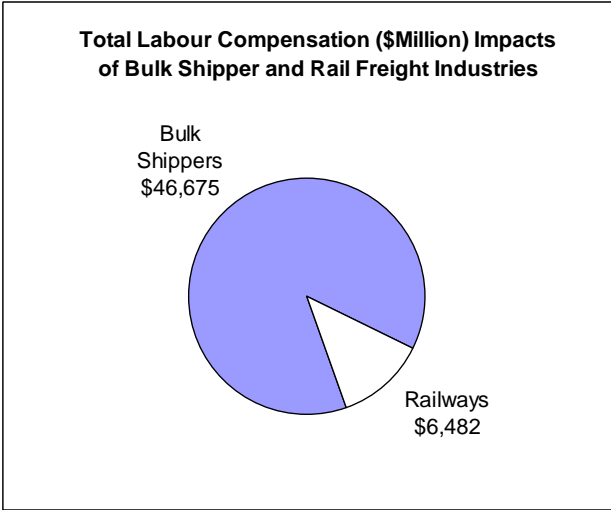
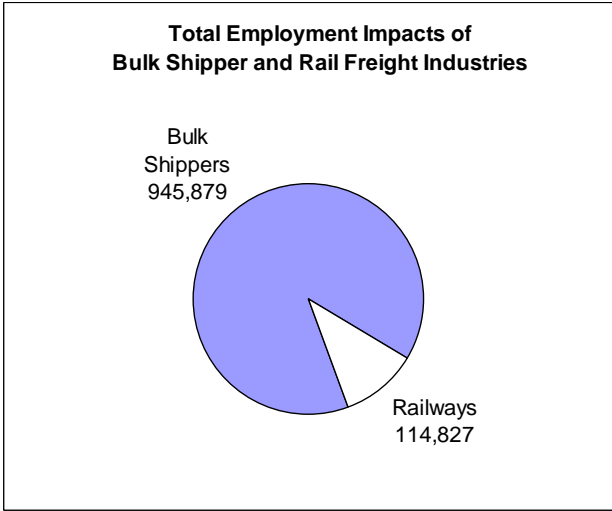
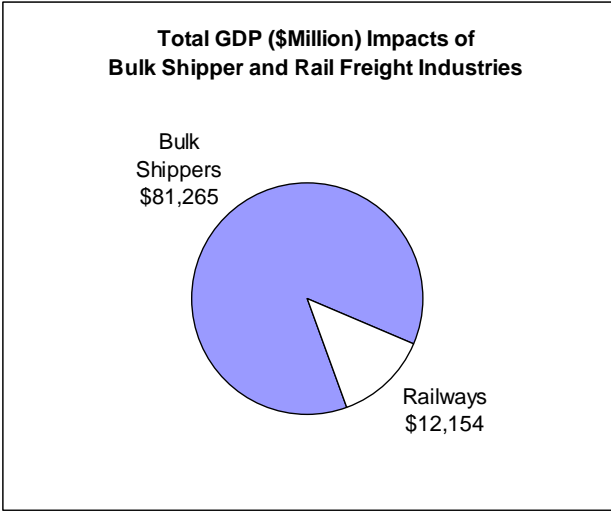
Through the use of publicly available data for 2007 and the Input-Output capabilities of Statistics Canada the total impact on the Canadian economy of Oilseed and Grain Farming, Coal Mining, Wood Products Manufacturing and Pulp & Paper and Paper Products Manufacturing has been compared with that of the Canadian rail freight industry. It should be noted that the contribution of regional rail carriers (which are not subject to the Canada Transportation Act) was relatively minor (7% of direct output and 10% of direct employment) and that the Canadian rail freight industry to a vast extent is comprised by the CNR and the CPR.

We have found the following (also represented in Chart 1):

- The rail freight industry, which is dominated by the Canadian National Railway and the Canadian Pacific Railway, accounts for \$12.2 billion in GDP.
- The four representative bulk commodity industries combined account for \$81.3 billion in GDP.
- The impact of the rail freight industry totals nearly 115,000 jobs and \$6.5 billion in labour compensation.
- The impact of the four bulk commodity industries totals nearly 950,000 jobs and \$47 billion in labour compensation.
- Federal tax revenues generated by the rail freight industry total \$1.4 billion.
- Federal tax revenues generated by the bulk commodity industries total \$7.6 billion.

Finally, it is noteworthy that while the bulk commodity industries examined in this study are key contributors to the Canadian economy, they do not constitute a complete list of such industries. Two significant omissions include the potash industry and the metals mining industry. This study was commissioned to provide a representative sample to assist in understanding the relative contribution of bulk commodity shippers to the Canadian economy compared with that of Canadian rail freight carriers.

**Chart 1. Relative Contributions to the Canadian Economy**



## **Appendix A – Detailed Industry Indirect and Induced Impacts**

One of the appealing features of the Statistics Canada Input-Output model is that it not only provides information at an aggregate economy level but also on a detailed industry basis. Tables 1 and 2 in the report present the aggregate economy GDP and employment impacts of the indirect and induced spending. This appendix presents the totals at a more disaggregated industry level so that one can get a sense of how the indirect and induced spending impacts different sectors of the economy.

Table A1.a shows the detailed industry indirect and induced impact on GDP (in thousands of dollars, as some of the industry impacts can be relatively small) of the bulk shipper industries, while Table A1.b shows the employment impacts. Table A2.a shows the detailed industry indirect and induced impact on GDP of the rail freight industry, while Table A2.b shows the employment impacts.

**Table A1.a: Indirect and Induced Impacts on GDP by Detailed Industry - Representative Bulk Shipping Industries**

• All amounts are in thousands of 2007 Canadian dollars

<b>Indirect</b>	<b>Oilseed &amp; Grain Farming</b>	<b>Coal Mining</b>	<b>Wood Products Manufacturing</b>	<b>Pulp &amp; Paper and Paper Products Manufacturing</b>	<b>TOTAL</b>
Crop and Animal Production	\$323,291	\$447	\$15,772	\$22,884	\$362,393
Forestry and Logging	\$11,415	\$528	\$4,225,703	\$1,216,006	\$5,453,653
Fishing, Hunting and Trapping	\$200	\$13	\$375	\$356	\$944
Support Activities for Agriculture and forestry	\$176,392	\$117	\$365,329	\$110,013	\$651,850
Mining and Oil and Gas Extraction	\$726,820	\$60,215	\$611,682	\$1,173,188	\$2,571,905
Utilities	\$216,309	\$41,470	\$513,011	\$1,750,127	\$2,520,916
Construction	\$170,952	\$4,037	\$126,746	\$229,668	\$531,403
Manufacturing	\$770,017	\$45,349	\$2,064,410	\$3,244,351	\$6,124,128
Wholesale Trade	\$855,524	\$48,531	\$1,216,639	\$1,147,843	\$3,268,538
Retail Trade	\$168,609	\$11,721	\$451,982	\$272,716	\$905,028
Transportation and Warehousing	\$491,580	\$22,545	\$1,139,462	\$1,656,561	\$3,310,149
Information and Cultural Industries	\$169,508	\$11,403	\$277,853	\$303,287	\$762,051
Finance, Insurance, Real Estate and Rental and Leasing	\$782,538	\$61,414	\$1,205,770	\$1,303,330	\$3,353,052
Professional, Scientific and Technical Services	\$320,243	\$23,228	\$476,505	\$545,628	\$1,365,604
Administrative and Support, Waste Management and Remediation Services	\$141,966	\$22,113	\$347,580	\$608,051	\$1,119,710
Educational Services	\$3,879	\$323	\$8,251	\$7,785	\$20,238
Health Care and Social Assistance	\$13,944	\$1,090	\$13,763	\$16,287	\$45,085
Arts, Entertainment and Recreation	\$7,450	\$719	\$18,647	\$20,435	\$47,251
Accommodation and Food Services	\$30,757	\$3,362	\$75,947	\$82,073	\$192,139
Other Services (Except Public Administration)	\$107,102	\$4,517	\$297,848	\$332,716	\$742,183
Non-Profit Institutions Serving Households	\$1,214	\$125	\$1,578	\$2,723	\$5,639
Government Sector	\$80,866	\$8,751	\$109,778	\$220,893	\$420,288
<b>Total</b>	<b>\$5,570,576</b>	<b>\$372,021</b>	<b>\$13,564,631</b>	<b>\$14,266,921</b>	<b>\$33,774,149</b>
<b>Induced</b>	<b>Oilseed &amp; Grain Farming</b>	<b>Coal Mining</b>	<b>Wood Products Manufacturing</b>	<b>Pulp &amp; Paper and Paper Products Manufacturing</b>	<b>TOTAL</b>
Crop and Animal Production	\$20,270	\$3,265	\$66,268	\$61,178	\$150,982
Forestry and Logging	\$3,866	\$623	\$12,638	\$11,667	\$28,793
Fishing, Hunting and Trapping	\$1,004	\$162	\$3,282	\$3,030	\$7,477
Support Activities for Agriculture and forestry	\$1,577	\$254	\$5,155	\$4,759	\$11,745
Mining and Oil and Gas Extraction	\$76,554	\$12,332	\$250,273	\$231,053	\$570,213
Utilities	\$100,812	\$16,240	\$329,576	\$304,264	\$750,892
Construction	\$46,327	\$7,463	\$151,454	\$139,822	\$345,066
Manufacturing	\$169,867	\$27,364	\$555,335	\$512,685	\$1,265,252
Wholesale Trade	\$185,822	\$29,935	\$607,494	\$560,839	\$1,384,090
Retail Trade	\$474,638	\$76,461	\$1,551,697	\$1,432,528	\$3,535,324
Transportation and Warehousing	\$116,985	\$18,845	\$382,451	\$353,079	\$871,361
Information and Cultural Industries	\$141,212	\$22,748	\$461,654	\$426,199	\$1,051,814
Finance, Insurance, Real Estate and Rental and Leasing	\$1,123,099	\$180,923	\$3,671,661	\$3,389,681	\$8,365,365
Professional, Scientific and Technical Services	\$103,575	\$16,685	\$338,611	\$312,606	\$771,478
Administrative and Support, Waste Management and Remediation Services	\$80,006	\$12,888	\$261,556	\$241,469	\$595,919
Educational Services	\$8,865	\$1,428	\$28,981	\$26,755	\$66,029
Health Care and Social Assistance	\$73,419	\$11,827	\$240,023	\$221,590	\$546,860
Arts, Entertainment and Recreation	\$35,020	\$5,641	\$114,488	\$105,695	\$260,844
Accommodation and Food Services	\$128,082	\$20,633	\$418,729	\$386,571	\$954,015
Other Services (Except Public Administration)	\$95,714	\$15,419	\$312,911	\$288,880	\$712,923
Non-Profit Institutions Serving Households	\$103,460	\$16,667	\$338,234	\$312,258	\$770,619
Government Sector	\$96,842	\$15,601	\$316,599	\$292,285	\$721,327
<b>Total</b>	<b>\$3,187,017</b>	<b>\$513,405</b>	<b>\$10,419,070</b>	<b>\$9,618,894</b>	<b>\$23,738,386</b>

**Table A1.b: Indirect and Induced Impacts on Employment by Detailed Industry - Representative Bulk Shipping Industries**

• Employment is in person-years

<b>Indirect</b>	<b>Oilseed &amp; Grain Farming</b>	<b>Coal Mining</b>	<b>Wood Products Manufacturing</b>	<b>Pulp &amp; Paper and Paper Products Manufacturing</b>	<b>TOTAL</b>
Crop and Animal Production	9,784	14	486	696	10,980
Forestry and Logging	114	5	42,034	12,096	54,249
Fishing, Hunting and Trapping	2	0	4	4	10
Support Activities for Agriculture and forestry	4,792	2	4,595	1,399	10,788
Mining and Oil and Gas Extraction	869	156	697	1,329	3,051
Utilities	785	145	1,817	6,193	8,940
Construction	2,665	60	1,910	3,502	8,137
Manufacturing	6,120	443	21,998	33,692	62,253
Wholesale Trade	11,015	625	15,663	14,777	42,080
Retail Trade	4,657	324	12,483	7,532	24,996
Transportation and Warehousing	6,388	261	15,144	21,084	42,877
Information and Cultural Industries	1,351	103	2,446	2,736	6,636
Finance, Insurance, Real Estate and Rental and Leasing	6,478	538	9,678	10,878	27,572
Professional, Scientific and Technical Services	5,321	377	7,979	9,168	22,845
Administrative and Support, Waste Management and Remediation Services	3,443	490	8,324	12,453	24,710
Educational Services	137	11	292	275	715
Health Care and Social Assistance	238	16	238	273	765
Arts, Entertainment and Recreation	277	27	695	764	1,763
Accommodation and Food Services	1,090	118	2,686	2,901	6,795
Other Services (Except Public Administration)	2,573	103	6,609	7,305	16,590
Non-Profit Institutions Serving Households	27	3	36	61	127
Government Sector	1,005	109	1,412	2,775	5,301
<b>Total</b>	<b>69,131</b>	<b>3,930</b>	<b>157,226</b>	<b>151,893</b>	<b>382,180</b>

<b>Induced</b>	<b>Oilseed &amp; Grain Farming</b>	<b>Coal Mining</b>	<b>Wood Products Manufacturing</b>	<b>Pulp &amp; Paper and Paper Products Manufacturing</b>	<b>TOTAL</b>
Crop and Animal Production	645	104	2,110	1,947	4,806
Forestry and Logging	38	6	126	116	286
Fishing, Hunting and Trapping	12	2	38	35	87
Support Activities for Agriculture and forestry	37	6	121	111	275
Mining and Oil and Gas Extraction	91	15	298	274	678
Utilities	372	60	1,217	1,125	2,774
Construction	714	115	2,334	2,154	5,317
Manufacturing	1,815	292	5,933	5,477	13,517
Wholesale Trade	2,392	385	7,820	7,220	17,817
Retail Trade	13,109	2,112	42,857	39,566	97,644
Transportation and Warehousing	1,694	273	5,540	5,113	12,620
Information and Cultural Industries	1,164	187	3,804	3,513	8,668
Finance, Insurance, Real Estate and Rental and Leasing	3,941	635	12,885	11,896	29,357
Professional, Scientific and Technical Services	1,776	286	5,805	5,360	13,227
Administrative and Support, Waste Management and Remediation Services	2,070	334	6,768	6,248	15,420
Educational Services	314	51	1,025	946	2,336
Health Care and Social Assistance	1,788	288	5,845	5,396	13,317
Arts, Entertainment and Recreation	1,238	199	4,047	3,736	9,220
Accommodation and Food Services	4,978	802	16,274	15,025	37,079
Other Services (Except Public Administration)	3,325	536	10,870	10,035	24,766
Non-Profit Institutions Serving Households	2,551	411	8,338	7,698	18,998
Government Sector	1,415	228	4,625	4,270	10,538
<b>Total</b>	<b>45,479</b>	<b>7,326</b>	<b>148,680</b>	<b>137,261</b>	<b>338,746</b>



**Table A2.a: Indirect and Induced Impacts on GDP by Detailed Industry - Rail Freight Industry**

• All amounts are in thousands of 2007 Canadian dollars

	Indirect	Induced
Crop and Animal Production	\$2,537	\$21,033
Forestry and Logging	\$5,429	\$4,011
Fishing, Hunting and Trapping	\$89	\$1,042
Support Activities for Agriculture and forestry	\$894	\$1,636
Mining and Oil and Gas Extraction	\$518,540	\$79,434
Utilities	\$58,089	\$104,603
Construction	\$597,582	\$48,070
Manufacturing	\$306,896	\$176,256
Wholesale Trade	\$192,082	\$192,811
Retail Trade	\$46,291	\$492,490
Transportation and Warehousing	\$474,545	\$121,385
Information and Cultural Industries	\$142,115	\$146,523
Finance, Insurance, Real Estate and Rental and Leasing	\$464,276	\$1,165,340
Professional, Scientific and Technical Services	\$126,743	\$107,471
Administrative and Support, Waste Management and Remediation Services	\$185,897	\$83,015
Educational Services	\$2,282	\$9,198
Health Care and Social Assistance	\$4,383	\$76,180
Arts, Entertainment and Recreation	\$3,821	\$36,337
Accommodation and Food Services	\$20,591	\$132,899
Other Services (Except Public Administration)	\$31,139	\$99,314
Non-Profit Institutions Serving Households	\$863	\$107,351
Government Sector	\$77,935	\$100,485
<b>Total</b>	<b>\$3,263,021</b>	<b>\$3,306,885</b>

**Table A2.b: Indirect and Induced Impacts on Employment by Detailed Industry - Rail Freight Industry**

• Employment is in person-years		
	Indirect	Induced
Crop and Animal Production	79	669
Forestry and Logging	54	40
Fishing, Hunting and Trapping	1	12
Support Activities for Agriculture and forestry	14	38
Mining and Oil and Gas Extraction	568	95
Utilities	221	387
Construction	9407	741
Manufacturing	2709	1,883
Wholesale Trade	2473	2,482
Retail Trade	1279	13,602
Transportation and Warehousing	5614	1,758
Information and Cultural Industries	1020	1,207
Finance, Insurance, Real Estate and Rental and Leasing	3904	4,090
Professional, Scientific and Technical Services	2109	1,843
Administrative and Support, Waste Management and Remediation Services	4232	2,148
Educational Services	81	325
Health Care and Social Assistance	75	1,855
Arts, Entertainment and Recreation	142	1,284
Accommodation and Food Services	768	5,165
Other Services (Except Public Administration)	748	3,450
Non-Profit Institutions Serving Households	19	2,647
Government Sector	970	1,468
<b>Total</b>	<b>36,487</b>	<b>47,189</b>