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Size and Structure of the Public Sector Market, 1979

By

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Introduction

This is a special study sponsored by the Department of Supply and Services to measure the size and structure of the public sector market for the year 1979.

The public sector market herein refers to all goods and services purchased by the three levels of government (including hospitals), universities and government business enterprises for both current operations and capital formation as per the system of National Accounts. It excludes transfer payments such as grants and subsidies. The study was undertaken to answer the following questions:

1. What is the total dollar value of public sector's purchases of goods and services?
2. What is the content of these purchases in terms of specific commodities?
3. What is the estimated import-content and domestic production of these commodity purchases? In other words, what is the source of supply, namely, imports and/or domestic production? In this context, imports refer to the direct import content only, and exclude imports embodied in domestically produced goods.
4. Which industries produce the commodities purchased by the Public Sector?
5. What is the provincial distribution of the Public Sector purchases?
6. What is the estimated employment on account of the domestic purchases of commodities by the Public Sector?

It was decided to use the conceptual and statistical framework of the System of National Accounts for the required data base. As is well known, the System of National Accounts provides an over-all conceptually integrated framework to study the economy. It consists of several parts such as the National Income and Expenditure Accounts, Input-Output Accounts, Balance of International Payments, and Gross Domestic Product by Industry. All these parts are considered to be interrelated subsystems and they use the same conceptual framework. Of the several parts, the Input-Output Accounts provide details on an individual industry's output of goods and services (called commodities) and its input structure including commodities and primary inputs such as indirect taxes, wages and salaries, net income, surplus etc. Since the primary objective was to measure the size and structure of public sector purchases in terms of specific commodities, it became necessary to use the input-output subsystem in this project.

Definition of the Public Sector

In this study, the public sector is defined to include the government sector, universities, and government business enterprises. They are outlined below.

1. *Government Sector*

This sector covers a very broad range of activities carried out directly by various levels of government — federal, provincial, municipal, (including education) and hospitals — and is the same as defined in the Canadian System of National Accounts. It represents the non-commercial activities undertaken by society on a collective basis and financed, for the most part, from taxation or borrowing. It also includes transactions of the federal and provincial special funds. These special funds have functions similar to those of the government sector as defined in the National Accounts.

2. *Universities:*

Universities are post-secondary institutions for which no elaborate definition is needed. In the National Accounts, universities are classified to the personal sector because they are considered to be private non-commercial institutions; but for this report, they are included with the public sector as the major source of their revenue is grants from government.

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3. *Government Business Enterprises:*
These are entities primarily owned by government (federal, provincial and local) which produce goods and services for sale in the open market at cost or for profit. Their general motivation and behavior are similar to those of private business enterprises.

Presentation of Information

For the purpose of presentation of statistical information in this study, the above three main areas of the public sector have been organized into the following 28 categories with each category having full provincial detail of expenditures at purchasers' prices. It should be noted at the outset that the statistical information required to answer the above questions on the public sector is not readily available from a single source, but had to be drawn from a variety of sources. In the course of the research, several data gaps and problems have been encountered. These gaps have been filled with estimates (and sometimes pure professional judgement) and it is felt that a continuing program of research and development is desired in this area to obtain a more solid data base for future studies.

As this study was done at the request of the Department of Supply and Services, the final statistical tabulations were prepared in the format required by that department for its analytical report. The purpose of this paper is mainly to highlight the results of this study for general information. It is not intended either to replace the analytical report of the department of Supply and Services or to duplicate the conclusions of that department.

A. *Current Expenditures*
1. Government sector: hospitals
2. Government sector: education
3. Government sector: defence
4. Government sector: other municipal government
5. Government sector: other provincial government
6. Government sector: other federal government
7. Universities
8. Government business enterprises: federal
9. Government business enterprises: provincial
10. Government business enterprises: local

B. *Capital Expenditures: Machinery and Equipment*
11. Government sector: hospitals
12. Government sector: education
13. Government sector: other municipal government
14. Government sector: other provincial government
15. Government sector: other federal government
16. Universities
17. Government business enterprises: federal
18. Government business enterprises: provincial
19. Government business enterprises: local

C. *Capital Expenditures: New Construction*
20. Government sector: hospitals
21. Government sector: education
22. Government sector: other municipal government
23. Government sector: other provincial government
24. Government sector: other federal government
25. Universities
26. Government business enterprises: federal
27. Government business enterprises: provincial
28. Government business enterprises: local

Conversion of Values from "Purchaser Prices" to "Producer Prices"

Purchaser Prices to Producer Prices
Thus far, the discussion has been confined to the commodity content and provincial distribution in purchaser prices for the 28 categories. Since the main purpose of this study is to estimate the amount received by the producers, it is necessary to convert the purchaser price values into producer price values. In other words, taxes and other margins which are embodied in the commodity purchases have to be removed and shown as being purchased directly from the producers of these margins.

The conversion from purchaser to producer values is available for each commodity at Canada level in the national input-output tables for 1979. This conversion framework has been applied to the provincial commodity expenditure values. Implicit in this conversion technique is the assumption that the national rates for margins apply to each province as well. In other words, the producer and purchaser value relationships applicable to national levels have been assumed to be the same for provinces also. However, the tabulations showing the margins thus derived by province have been reviewed in the context of additional information concerning *provincial sales taxes* and necessary adjustments made for the tax margin.

Thus producer price tabulations of the 28 categories were completed after making the necessary adjustments for the tax margin. These categories are then aggregated into the following 8 sub-sectors for both current and capital expenditures as requested by the Department of Supply and Services.

(i) Federal government (includes "defence" and "other federal")
(ii) Provincial government (equals "other provincial")
(iii) Local government (includes "other local" and education)
(iv) Hospitals
(v) Universities
(vi) Federal government business enterprises
(vii) Provincial government business enterprises
(viii) Local government business enterprises

It should be noted that the input-output system has a special treatment for construction and dummy industries. A dummy industry, such as "office supplies" is a technique used where the specific commodity content of the purchases of a related grouping of commodities cannot be determined. For this study the commodity and primary inputs of construction and dummy industries are shown as if purchased directly by the Public Sector Market. The producer price representation in this report contains neither dummy commodities nor construction commodities but rather the input structures specific to them.

Purchases from Imports

The producer price files of the eight sub-sectors have been completed with the commodity structure of the Public Sector expenditures by province and this represents the consumption in each province. These commodities could be from domestic production and/or imports from other countries.

One of the objectives of this study is to identify the import content of the public sector expenditures. This refers to direct imports only. Actual data on commodity imports of the public sector are not readily available and it has to be assumed that for any commodity, the import content of the public sector purchases would be similar to that of the total economy. By using this assumption and by applying the 1979 import coefficients[1] of the input-output system, each commodity purchased by the public sector has been disaggregated into its import share and domestic share. The imports by province estimated by this method represent only the imports from abroad and not imports from other provinces.

By subtracting the estimated imports from the total purchases of each commodity, the purchases of domestic origin (i.e. domestic production within Canada) have been derived. Thus, for the 8 sub-sector framework, commodity tabulations have been generated for (a) the total of both domestic production and imports (b) imports and (c) domestic production.

Purchases from Domestic Production

The term "domestic production" used here represents total production within Canada (irrespective of province). The commodity purchases by province from domestic production do not necessarily represent the production within that province; rather, these represent only the consumption which could be supplied either from that province or other provinces but not from abroad.

It should be recalled that an objective of this study is to identify the industries which benefit from the public sector purchases. In order to achieve this objective, we have used the market share assumption of the input-output system and transformed commodity values into industry output values for the industries producing the commodities. By this exercise the industrial distribution of domestic production purchased by the eight sub-sectors of the Public Sector Market is obtained.

Employment

The Public Sector hires a large number of persons under its direct payroll. But it also affects employment indirectly on account of its purchase of commodities produced by the domestic industries; it is the calculation of this estimate that we are concerned with in this section.

With the purchase of a commodity, say automobiles, by the Public Sector, there will be a direct increase in the output of the motor vehicle industry. The motor vehicle industry requires inputs of steel, components, tires, etc. But the effect of the production of an automobile does not end with the purchase of steel, components, tires, etc. It begins a long chain of production since each of the products purchased will require, in turn, various inputs. One must capture the direct effect of any change in final demand and all the chain effects resulting from it. The more the interdependence in the economy, the bigger the chain effect. The total effect is also called multiplier. Thus for any given change in final demand, one can calculate total change in output detailed by industry. Also by using an output employment relationship again by industry, total employment direct and indirect can be calculated for any change in purchase of commodities in the final demand sectors. The Input Output Division of Statistics Canada has developed an operational model[2] to calculate output and employment by industry for any change in final demand. It is this model which has been used to calculate employment estimates on account of the purchases of commodities by the Public Sector.

Commodity Classification

In this study, Public Sector expenditures have been coded to commodities using the Canadian Input-Output commodity classification system.[3] There are 602 commodities and primary inputs in the Input-Output system which have been aggregated for this study as follows:

(i) Manufactured goods consist of commodities 52-521;
(ii) Other goods consist of commodities 1-51, 522-529, 546, 548, 549, 580-582, 584, 588-593;
(iii) Services consist of commodities 530-545, 547, 550-579, 583, 585-587, 594 and 595.

Primary inputs include wages and salaries, supplementary labour income, net income and other operating surplus; commodity indirect taxes, other indirect taxes and subsidies; these include classification codes 596 to 602.

Statistical Results

Total current and capital expenditures by all levels of government, universities and government business enterprises in 1979 amounted to $111,493 millions of which purchases of $44,223 millions were on commodities and expenditures on primary inputs summed to $67,270 millions. These expenditures have been distributed by 10 provinces and 2 territories in Table 1. Table 1 distributes separately primary inputs, commodities and the sum of the two. Then the same is shown in percentages along with the percentage

[1] The import coefficient for each commodity is calculated as follows: Imports divided by "Use" where "Use" equals consumption by domestic industries for intermediate purposes, final use by Households, Government, Business for capital formation, additions to inventories and re-exports.

[2] See Chapter 4, The Input Output Model in *The Input Output Structure of the Canadian Economy 1971-79*, Catalogue (15-201E).

[3] See Appendix C, Aggregation Parameters in *The Input-Output Structure of the Canadian Economy 1971-1979*, Catalogue 15-201E.

Table 1 Current and Capital Expenditures of the Public Sector Market by Province, 1979

	($ Millions)					
	Primary Inputs (1)	Commodities (2)	Total (1+2) (3)	Col. 2 in % (4)	Col. 3 in % (5)	Population in 1979 in % (6)
Newfoundland	1,357	849	2,206	1.9	2.0	2.4
P.E.I.	292	186	478	.4	.4	.5
Nova Scotia	2,618	2,114	4,732	4.8	4.2	3.5
New Brunswick	1,837	1,408	3,245	3.2	2.9	2.9
Québec	17,649	9,600	27,249	21.7	24.4	26.7
Ontario	22,823	15,107	37,930	34.2	34.0	35.8
Manitoba	3,720	3,768	7,488	8.5	6.7	4.3
Saskatchewan	2,762	2,009	4,771	4.5	4.3	4.0
Alberta	6,124	3,885	10,009	8.8	9.0	8.7
British Columbia	7,690	4,957	12,647	11.2	11.3	10.9
Yukon	145	127	272	.3	.2	.1
N.W.T.	253	213	466	.5	.4	.2
	67,270	44,223	111,493	100.0	100.0	100.0

distribution of the Canadian population by Province. Expenditures in Manitoba and the two territories are proportionally much higher than their population proportion. For example, total expenditures in Manitoba are 6.7 percent of the total Public Sector compared with 4.3 percent population of Canada. The most significant explanation for this divergence is the purchases of the Canadian Wheat Board with its headquarters in Manitoba. Total expenditures in Quebec were 24.4 percent compared with 26.7 percent of population. Table 1 shows the aggregation of all commodities, and of all primary inputs. However, the Input-Output Division of Statistics Canada would provide upon request but subject to cost recovery the provincial detail as well as the sub-sector detail by M aggregation of commodities. Note that in M aggregation the 602 commodities and primary inputs have been aggregated to 100 commodities and primary inputs. For detailed definition of M aggregation in terms of the 602 commodities, see Appendix C of Aggregation Parameters of the Input-Output Structure of the Canadian Economy 1971-79, Catalogue 15-201. It may be further noted that not only details on total commodities and total primary inputs are made available, but as well the same is further distributed by Imports and Domestic Origin as per our methodology noted earlier.

Table 2 Public Sector Current and Capital Expenditures by Sub-Sector Imports versus Domestic Commodities, 1979

		$ Millions			
		Imports (1)	Domestic (2)	Total (1+2) (3)	Import* Content (1/3)100 (4)
Government Sector Federal	Manufactured Goods	969	1,371	2,360	41.9%
	Other Goods	6	222	228	2.5
	Services	205	2,972	3,177	6.5
	(G & S)	(1,200)	(4,565)	(5,765)	20.8
Government Sector Provincial	Manufactured Goods	358	1,360	1,718	20.8
	Other Goods	14	172	186	7.3
	Services	235	6,103	6,338	3.7
	(G & S)	(607)	(7,635)	(8,242)	7.4
Government Sector Local	Manufactured Goods	662	1,894	2,556	25.9
	Other Goods	20	523	543	3.7
	Services	146	2,547	2,693	5.4
	(G & S)	(828)	(4,964)	(5,792)	14.3
Government Sector Hospitals	Manufactured Goods	405	690	1,095	37.0
	Other Goods	9	122	131	6.8
	Services	25	640	665	3.8
	(G & S)	(439)	(1,452)	(1,891)	23.2
Universities	Manufactured Goods	130	226	356	36.5
	Other Goods	1	82	83	1.2
	Services	16	319	335	4.8
	(G & S)	(147)	(627)	(774)	19.0
GBE — Federal	Manufactured Goods	1,110	2,581	3,691	30.1
	Other Goods	314	1,741	2,055	15.3
	Services	123	2,794	2,917	4.2
	(G & S)	(1,547)	(7,116)	(8,663)	17.8
GBE — Provincial	Manufactured Goods	2,038	4,347	6,385	31.9
	Other Goods	451	811	1,262	35.8
	Services	180	3,020	3,200	5.6
	(G & S)	(2,669)	(8,178)	(10,847)	24.6
GBE — Local	Manufactured Goods	119	290	409	29.0
	Other Goods	12	1,598	1,610	1.0
	Services	13	217	230	5.5
	(G & S)	(144)	(2,105)	(2,249)	6.4
TOTAL	Manufactured Goods	5,811	12,759	18,570	31.3
	Other Goods	827	5,271	6,098	13.6
	Services	943	18,612	19,555	4.8
	(G & S)	(7,581)	(36,642)	(44,223)	17.1

* Import content has been calculated from unrounded data.

In Table 2, "Public Sector Current and Capital Expenditures by Sub-sector, Imports versus Domestic Commodities, 1979" the total commodities of $44,223 millions have been distributed by the eight sub-sectors — government sector, federal; government sector, provincial; government sector, local; hospitals; universities; government business enterprises, federal; government business enterprises, provincial; and government business enterprises, local — and within each sub-sector commodities have been disaggregated into imports and of domestic origin. Column 1 refers to imports, column 2 to domestic production, Column 3 to the total of imports and domestic production and Column 4, called Import Content, is derived by dividing Column 3 of total expenditures by Column 1 of imports.

For the entire Public Sector, import content of all commodities equalled 17.1 percent, with 31.3 percent for manufactured goods, 13.6 percent for other goods and 4.8 percent for services. It is worth repeating that this estimate of imports is derived by calculating national imports ratios by each commodity and applying this relationship to the Public Sector purchases. It is quite possible that for a particular commodity this may not hold. But Public Sector being such a large share of the national picture, our methodology probably would give not too erroneous a result. This can only be empirically tested if there is an independent source of import information by the final user. One could classify imports by the importing company including wholesale and retail establishments. Wholesalers and retailers are only intermediaries, not final users. Then one has to go to wholesalers and retailers of imports and to find out from them to whom they sell each imported commodity. This kind of information is not available and would have to be developed from new surveys. This vehicle, given the financial restraint and response burden, is not an easy solution, apart from the inherent technical problems for such a survey.

The other possible vehicle would be to see if public sector records keep information on imports purchased offshore, imports bought from domestic wholesalers and retailers of imports. No such information base existed for 1979 for the public sector except for Defence.

Imports estimates, developed for this study, differ extensively between the various sub-sectors. Let us explain this with reference to manufactured goods. The overall average for the Public Sector equalled 31.3 percent. Defence, hospitals, and universities were above average in terms of imports; all the government business enterprises, federal, provincial and local, were about average and others were below average. There is nothing inherent about the behaviour of a particular sub-sector which would explain this wide difference. It is only the particular kind of commodities which are or have to be purchased that would explain the difference.

For example, defence (part of federal government), is very heavy in imports because of the equipment needed and purchased by this sub-sector. Hospitals, and universities have heavy expenditures in such manufactured goods as laboratory equipment whose import content is very high. For example, import content of commodity, medical and related instruments is 67 percent; for laboratory and scientific apparatus 97 percent, for photographic equipment and film 76%. For other goods (ie: other than manufactured goods), it may be noted that the provincial government business enterprises have the highest import content which is mostly due to the import of coal by the Hydro projects and imports of liquor and wines by the Provincial Liquor Control Boards.

Table 3 rearranges the sub-sectors data of Table 2 into provincial details. Note that all the eight subsectors are subsumed in each province. As expected, the import content say for manufactured goods is much closer to the national average by province than by subsector. The main difference among provinces would be due to the different weights of subsectors in each province.

Table 4 is a matrix of import content of manufactured goods by province and by subsector. It is interesting to examine in a particular province the import content by various subsectors. For example, in Ontario, the average import content of manufactured products is 32.6 percent, but provincial government subsector has only 18.8 percent and the federal government subsector

Table 3 Public Sector Current and Capital Expenditures by Province Imports versus Domestic Commodities, 1979

Province		$Millions			
		Imports (1)	Domestic (2)	Total (1+2) (3)	Import* Content (1/3)100 (4)
Newfoundland	Manufactured Goods	108	303	411	26.2%
	Other Goods	2	57	59	4.1
	Services	20	359	379	5.2
	(G & S)	(130)	(719)	(849)	15.3
Prince Edward Island	Manufactured Goods	21	55	76	27.4
	Other Goods	1	9	10	10.0
	Services	4	97	101	3.8
	(G & S)	(26)	(161)	(187)	13.9
Nova Scotia	Manufactured Goods	421	703	1,124	37.5
	Other Goods	49	184	233	20.8
	Services	38	719	757	5.1
	(G & S)	(508)	(1,606)	(2,114)	24
New Brunswick	Manufactured Goods	266	559	825	32
	Other Goods	8	113	121	6.7
	Services	24	437	461	5.2
	(G & S)	(298)	(1,109)	(1,407)	21.2
Québec	Manufactured Goods	1,375	3,055	4,430	31.0
	Other Goods	20	439	459	4.3
	Services	199	4,512	4,711	4.2
	(G & S)	(1,594)	(8,006)	(9,600)	16.6
Ontario	Manufactured Goods	1,855	3,834	5,689	32.6
	Other Goods	614	2,370	2,984	20.6
	Services	317	6,117	6,434	4.9
	(G & S)	(2,786)	(12,321)	(15,107)	18.4
Manitoba	Manufactured Goods	333	889	1,222	27.3
	Other Goods	64	1,325	1,389	4.6
	Services	45	1,112	1,157	3.9
	(G & S)	(442)	(3,326)	(3,768)	11.7
Saskatchewan	Manufactured Goods	239	566	805	29.7
	Other Goods	23	171	194	12.0
	Service	54	955	1,009	5.4
	(G & S)	(316)	(1,902)	(2,004)	15.7
Alberta	Manufactured Goods	555	1,324	1,879	29.5
	Other Goods	19	286	305	6.1
	Service	87	1,614	1,701	5.2
	(G & S)	(661)	(3,224)	(3,885)	17.0
British Columbia	Manufactured Goods	606	1,369	1,975	30.7
	Other Goods	27	292	319	8.5
	Service	145	2,519	2,664	5.4
	(G & S)	(778)	(4,180)	(4,958)	15.7
Yukon	Manufactured Goods	12	38	50	23.2
	Other Goods	—	6	6	2.7
	Services	4	67	71	6.0
	(G & S)	(16)	(111)	(127)	12.6
Northwest Territories	Manufactured Goods	20	64	84	24.1
	Other Goods	—	19	19	1.4
	Services	6	104	110	5.1
	(G & S)	(26)	(187)	(213)	12.2
TOTAL	Manufactured Goods	5,811	12,760	18,570	31.3
	Other Goods	827	5,971	6,098	13.6
	Services	943	18,612	19,555	4.8
	(G & S)	(7,581)	(36,642)	(44,223)	1

* Import content has been calculated from unrounded data.

Table 4 Import Content of Manufactured Goods Purchased By subsector and By Province Public Sector Current and Capital Expenditures, 1979 (In Percentage)

	Gov't Sector Fed.	Gov't Sector Prov.	Gov't Sector Local	Gov't Sector Hospitals	Universities	GBE Federal	GBE Provincial	GBE Local	Total
Newfoundland	28.3	22.1	23.3	37.1	30.7	24.9	25.8	30.7	26.2
P.E.I.	36.6	17.6	24.8	28.7	25.4	27.2	22.8	20.8	27.4
Nova Scotia	52.7	22.9	24.7	38.0	27.1	24.9	28.7	27.0	37.5
New Brunswick	49.2	20.5	22.4	31.2	35.3	26.7	31.2	35.0	32.3
Québec	37.3	19.7	24.1	40.1	36.7	33.7	36.1	27.9	31.0
Ontario	39.7	18.8	25.6	37.7	38.1	30.2	36.6	29.7	32.6
Manitoba	22.1	21.6	24.8	34.1	35.0	28.1	27.9	27.5	27.3
Saskatchewan	35.5	21.8	25.8	35.6	33.2	32.9	31.1	27.3	29.7
Alberta	47.3	24.4	27.8	33.7	38.0	32.2	24.5	29.2	29.5
British Columbia	41.4	20.6	30.2	36.3	40.3	25.2	31.5	26.8	30.7
Yukon	27.3	19.6	19.2	31.4	—	24.1	27.5	18.6	23.2
N.W.T.	26.5	24.7	21.4	31.0	—	21.2	28.0	—	24.1
TOTAL	41.9	20.8	25.9	37.0	36.5	30.1	31.9	29.0	31.3

has 39.7% import content. Looking at a column, say federal government subsector, the average is 41.9 percent, with NWT 26.5 percent at the lower end to 52.7 percent in Nova Scotia at the higher end. This wide difference is again due to the particular type of federal government establishments — defence, enterprises, general government, etc., — in each province. Federal government subsector shows the greatest variation by province.

Employment

Employment estimates are made using the *Open Input-Output Model of Statistics Canada.*

It may be restated that the Public Sector spent $111,493 millions in 1979; this included $67,270 for primary inputs and $44,223 millions for goods and services. In the Input-Output commodity classification, at the most detailed level (level L) goods and services consist of all items from 001 to 595 and primary inputs include all items from 596 to 602. The employment calculation is on account of the purchase of goods and services. The direct employment by the public sector is not included in the employment estimates.

There were three direct leakages from the total purchase of goods and services: import leakage of $7,581 millions; purchases from within the government sector of $1,304 millions and purchases from stocks (ie: withdrawal from inventories) of $308 millions. Excluding these leakages, the net purchase from domestic industries in the business sector amounted to $35,030 millions. It is this amount which is used to calculate total full time employment of 1,032,043 person years. For detail by industry, see Table 5. This is translated into an average expenditure of $33,942 in the domestic economy by the Public Sector in 1979 (and in 1979 prices) to create one full time job.

Let us compare the result of the Public Sector with the total economy in 1979. In that year, total final expenditures on household consumption, fixed capital formation, additions to inventories, government gross current expenditures, domestic exports and re-exports amounted to $350,495 millions. There were three leakages out of this amount: direct imports of $30,046 millions; purchases from the government sector $3,858 millions and purchases from stocks (ie withdrawals from inventories) $1,182 millions. Excluding these leakages, the net purchase equalled $315,409 millions. Excluding primary inputs and unallocated imports and exports (which cannot be allocated to any industries), purchases of goods and services from the domestic industries summed to $253,089 millions. It is this amount which is comparable to the $35,030 millions used by the Public Sector. Total full time employment, using Open Input Output Model, with the total economy's final expenditures of $253,089 millions equalled 7,639,752 person years. This is translated into an average expenditure of $33,128 in 1979 prices by the total economy compared with $33,942 by the Public Sector to create one full time job; in other words public sector required a slightly more (2.5 percent more) expenditure to create one job. This small difference is of course entirely due to the structure of commodity purchases.

A model should replicate reality as close as possible. The Open Input Output Model, in our judgement, does this with respect to employment. Total final expenditures in 1979 using open model, calculated total employment of 7,639,752 person years in the business sector whereas in actual fact employment in the business sector was 7,633,073, a difference of less than one percent between the model results and the actual statistics.

Concluding Remarks

This paper summarizes some of the highlights of the extensive statistical database developed for the Public Market Study. As mentioned above, the Input-Output Division would provide upon request but subject to cost recovery the provincial and sub-sector detail by M aggregation of commodities. The statistical database, sources and methods and the analytical tables using Input-Output models were developed in the Input-Output Division of Statistics Canada; this plus additional statistical and analytical commentary being written by the Department of Supply and Services is being organized into a comprehensive report to be issued shortly by the Department of Supply and Services.

Table 5 Employment by Industry on account of the Public Sector Current and Capital Expenditures on Commodities, 1979

		Total Employment Person Yrs.
Primary and Extractive Industries		
1.	Agriculture	53815
2.	Forestry	4187
3.	Fishing, Hunting & Trapping	1619
4.	Metal Mines	2505
5.	Mineral Fuels	6132
6.	Non-Metal Mines & Quarries	3130
7.	Services Incidental to Mining	3747
Manufacturing Industries		
8.	Food & Beverage Industries	15867
9.	Tobacco Products Industries	11
10.	Rubber & Plastics Products Ind.	6702
11.	Leather Industries	531
12.	Textile Mills	3587
13.	Knitting Mills	182
14.	Clothing Industries	1634
15.	Wood Industries	6204
16.	Furniture & Fixture Industries	3218
17.	Paper & Allied Industries	9625
18.	Printing & Publishing	32158
19.	Primary Metal Industries	20713
20.	Metal Fabricating Industries	29381
21.	Machinery Industries	12345
22.	Transportation Equipment Ind.	15831
23.	Electrical Products Industries	30233
24.	Non-Metallic Mineral Prod. Ind.	15032
25.	Petroleum & Coal Products Ind.	4529
26.	Chemical & Chemical Prod. Ind.	14167
27.	Misc. Manufacturing Industries	9410
Other Industries		
28.	Construction Industry	11757
29.	Transportation & Storage	91482
30.	Communication	52628
31.	Elec. Power, Gas, Other Utilities	32576
32.	Wholesale Trade	66482
33.	Retail Trade	87586
34.	Other Finance, Ins. & Real Estate	72639
35.	Education & Health Services	67935
36.	Amusement & Recreation Services	6742
37.	Services to Business Management	169957
38.	Accommodation & Food Services	32770
39.	Other Personal & Misc. Services	31018
	TOTAL	1032043

Note: This calculation is based on Statistics Canada's Input-Output OPEN Model for 1979. Total Purchasers of Commodities amounted to $44,223 millions. There w three direct leakages — imports $7,581 millions; production of government goods and services $1,304 millions and withdrawal from inventories $308 milli Thus purchases which affected the industries in the business sector in Canada equalled $35,030 millions. The above calculation of employment on dome industries is based on this amount.