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Industrial structure & performance
with particular reference to the service
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MEMORANDUM

CLASSIFICATION

Mr. J. F. Grandy,
Deputy Minister.

YOUR FILE No.
Votre dossier

OUR FILE No.
Notre dossier

DATE

January 19, 1973.

FROM
De

F. J. Chambers,
Special Adviser.

SUBJECT
Sujet

DISCUSSION PAPER - THE SERVICE INDUSTRIES

Attached is the 5th study in the series on Industrial Strategy. It was prepared by Mr. Turner in the Office of Economics. I am not sure that I entirely agree with some of the conclusions and implications he draws in the final few pages, but they are nevertheless of some interest.

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INDUSTRIAL STRUCTURE & PERFORMANCE

WITH PARTICULAR REFERENCE TO

THE SERVICE INDUSTRIES

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STRATEGIC PLANNING GROUP

Prepared by L. Turner
Productivity Branch
January 1973.

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P R E F A C E

This is the fifth in a series of Discussion papers being prepared as background material for the development of a Canadian industrial policy and the second on the subject relating to service industries.

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Industrial Structure With Particular
Reference to the Service Industries

Introduction

This short report is designed above all to provide a statistical supplement to the study of the service sector which was put out by the strategic planning group in 1972. The statistics are drawn mainly from the recently revised national income and expenditure accounts, input-output data, and the "Candide" forecasts prepared by the Economic Council. Most of the data are highly aggregated, in part to provide an overview and because more detailed data are not readily available in a comparable form. Although the main purpose of the report is to increase understanding of the service industries, the structure and performance of the twelve main industrial sectors are examined and compared. This has been done to emphasize the overall, interrelated structure rather than the overly simplified division into goods and services. In addition to setting out and examining the statistics, thought is also given to the nature and significance of services, their likely development, and what in general government should do to improve their efficiency or to affect their growth.

Overview

During the past twenty years some people have come to visualize the industrial structure somewhat as an inverted pyramid, with the expanding area at the top being the service industries, their growth being dependent on the prior development of the goods-producing industries. Some have also begun to talk as if they believed that the industries supplying goods are in some way in a separate box from that of the service industries. The relatively fast growth of employment in the service

industries, at least in the United States and other industrially mature countries, has led some to designate them as service economies. These approaches however are all overly simplified, and, although they compel us to rightly encompass services in our analyses, they do not appear to explain what has occurred historically or have any advantages over other industrial classifications.

When one considers that capital goods as well as persons, independently or together, provide services both in industry and the home, it seems that one can consider most industrial advanced countries as primarily producers of services. The demand for many goods is a derivative of the demand for services; this relationship is reversible only to a minor extent. What has characterized modern economic development has been the development of new products and technologies, the growth in capital intensity, and the rapid rate of increase in labour productivity, particularly in goods production, but also in some services such as transportation and communication, and in the home. So successful have we now become at producing goods for either direct consumption or the provision of services, that large increases in volume can be achieved with only minor increases in the inputs of labour. This has led to some unemployment of labour, particularly during periods of rapid expansion in the labour force, and the problem of how labour can be provided with sufficient income to purchase the volume of goods which the economy is capable of producing. Both of these problems have been alleviated to some extent by the relatively slow rise of productivity in some service industries, particularly those in which capital goods have not been easily substitutable for labour, by the transference of income generated in high productivity industries to persons and organizations with relatively high propensities to spend, and by a large increase in

direct government expenditures on health & education and other social services.

The main characteristics of the affluent society have been the large per capita output and consumption of goods, and the relative growth of the labour force employed in what have become to be called the service industries. Since the last war the proportion of total expenditures on services has risen considerably, as has the proportion of the work force employed in the service industries. Despite these apparent shifts and changes in industrial structure, the proportion of real output produced in the service industries has remained fairly steady throughout the post-war period. These complex changes appear to reflect the relatively slow rise in productivity in the service industries (even when we take into consideration that the output of non-commercial services may have been under estimated) and a relatively high money-income elasticity of demand for services.

The apparent high money-income elasticity of demand reflects factors which may not be so powerful in the future. For instance, demographic factors, such as those associated with the baby boom of the early post-war years, and the shift of some services from the household to the market, may not be so important during the next fifteen years as the last. In addition, much of the increased government expenditures on services rose not simply in response to the growth in say per capita money income but in response to the very rapid growth in government money incomes and the political drive to increase the supply of certain services, perhaps above that which society would have preferred if it were familiar with the costs and benefits involved. To maintain a sufficient expansion in employment governments will no doubt have to continue to expand their

expenditures on services and construction at a rapid rate, but society may well resist a much larger proportion of the national income going to the public sector.

Also, if productivity increases continue to rise relatively slowly in the service industries, and wage increases do not rise proportionally less, the costs or prices of services will continue to rise more quickly than those of goods and tend to stimulate the substitution of more goods for services in the production processes and for direct services to persons. In time, such a process may raise our potential per capita real income but it could exacerbate the unemployment problem. In addition, if the income-elasticity of demand for services is not high relative to that for goods, and there is some substitution for services, either of goods or leisure, the continued growth of services may not provide the necessary thrust in the future to eradicate unemployment.

Also, if an attempt is made to expand industries which have a relatively low labour productivity simply to generate more employment, the growth in per capita real income may well be reduced. Another problem associated with this strategy is that the mix of jobs provided by the service industries may satisfy only a small proportion of the unemployed labour force; many of whom will be well educated (in the liberal sense), and have high expectations with regard to salary, working conditions, etc. Many of these persons could become unemployable. Also, to raise effective demand sufficiently to employ all those seeking work in this situation could be highly inflationary.

Changes During the Sixties

Some of the main changes which occurred in income and expenditure during the 'sixties are shown below:

National Income & Expenditure

Percentage Changes 1960-1970

G.N.P. (Market Prices)	122.8
Personal Income	124.8
Personal Disposable Income	103.2
Personal Direct Taxes	310.8
Indirect Taxes (less subsidies)	144.9
Personal Expenditures	96.4
- Durable Goods	110.1
- Semi-Durable Goods	85.8
- Non-Durable Goods	80.0
- Services 1	111.0
Government Current Expenditures	210.5
Government Gross Fixed Investment	103.4

1. Includes net expenditures abroad.

What stands out is the relatively fast growth of the government revenues and outlays. It can be seen too that the rate of growth in consumer expenditures on services was less than that of G.N.P. but above that of consumer expenditures on goods. The increase in consumer outlays on services during this period was lowered by the transference of most medical expenses to government. For details of this shift, see pages 23-26 of our previous report "The Service Industries".

It was also shown in that report that prices and the value of output in the service industries rose more quickly in total during the 'sixties than they did in the goods-producing industries. Between 1960 and 1970 the proportion of gross domestic product at factor cost originating in services rose from 54.4 to 58.8 percent. This relative expansion in the "value" of services is expected to continue in the 'seventies, the limits to the development being determined by productivity increases in both goods and services and the response of society (including government)

to the higher costs and prices in services.

The statistical appendix to this reports contains a number of up-to-date tables which provide information on the twelve main industrial groupings and sub-totals for goods and services. Table 1 shows the breakdown of gross domestic product and the percentage changes between 1960 and 1970. The most striking advance was that made by community business and personal services; they more than doubled over the ten years and accounted for 38 percent of the increased outlays on services.

When the domestic product is expressed in constant dollar values (as in tables 2 to 6), it can be seen that there was hardly any change at all between 1960 and 1970 in the proportional distribution of output between goods and services. Furthermore, the Economic Council of Canada has forecast that between 1970 and 1980 there will be a slight fall in the proportion of real domestic product originating in services. In 1980 the goods industries are forecast to produce 47.9 and the service industries 52.1 percent of real domestic product. Within the service area the proportion is expected to rise to 16.8 percent in community, business and personal services, from 14.5 in 1960, and to fall in public administration, from 7.6 to 4.5.

Another observation in the previous report was the rapid increase in the proportion of the labour force employed in services. Table 3 shows that the proportion of employment in the goods industries fell from 46.4 in 1960 to 39.1 in 1970 and is expected to fall a further 8.2 points by 1980. Conversely, the proportion in services is expected to rise from 53.6 in 1960 to 69.1 in 1980. (1)

(1) It should also be noted that during the last thirty years there has been a considerable rise in the proportion of non-production workers in manufacturing.

The forecasted absolute growth in employment between 1970 and 1980 for each of the industry groups is as follows.

Growth in Employment, 1970 to 1980.

	<u>000's</u>
Agriculture	- 83
Forestry	9
Fishing & Trapping	21
Mines, Quarries & Oil Wells	34
Manufacturing	- 1
Construction	184
Electric Power, Gas & Water	- 5
Total Goods	<u>159</u>
Transportation, Storage & Communication	144
Trade	407
Finance, Insurance & Real Estate	153
Community, Business & Personal Services	1,546
Public Administration	<u>193</u>
Total Services	<u>2,443</u>
Total Goods & Services	<u>2,602</u>

In percentage terms, the growth in employment which the Council forecasts during the 'seventies is only 1.1 percentage points higher than in the 'sixties, 33 percent in contrast with 32.1 percent. The task therefore does not seem an impossible one. However, as in the previous decade, 75 percent of these jobs are in trade and community, business and personal services, many of which are part-time, of low productivity and pay relatively low wages. Whether these job opportunities will satisfy the psychological and physical expectations of the persons seeking work in the 'seventies is doubtful and this may result in some vacancies not being filled.

Real domestic product per employee (full time and part time) is set down in appendix table 5. The figures for 1980 are derived from other forecasts by the Economic Council. One can see that the rates of change in the measure are expected to be greatly different among industries and between the two periods, 1960-70 and 1970-80. One should bear in mind, however, that there are many difficulties associated with the calculation of real domestic product in non-commercial services, including public

administration, and that as a result the levels and perhaps the rates of increase in these areas are understated. The absolute figures shown for finance, insurance and real estate are also of dubious value, for some of the outputs embodied in this group are independent of any labour input. Despite these qualifications the calculations are of great interest. In total, services look as if they are less productive than goods. This was not always the case as can be seen in 1960, when the levels are almost equal. Since then, however, a continuation of the rapid increase in productivity in most of the goods-producing sectors has resulted in a widening productivity gap between goods and services. Also, if the Council's forecasts are correct, this gap will widen and by 1980 the level in goods production will be twice as high as that in services. This development is exaggerated, however, by their assumption of no productivity advances in public administration, perhaps an over optimistic assumption about productivity increases in manufacturing, and because much of the increased employment in services will be on a part-time basis.

To obviate the effects of part-time working, analysts prefer to use real domestic product per man-hour, particularly when making industry comparisons. Table 6 contains calculations of real domestic product per average hours worked per week for most of the industrial groups. These are based on data published by the Economic Council and indicate what its assumptions or forecasts are with regard to changes in productivity. There is little doubt that even with this adjustment, the levels are still understated in non-commercial services, and that the rate of increase in public administration should be positive and not

relative as is shown in the table. The level can be seen to be lowest in community, business and personal services, where as has been seen the greatest increase in employment has occurred and is expected. The level in trade is not much higher. As one might expect, the levels tend to be higher in the more capital intensive groups, such as utilities, mines, quarries & oil wells, and transportation, storage and communication. However, productivity depends also on the nature of the capital stock, and in the case of manufacturing the high ratios of machinery and equipment to structures, as well as the production-line technology, allows a relatively high productivity with a relatively low capital intensity. We have not examined the possibility that capital stock in manufacturing has been undervalued relatively to its value in other groups.

The ranking of the industries by net capital stock per man-hour in 1961 dollars is shown below.

Net Capital Stock Per Man Hour (1961 Dollars) in 1970.

<u>Industry Groups</u>	<u>Rank</u>
Agriculture	5
Mines, Quarries & Oil Wells	2
Manufacturing	6
Construction	8
Utilities	1
Transportation, Storage & Communication	3
Wholesale & Retail Trade	9
Finance, Insurance & Real Estate	4
Other Services, including Public Admin.	7

As can be seen in table 6, between 1960 and 1970 the percentage increases in productivity were greatest in transportation and communication, utilities, and agriculture. They were particularly low in finance, insurance and real estate, and community, business and personal services. The changes shown for the period 1970 to 1980 are derived from forecasts prepared by the Economic Council. It expects very substantial increases

in productivity in utilities and manufacturing, and substantial increases in the rate of increase in finance, insurance and real estate, and community, business and personal services. The expected increases in the last group of services appear excessively high in part because of the underestimation in the preceding period. It's comforting to remember that the Council has forecast the large increases in employment in this sector despite this productivity growth.

The relatively slow growth in productivity in services as a whole during the last few decades has resulted in relatively fast increases in their unit labour costs and prices. This has occurred in part because wage increases appear to keep pace more with general price movements than particular productivity increases. In addition, those services which are not sold in the market but are supplied on a cost-plus basis have expanded the demand for labour in services and have been a factor in raising wage rates in this area.

Changes in Costs & Prices

(Average Annual Rates of Change)

Industry Groups	Unit Labour Cost		Implicit Deflators of Value Added	
	1960-70	1970-80	1960-70	1970-80
Agriculture	3.1	2.3	4.5	1.3
Forestry	3.0	-1.5	0.7	-1.1
Mines, Quarries & Oil Wells	2.0	1.4	2.3	3.2
Manufacturing	2.1	0.5	1.0	0.6
Construction	4.9	4.5	4.9	4.8
Utilities	1.3	-0.7	0.5	0.1
Transportation, Storage & Communication	2.1	2.6	1.8	3.5
Wholesale & Retail Trade	2.5	2.0	2.6	2.3
Finance, Insurance & Real Estate ¹	6.8	5.0	4.4	3.6
Community, Business & Personal Services	5.9	4.3	5.6	4.0
Public Administration & Defence	6.1	5.2	6.2	5.1
Total	3.6	2.9	3.1	2.8

1. Includes Housing Output.

Source: The Economic Council of Canada, Staff Papers 1972, p 237.

It can be seen in the above table that unit labour costs and prices have risen very rapidly in the last three groups of services. (Labour income as a percentage of gross domestic product for each of the industry groups can also be seen in table 8 of the appendix.) Between 1970 and 1980, the rates of increase in unit labour costs in these three groups are expected to fall slightly in response to the expected acceleration of productivity growth. Construction is another group in which unit labour costs and prices have risen and are expected to rise fast.

Given the growth in the proportion of employment and output in current prices in the service industries, one naturally expects the proportion of labour income in these industries to be high. As can be seen in table 9 the proportion of labour income generated in services was 54.7 in 1960 and 60.0 in 1970. The comparable percentages in community, business and personal services were 15.5 and 22.5. Similarly, we find that the proportion of profits, investment income, and other business income being made in or paid to the service sectors were 53.4 and 56.1. This however includes rental income which is over half of the totals shown for finance, insurance and real estate. Community business and personal services (see table 10) accounted for 11.1 and 14.2 percent of business income in 1960 and 1970.

This large and growing flow of money expenditures and income through the service industries is highly significant, for stabilization as well as growth policies, and its implications deserve to be studied econometrically in greater depth.

Between 1960 and 1970, as can be seen below, the absolute and percentage growth in both labour and business income was greater in services than goods. The use of a terminal year comparison can be misleading but the figures are adequate for present purposes.

Growth in Income 1960 to 1970

	<u>\$ Millions</u>	<u>Percentage</u>
Labour Income - Goods	9,891	108.3
- Services	17,515	159.1
Business Income - Goods	3,630	83.4
- Services	5,216	104.6

When a comparison is made of the percentage increases in labour and business income for each industry group, one finds that business income has risen more quickly in the more capital intensive industries, viz., mines, quarries & oil wells, utilities, and transportation, storage and communications. In manufacturing and the remaining services, excluding public administration, labour income rose much more quickly than business income.

An examination of gross fixed capital formation also emphasizes the importance of the service industry groups. During the period 1960 to 1970 inclusive, 60.7 percent of gross fixed capital formation took place in these industries, though 20 percentage points of this were for residential construction. Table 11 in the appendix also shows that the proportion of gross fixed capital formation accounted for by the service industries was several points lower in 1970 than 1960 because of the greater increase in outlays in the goods industries. This occurred in part however because the goods industries were in the doldrums in 1960.

Gross Fixed Capital Formation

1960 to 1970 Inclusive

	<u>Percentage of Total</u>	<u>Percentage Increase 1960 to 1970</u>
Goods	39.3	150.6
Residential Construction	20.2	101.4
Services	40.5	90.5
Total Business	81.3	116.3
Total Government	18.7	103.4

Demand - Industry and Inter-Industry Relationships.

Sometime in 1973, Statistics Canada expects to publish input-output data for 1967. Until they are made available, the most up-to-date information on these interrelationships is for 1961.

In the Economic Council's Staff Papers, 1972, table 7-2 on page 222 records the proportion of demand components produced in various industries in 1961. This table is reproduced in the appendix, table 12, and a summary is set out below:

Proportion of Demand Components Produced in Goods and Service Industries

Industries	Consumer Expenditures	Government Expenditures	Business Investment	Exports	Imports	Total
	(Percentages)					
Total Goods	42.5	29.6	72.1	77.0	78.3	44.2
Total Services	57.4	70.5	28.0	22.9	21.7	55.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
\$ Billions	25.5	5.3	8.9	7.0	8.1	38.4 *

* Does not equal components because of rounding and residual error.

The consumption outlays, which include paid and imputed residential rents, were the source of 68 percent of the final expenditures on services, and government was the source of just over 17 percent of such expenditures. Since 1961 there has been a major transference of consumers outlays, eg., on health, from the consumer sector to government, and their proportions together have risen. What stands out as significant in 1961 however was the large circular flow of income and expenditure through households and the service industries. This flow is the same today with the one difference that there is a larger outflow to government for the indirect purchase of some of the services which otherwise would have been financed privately.

Tables 13 and 14 in the appendix, together with an explanatory memorandum, set out a consolidation of a part of the input-output structure in 1961. These consolidations show fairly accurately the input-output relationships between the service industries and the other main industrial groups. Essentially, they show the gross value of the supply of commodities vertically and the industry demands for these commodities horizontally. The supplies of non-marketed government services are not included in the services columns and therefore the supply of services is understated. The inputs purchased by government to supply goods and services, however, are included in the services row.

In the summary table below, the dummy industries and commodities which appear in the source data have been assumed, appropriately we believe, to be in the manufacturing sector. The sector purchases and the commodities supplied also include items on capital account and the government outlays excluded from the intermediate input matrix in the basic accounts. What the figures represent therefore are the total purchases made by each of the sectors of the several groups of commodities shown.

Input-Output Relationships in 1961

(Percentages of Totals)

<u>Commodities Supplied</u> <u>Industries</u>	<u>Primary</u> <u>Products</u>	<u>Manufactured</u> <u>Products</u>	<u>Construction</u>	<u>Utilities</u>	<u>Services</u>	<u>Total</u>
Primary Industries	5.5	5.8	9.4	5.8	3.6	5.4
Manufacturing Industries	60.8	42.1	5.8	24.6	17.5	30.8
Construction	1.3	11.7	0.3	0.5	4.5	6.4
Utilities	0.1	0.9	10.1	19.2	0.3	2.0
Services	7.3	14.5	51.6	8.2	17.3	18.5
Other Demands	25.0	25.0	22.8	41.7	56.8	36.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

The table brings out the importance of manufacturing which purchased 60.8 percent of the primary products, 42.1 percent of manufactured products, nearly a quarter of the output of utilities and 17.5 percent of

all services sold in the market. One can also see that the service industries, including government, purchased much lower proportions of primary products, manufactured products and utilities, about the same proportion of services, but, at least in 1961, a much larger proportion of construction. Although the supplies of government financed services are not included because they cannot be broken down by industry sector, it appears that the overt market relationships between manufacturing and services are not so great as perhaps many of us have thought.

The largest outlays on services come from "other demands" which includes consumption, exports and a residual not allocated elsewhere.

Another point of interest is that manufacturing accounted for 30.8 percent of the total expenditures on commodities whereas services accounted for only 18.5 percent. This was not an expected result because as we have seen, in terms of value added, manufacturing accounted for only 26 percent whereas services accounted for as much as 54 percent of the total.

The Provincial Distribution of Employment in Services

The figures quoted in this section are derived from Statistics Canada's publication 72-008 Estimates of Employees by Province and Industry and exclude agriculture and people working on own account or are unpaid. They include public administration and defence.

Proportional Distribution of Employees Among Provinces, 1970

Provinces	Goods less Agriculture	Services	Total less Agriculture
N.	1.3	1.7	1.5
P.E.I.	.2	.4	.3
N.S.	2.5	3.3	3.1
N.B.	2.1	2.5	2.4
Q.	29.2	26.0	27.1
O.	45.8	38.7	41.1
M.	3.4	5.1	4.5
S.	1.4	3.6	2.9
A.	5.3	8.1	7.1
B.C.	8.8	10.6	10.0
Total	100.0	100.0	100.0

As is well known, industrial employment is concentrated in Ontario and Quebec, particularly Ontario. The degree of concentration is greater for goods, excluding agriculture, than services. This may result from higher levels of productivity in services in these provinces and perhaps from the ability of some services to grow more easily when other industrial employment is not so readily available.

City data show that 47.9 percent of the service employment in Quebec is located in Montreal. It also had 51.8 percent of the employment in goods production. The comparable figures for Toronto were 33.8 and 37.2, for Winnipeg 60.5 and 70.0, and for Vancouver 50.2 and 45.8.

Sector Distribution of Employees by Province

Provinces	(Percentages)		Total less Agriculture
	Goods less Agriculture	Services	
N.	27.7	72.3	100.0
P.E.I.	18.6	81.4	100.0
N.S.	27.2	72.8	100.0
N.B.	29.2	70.8	100.0
Q.	36.2	63.8	100.0
O.	37.4	62.6	100.0
M.	25.0	75.0	100.0
S.	16.6	83.4	100.0
A.	25.0	75.0	100.0
B.C.	29.7	70.3	100.0
Total	33.5	66.5	100.0

This table shows the very great predominance of employment in services in all the provinces, though its importance is exaggerated in the more agriculturally oriented provinces such as P.E.I. and Saskatchewan. It can be seen too that employment in services is relatively less predominant in Ontario and Quebec than in the other provinces.

The city data show Montréal and Toronto have about 60 percent of their employees in services while Winnipeg and Vancouver both have 72 percent in the service industries.

More on Real Growth

Statistics Canada publishes indexes of real domestic product by industry. The industrial breakdown is more detailed than that discussed so far and is useful for comparisons of real growth. The annual growth rates for the three periods 1947-71, 1961-71 and 1967-71 are set out in appendix table 15. Some of the figures are repeated below:

Real Domestic Product

Annual Growth Rates

	<u>1947</u>	<u>1961</u>	<u>1967</u>
	<u>1971</u>	<u>1971</u>	<u>1971</u>
Agriculture	1.6	2.1	5.6
Forestry	2.5	3.3	1.1
Mines	7.9	6.2	7.3
Manufacturing	5.2	6.2	4.0
Construction	5.4	4.9	2.6
Utilities	8.8	7.7	8.1
Goods	5.0	5.6	4.5
Transportation, Storage & Communication	5.1	6.2	5.4
Trade	4.9	5.5	3.9
Finance, Insurance & Real Estate	N.A.	4.0	3.0
Community, Business & Personal Services	4.9	6.6	5.1
Public Admin. & Defence	N.A.	3.0	3.0
Services	4.7	5.3	4.2

Services grew at lower rates than goods in each of the three periods. The growth of both sectors declined in the period 1967-71. Only Agriculture, Mines & Utilities expanded their rates of growth in this period. The sharpest declines were in forestry, durable manufactures, construction, and, in services, wholesale trade, miscellaneous services, education, and services to business management. In the case of goods, much of the decline was of a cyclical nature, but it is doubtful whether this was the case with most of the services. If there has been a shift down in the long term rate of growth in services, perhaps nearer to that for the period 1947-71, the Economic Council's forecasts for employment increases in this area in the 'seventies look rather optimistic. The annual indexes for 1972

are not yet available, but the monthly figures do not indicate any sudden increase in the rate of growth for services during the first eight months of the year.

The key variable in the growth of the service industries will be the real consumer outlays on services. As we have seen these outlays account for a significant proportion of total outlays on services and if they fail to grow at a sufficiently fast rate government will be required to expand its expenditures on services at an even faster rate.

In its recently published Staff Papers, the Economic Council set out forecasts for the average annual rates of increase in the components of real consumer expenditures per capita. As population is expected to expand at a slower rate in the 'seventies than the 'sixties, the rates of increase in per capita expenditures in the period 1970-80 are higher than the rates of increase in the absolute amounts. This should be kept in mind when examining the following figures:

Consumer Expenditures Per Capita
(Constant \$1961)

	<u>Average Annual Rates of Change</u>	
	<u>Actual</u> <u>1960-70</u>	<u>Projected</u> <u>1970-80</u>
Durable Goods	4.4	4.7
Semi Durable Goods	2.1	2.4
Non Durable Goods	3.5	3.7
Services	2.4	4.0
(Services 1960 Definition)	3.1	4.0
Housing	4.5	3.8
Health	-5.1	1.7
(Health 1960 Definition)	3.6	4.0
Education 1	10.0	3.9
Other Services	1.1	4.3
Total	3.1	3.8
(Total 1960 Definition)	3.3	3.9

1. Includes all current expenditures of universities, in addition to private outlays.

In per capita terms the rates of increase in the 'seventies are in total about 0.6 percentage point higher than in the 'sixties. Services, with and without public expenditures on health, show a greater increase than goods, though expenditures on durable goods are forecast to rise at a faster rate than services in both periods. The increased rate of increase in services, however, is highly dependent on the expected increase in the outlays on "Other Services". The Council has projected an unbelievably sharp increase in their rate of expansion. Its reasons for postulating such an increase are possibly justified but, as in 1980 these expenditures are forecast to account for 48 percent of consumer outlays on services, it can be appreciated how dependent the Council's forecasts of increased employment in services is on the realization of this particular projection.

The Service Industries and Government

Government action has already done a great deal to expand the service industries, particularly transportation and the non-commercial services, such as education and health services. This has been done directly by financing these services and indirectly we believe (but have not yet been able to quantify) by imposing a greater burden of taxation on goods than services.

The relatively fast growth in expenditures on services has helped government considerably in its efforts to keep unemployment down and to distribute the national output. Forecasts by the Economic Council, together with our own reservations about them, however, do not allow us to predict with confidence that unemployment will be kept down to politically and socially desirable levels in the 'seventies; that is, without substantial, inflationary, increases in effective demand. Even a more rapid increase in effective demand may have difficulty lowering unemployment if it leads to inflation and a shift of expenditures into goods and property, and if there is also a large import leakage. In addition, as noted previously, the mix of new jobs created, and the remuneration offered, may not meet the expectations of active job seekers. If this imbalance develops, some dissatisfied workers may seek, as in the past, positions outside Canada. This would alleviate the problem but it is certainly not a satisfactory solution

In view of this, should government promote increases in productivity or not. One can see that it is still absolutely necessary to raise productivity (interpreted here in its widest sense) in the output and marketing of traded goods and services, and also in those non-traded goods and services which enter as inputs into the former. This is necessary, of course, to maintain and if possible raise our international

competitiveness. If Canada fails to do this, it will either lose employment or be forced to restrict imports. The second course, too, may not be a solution as it could lead to foreign retaliation.

Is there an argument for holding up productivity increases, or not promoting them, in the other non-traded goods and services, such as residential construction, many personal services, etc. Such action, simply to create jobs, does not seem acceptable. For one thing, the costs of these services will be greater and this is likely to raise the rate of increase in wages and prices. This could also hurt those industries dealing in traded goods and services, though the flexible exchange rate may offset this. What exists in this simplified picture therefore is a trade-off between income lost from lower productivity plus the higher cost of imports and the income gained from greater employment.

In practice, however, government, even if it wished, could not lower much productivity increases in these non-traded goods and services. Consequently, such a discriminatory approach would not have much effect on unemployment anyway. For these several reasons, we prefer government to raise productivity and efficiency wherever possible and to seek solutions for unemployment and inadequate incomes in other ways.

Even if productivity and efficiency is generally promoted the present system of economic arrangements in Canada will provide jobs and incomes to a large majority of the persons actually seeking them. If possible, all workers should be appropriately prepared for the types of job opportunities which will arise or can be generated. Research into job requirements and manpower training, etc. is important and is carried on by the Department of Manpower and Immigration. The more successful

we are in matching the supply with the demand, the fewer persons will be unemployed or forced to leave the country. Those persons who decline job opportunities as unsuitable (given their education and expectations) set a serious problem for themselves and government, and for which there is no easy solution. In economic terms their education and training may have been inappropriate. They require retraining of course, and, more difficult, reorientation. If the volume of non-recessionary unemployment becomes serious, new approaches to work sharing and income distribution would be necessary.

Another area which government might explore to create meaningful work is the creation of new services as well as products. Thought also needs to be given to the ways in which services, including service functions carried out in multi-national enterprises, can be attracted to and held in Canada. The attractions are environmental, such as law and order, as well as economic. The location of services, as well as goods production, is also influenced by ownership and control and the policies of foreign governments. The impact of these factors will have to be studied in greater detail.

GROSS DOMESTIC PRODUCT AT FACTOR COST
(Millions of Dollars)

	1960	Percentage of Total	1970	Percentage of Total	Percentage Change 1960-1970
Agriculture	1,690	4.9	2,500	3.3	47.9
Forestry	438	1.3	593	.8	35.4
Fishing & Trapping	72	.2	157	.2	118.1
Mines, Quarries & Oil Wells	1,382	4.0	3,078	4.1	122.7
Manufacturing	9,020	26.4	17,772	23.6	97.0
Construction	2,043	6.0	4,741	6.3	132.1
Electric Power, Water & Gas Utilities	963	2.8	2,228	2.9	131.4
Total Goods	15,608	45.6	31,069	41.2	99.1
Transportation, Storage & Communication	3,291	9.6	6,691	8.9	103.3
Trade	4,367	12.8	9,358	12.4	114.3
Finance, Insurance & Real Estate ¹	3,974	11.6	8,340	11.1	109.9
Community, Business & Personal Services	4,604	13.5	14,464	19.2	214.2
Public Administration & Defence	2,348	6.9	5,457	7.2	132.4
Total Services¹	18,584	54.4	44,310	58.8	138.4
Total Goods & Services¹	34,192	100.0	75,379	100.0	120.5

1. Includes imputed net rent and depreciation on owner-occupied dwellings.

Source: National Income & Expenditure Accounts, Statistics Canada.

REAL DOMESTIC PRODUCT (1961 DOLLARS) AND TOTAL EMPLOYMENT

	1960		1970		1980	
	R.D.P. \$ Millions	Employment Thousands	R.D.P. \$ Millions	Employment Thousands	R.D.P. \$ Millions	Employment Thousands
Agriculture	1,824	682	1,976	511	2,590	428
Forestry	449	97	629	72	984	81
Fishing & Trapping	86	17	104	20	139	41
Mines, Quarries & Oil Wells	1,554	94	2,790	125	4,565	159
Manufacturing	8,381	1,419	14,785	1,790	26,488	1,789
Construction	1,968	387	3,009	471	5,794	655
Electric Power, Gas & Water	960	69	1,949	89	3,555	84
Total Goods	15,222	2,765	25,242	3,078	44,115	3,237
Transportation, Storage & Communication	3,254	504	5,981	603	10,180	747
Trade	4,427	1,018	7,254	1,320	12,200	1,727
Finance, Insurance & Real Estate ¹	2,180	226	3,496	365	5,964	518
Community, Business & Personal Services	4,673	1,107	8,428	2,025	15,494	3,571
Public Administration	2,445	345	3,217	486	4,121	679
Total Services¹	16,979	3,200	28,376	4,799	47,959	7,242
Total Goods & Services¹	32,201	5,965	53,618	7,877	92,074	10,479

1. Excludes Income from Housing.

Source: Economic Council of Canada and Special Surveys Division, Statistics Canada.

Table 2

REAL DOMESTIC PRODUCT (1961 DOLLARS) AND TOTAL EMPLOYMENT
(Percentage Shares)

	1960		1970		1980	
	R.D.P. \$ Millions	Employment Thousands	R.D.P. \$ Millions	Employment Thousands	R.D.P. \$ Millions	Employment Thousands
Agriculture	5.7	11.4	3.7	6.5	2.8	4.1
Forestry	1.4	1.6	1.2	.9	1.1	.8
Fishing & Trapping	.3	.3	.2	.3	.1	.4
Mines, Quarries & Oil Wells	4.8	1.6	5.2	1.6	4.9	1.5
Manufacturing	26.0	23.8	27.6	22.7	28.8	17.1
Construction	6.1	6.5	5.6	6.0	6.3	6.2
Electric Power, Gas & Water	3.0	1.2	3.6	1.1	3.9	.8
Total Goods	<u>47.3</u>	<u>46.4</u>	<u>47.1</u>	<u>39.1</u>	<u>47.9</u>	<u>30.9</u>
Transportation, Storage & Communication	10.1	8.4	11.2	7.6	11.1	7.1
Trade	13.7	17.1	13.5	16.8	13.2	16.5
Finance, Insurance & Real Estate ¹	6.8	3.8	6.5	4.6	6.5	4.9
Community, Business & Personal Services	14.5	18.5	15.7	25.7	16.8	34.1
Public Administration	7.6	5.8	6.0	6.2	4.5	6.5
Total Services ¹	<u>52.7</u>	<u>53.6</u>	<u>52.9</u>	<u>60.9</u>	<u>52.1</u>	<u>69.1</u>
Total Goods & Services ¹	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

1. Excludes Income from Housing

Source: Economic Council of Canada and Special Surveys Division, Statistics Canada.

REAL DOMESTIC PRODUCT (1961 DOLLARS) AND TOTAL EMPLOYMENT
(Percentage Changes)

	1960-1970		1970-1980	
	R.D.P. \$ Millions	Employment Thousands	R.D.P. \$ Millions	Employment Thousands
Agriculture	8.3	-25.1	31.1	-16.2
Forestry	40.1	-25.8	56.4	12.5
Fishing & Trapping	20.9	17.6	33.7	105.0
Mines, Quarries & Oil Wells	79.5	33.0	63.6	27.2
Manufacturing	76.4	26.1	79.2	-.1
Construction	52.9	21.7	92.6	39.1
Electric Power, Gas & Water	103.0	29.0	82.4	-5.6
Total Goods	65.8	11.3	74.8	5.2
Transportation, Storage & Communication	83.8	19.6	70.2	23.9
Trade	63.9	29.7	68.2	30.8
Finance, Insurance & Real Estate ¹	60.4	61.5	70.6	41.9
Community, Business & Personal Services	80.4	82.9	83.8	76.3
Public Administration	31.6	40.9	28.1	39.7
Total Services ¹	67.1	50.0	69.0	50.9
Total Goods & Services ¹	66.5	32.1	71.7	33.0

1. Excludes Income from Housing.

Source: Economic Council of Canada and Special Surveys Division, Statistics Canada.

REAL DOMESTIC PRODUCT (1961 DOLLARS) PER EMPLOYEE

	Real Domestic Product Per Employee			Percentage Change 1960-70	Percentage Change 1970-80
	1960	1970	1980		
Agriculture	2,674	3,867	6,051	44.6	56.5
Forestry	4,629	8,736	12,148	88.7	39.1
Fishing & Trapping	5,059	5,200	3,390	2.8	-34.8
Mines, Quarries & Oil Wells	16,532	22,320	28,711	35.0	28.6
Manufacturing	5,906	8,260	14,806	39.9	79.2
Construction	5,085	6,389	8,846	25.6	38.5
Electric Power, Gas & Water	13,913	21,899	42,321	57.4	93.3
Total Goods	5,505	8,201	13,628	49.0	66.2
Transportation, Storage & Communication	6,456	9,919	13,628	53.6	37.4
Trade	4,349	5,495	7,064	26.4	28.6
Finance, Insurance & Real Estate ¹	9,646	9,578	11,514	-.7	20.2
Community, Business & Personal Services	4,221	4,162	4,339	-1.4	4.3
Public Administration	7,087	6,619	6,069	-6.6	-8.3
Total Services ¹	5,306	5,913	6,622	11.4	12.0
Total Goods & Services ¹	5,398	6,807	8,787	26.1	29.1

1. Excludes Income from Housing.

Source: Economic Council of Canada and Special Surveys Division Statistics Canada.

REAL DOMESTIC PRODUCT PER AVERAGE HOURS WORKED PER WEEK
(Dollars)

	1960	1970	1980	Percentage Changes	
				1960-70	1970-80
Agriculture	50.7	79.7	133.3	57.2	67.3
Mines, Quarries & Oil Wells	421.7	572.3	702.0	35.7	22.7
Manufacturing	160.1	231.4	421.8	44.5	82.3
Construction	128.1	168.1	231.6	31.2	37.8
Utilities	363.3	577.8	1,146.9	59.0	98.5
Transportation, Storage, & Communication	161.0	265.9	395.0	65.2	48.6
Trade	107.1	147.3	213.4	37.5	44.9
Finance, Insurance & Real Estate ¹	255.9	261.7	329.9	2.3	26.1
Community, Business & Personal Services	107.7	116.6	140.4	8.3	20.4
Public Administration & Defence	184.1	182.9	182.8	-.7	-.1

1. Excludes Housing.

Source: Derived from data made available by Economic Council of Canada

Table 7

NET CAPITAL STOCK AND REAL DOMESTIC PRODUCT, BY INDUSTRY

	(Volume and Per Employee)													
	Net Capital Stock Constant 1961 Dollars (Millions)		1970 1960 Change		No. of Employees (In Thousands)		Net Capital Stock Per Employee (Constant 1961 Dollars)		1970 1960	Real Domestic Product Constant 1961 Dollars (Millions)		Real Domestic Product Per Employee (Constant 1961 Dollars)		1970 1960
	1960	1970(p)	\$ (Millions)	%	1960	1970	1960	1970	Change %	1960	1970	1960	1970	Change %
Agriculture	5,166	6,573	1,407	27.2	682	511	7,575	12,863	69.8	1,824	1,976	2,674	3,867	44.6
Forestry	424	624	200	47.2	97	72	4,371	8,667	98.3	449	629	4,629	8,736	88.7
Fishing	140	255	115	82.1	17	20	8,235	12,750	54.8	86	104	5,059	5,200	2.8
Mining, Quarrying & Oil Wells	3,391	6,911	3,520	103.8	94	125	36,074	55,288	53.3	1,554	2,790	16,532	22,320	35.0
Manufacturing	12,525	19,849	7,324	58.5	1,419	1,790	8,827	11,089	25.6	8,381	14,785	5,906	8,260	39.8
Construction	927	1,103	176	19.0	387	471	2,395	2,342	-2.2	1,968	3,009	5,085	6,388	25.6
Transportation, Communication & Other Utilities	20,314	32,385	12,071	59.4	573	692	35,452	46,799	32.0	4,214	7,930	7,354	11,460	55.8
Transport, Storage, Communic.	11,734	16,872	5,138	43.8	504	603	23,282	27,980	20.2	3,254	5,981	6,456	9,919	53.6
El. Power, Gas & Water Util.	8,580	15,513	6,933	80.8	69	89	124,348	174,303	40.2	960	1,949	13,913	21,899	57.4
Trade	3,770	5,178	1,408	37.3	1,018	1,320	3,703	3,923	5.9	4,427	7,254	4,349	5,495	26.4
Finance, Insurance & R. Estate	1,465	4,137	2,672	182.4	226	365	6,482	11,334	74.8	2,180	3,496	9,646	9,578	-0.7
Service (Incl. Public Admin.)	20,262	37,514	17,252	85.1	1,452	2,511	13,955	14,940	7.0	7,118	11,645	4,902	4,638	-5.4
All Industries	68,384	114,529	46,145	67.5	5,965	7,877	11,464	14,540	26.8	32,201	53,618	5,398	6,807	26.1

Sources: (1) Fixed Capital Flows and Stocks, Non-Manufacturing Industries, 1926-1970(p). (Unpublished Computer Print-Out from Statistics Canada, Nat. Health and Capital Stock Section, Business Finance Div., Mr. Peter Koumanakos, Tel. 4-5601); and Manufacturing, Cat. 13-543, Table 1, page 9.

(2) Employment by Industry, 1946-1970, Special Surveys Division, Stat. Can. (Prepared for Econ. Council of Canada)

(3) Real Domestic Product (in 1961 Constant \$), Table dated Nov. 16/72 from J.A. Dawson, 3-1331, Econ. Council of Canada.

LABOUR INCOME AS PERCENTAGE OF GROSS DOMESTIC PRODUCT¹

	<u>1960</u>	<u>1970</u>
Agriculture	14.5	14.7
Forestry	82.9	87.0
Fishing & Trapping	37.5	33.1
Mines, Quarries & Oil Wells	42.7	39.9
Manufacturing	66.6	70.1
Construction	75.3	75.2
Electric Power, Gas & Water Utilities	<u>37.4</u>	<u>37.7</u>
Total Goods	<u>58.5</u>	<u>61.2</u>
Transportation, Storage & Communication	67.4	65.9
Wholesale and Retail Trade	62.2	66.8
Wholesale	(64.1)	(66.6)
Retail	(61.1)	(67.0)
Finance, Insurance & Real Estate ²	24.4	30.5
Community, Business & Personal Services	67.9	73.8
Public Administration & Defence	<u>84.3</u>	<u>84.9</u>
Total Services	<u>59.2</u>	<u>64.4</u>
Total Goods & Services	<u>58.9</u>	<u>63.1</u>

1. Labour Income includes Military Pay & Allowances, and Gross Domestic Product is at Factor Cost.

2. Unrealistically low because GDP includes product of housing.

Source: National Income and Expenditure Accounts, tables 28 and 29.

WAGES, SALARIES, & SUPPLEMENTARY LABOUR INCOME, & MILITARY PAY & ALLOWANCES.
(Millions of Dollars)

	1960	Percentage of Total	1970	Percentage of Total	Percentage Change 1960-1970
Agriculture	245	1.2	368	.8	50.2
Forestry	363	1.8	516	1.0	42.1
Fishing & Trapping	27	.1	52	.1	92.6
Mines, Quarries & Oil Wells	590	2.9	1,229	2.6	108.3
Manufacturing	6,010	29.9	12,454	26.2	107.2
Construction	1,538	7.6	3,565	7.5	131.8
Electric Power, Water & Gas Utilities	360	1.8	840	1.8	133.3
Total Goods	9,133	45.3	19,024	40.0	108.3
Transportation Storage & Communication	2,218	11.0	4,408	9.3	98.7
Trade	2,717	13.5	6,255	13.2	130.2
Finance, Insurance & Real Estate	968	4.8	2,545	5.3	162.9
Community, Business & Personal Services	3,125	15.5	10,680	22.5	241.8
Public Administration & Defence	1,980	9.9	4,635	9.7	134.1
Total Services	11,008	54.7	28,523	60.0	159.1
Total Goods & Services	20,141	100.0	47,547	100.0	136.1

Source: National Income & Expenditure Accounts

PROFITS & OTHER INVESTMENT INCOME,
ACCRUED NET INCOME OF FARM OPERATORS FROM FARM PRODUCTION, &
NON-FARM UNINCORPORATED BUSINESS INCLUDING RENT
(Millions of Dollars)

	<u>1960</u>	<u>Percentage of Total</u>	<u>1970</u>	<u>Percentage of Total</u>	<u>Percentage Change 1960-1970</u>
Agriculture	1,094	11.7	1,509	8.3	37.9
Forestry	36	.4	42	.2	16.7
Fishing & Trapping	34	.3	57	.3	67.6
Mines, Quarries & Oil Wells	430	4.6	1,286	7.7	199.1
Manufacturing	2,025	21.7	3,290	18.1	62.5
Construction	362	3.9	848	4.7	134.3
Electric Power, Water & Gas Utilities	370	4.0	949	5.2	156.5
Total Goods	<u>4,351</u>	<u>46.6</u>	<u>7,981</u>	<u>43.9</u>	<u>83.4</u>
Transportation, Storage & Communication	509	5.5	1,226	6.7	140.9
Trade	1,236	13.2	2,320	12.8	87.7
Finance, Insurance & Real Estate	2,203	23.6	4,078	22.4	85.1
Community, Business & Personal Services	1,039	11.1	2,579	14.2	148.2
Public Administration & Defence	-	-	-	-	-
Total Services	<u>4,987</u>	<u>53.4</u>	<u>10,203</u>	<u>56.1</u>	<u>104.6</u>
Total Goods & Services	<u>9,338</u>	<u>100.0</u>	<u>18,184</u>	<u>100.0</u>	<u>94.7</u>

Source: National Income & Expenditure Accounts

PROPORTION OF DEMAND COMPONENTS PRODUCED IN VARIOUS INDUSTRIES, 1961

	Consumer Expenditure	Government Expenditure	Business(1) Investment (Percent)	Exports	Imports	Total
Agriculture	6.2	1.1	-3.2	9.6	4.0	4.5
Forestry	0.5	0.4	1.3	4.3	0.9	1.2
Fishing	0.2	0.1	0.1	1.1	0.4	0.3
Mines, Quarries & Oil Wells	3.0	2.9	6.6	18.9	13.2	4.6
Manufacturing	26.9	17.3	47.6	38.5	56.2	24.9
Construction	1.8	7.5	18.0	1.2	1.0	5.8
Utilities	3.9	0.3	1.7	3.4	2.6	2.9
Total Goods	42.5	29.6	72.1	77.0	78.3	44.2
Transportation, Storage & Communication	11.2	5.1	8.7	11.7	9.1	9.9
Wholesale & Retail Trade	16.7	3.9	10.0	5.2	4.5	13.0
Finance, Insurance & Real Estate	8.3	1.9	5.7	3.1	3.9	6.3
Housing (2)	8.9	0	0	0	0	5.5
Community, Business & Personal Services	12.3	2.8	3.6	2.9	4.2	8.6
Public Administration & Defence	0	56.8	0	0	0	12.5
Total Services	57.4	70.5	28.0	22.9	21.7	55.8
Total Goods & Services	100.0	100.0	100.0	100.0	100.0	100.0

1. Including inventory change

2. Housing is a value-added estimate consisting mainly of paid and imputed residential rents.

Source: Derived from the 1961 Input-Output Tables, Statistics Canada.

GROSS FIXED CAPITAL FORMATION

(Millions of Dollars)

	<u>1960-1970</u>	<u>Percentage of Total</u>	<u>1960</u>	<u>Percentage of Total</u>	<u>1970</u>	<u>Percentage of Total</u>	<u>Percentage Increase 1960 to 1970</u>
Agriculture, Fishing & Trapping	9,168	6.5	592	7.0	822	4.5	38.9
Forestry	853	0.6	54	0.6	90	0.5	66.7
Mines, Quarries & Oil Wells	9,150	6.4	397	4.7	1,342	7.4	238.0
Manufacturing	21,589	15.2	1,118	13.2	3,079	17.0	175.4
Construction	2,370	1.7	135	1.6	289	1.6	114.1
Electric Power, Gas & Water Utilities	12,652	8.9	680	8.0	1,837	10.1	170.1
Total Goods	55,782	39.3	2,976	35.1	7,459	41.1	150.6
Transportation, Storage & Communication	14,424	10.2	1,051	12.4	1,817	10.0	72.9
Trade	4,533	3.2	370	4.4	534	3.0	44.3
Finance, Insurance & Real Estate ¹	33,533	23.6	2,108	24.9	4,222	23.3	100.3
Community, Business & Personal Services	15,713	11.1	777	9.2	1,942	10.7	149.9
Public Administration (ex. Defence)	17,808	12.6	1,191	14.0	2,154	11.9	80.9
Total Services	86,011	60.7	5,497	64.9	10,669	58.9	94.1
Total Goods & Services	141,793	100.0	8,473	100.0	18,128	100.0	114.0
<u>Government Sector</u>							
Goods	1,006	0.7	90	1.1	97	0.5	7.8
Services	25,585	18.0	1,470	17.3	3,076	17.0	109.3
<u>Residential Construction</u>	28,647	20.2	1,799	21.2	3,623	20.0	101.4

1. Includes residential construction

MEMORANDUM

CLASSIFICATION

TO
A

Mr. F. Chambers,
Special Adviser on Industrial Strategy

YOUR FILE No.
Votre dossier

OUR FILE No.
Notre dossier

DATE

FROM
De

Len Turner

December 6, 1972.

FOLD

SUBJECT
Sujet

1961 Input-Output Structure

Table 1 is a typed version of the hand-written table previously given to you. It consolidates a part of the input-output tables prepared for 1961 by Statistics Canada. The row figures show (1) the industrial demands for intermediate inputs (commodities) and (2) a partial breakdown of the final demand for the same commodities. The industrial demands exclude investments on capital account and the demands of government not originating in the public corporations. "Other Final Demand" includes consumption, investment other than that in inventories, and government outlays. The column figures show the supplies of the various commodities at factor cost. These supplies include imports which are deducted in total at the bottom of each column. I have not included in the columns office, cafeteria and operating supplies (Dummy Industries) which had a value of \$2 billion; of these 42 percent were purchased by the service industries and 39 percent by manufacturing. If they were manufactures, the dependence of the manufacturing sector on the service sector is greatly increased. It will be seen in the table that except for postal services, no column shows the supply of government services including defence. Bob Hoffman of Statistics Canada informs me that the input-output tables contain in "Other Final Demand" the demands of government for the goods and services of the other sectors but its own supply of services is for the main part not purchased in the market and no allocation among industries, consumers and governments has been attempted. What this means is that the various industries, etc. use more services than is shown (which they finance through tax payments) but that the total service sector's demand for goods is shown in full. These technical points aside, the table shows that the input-output relationships (the output-output relationships may also be important) between manufacturing and commercial services are not so great as many

people appear to have assumed and that the demand for services by the manufacturing sector is proportionately twice as great as the demand for manufactures by the service sector. If the dummy industries in the rows are treated as manufacturers and the dummy industries omitted in the columns are treated as manufactures, the manufacturers demand for services rises from 10.6 to 17.0 percent of the total, and the service industries demand for manufactures rises from 5.0 to 8.0 percent.

To build a more detailed picture of the inter-sectoral relationships, I obtained a breakdown of "Other Final Demand". These data contain revised data and are not perfectly in balance with the breakdown of "Other Final Demand" in table 1. The differences are not great however. In table 2, government net outlays and also the investment outlays have been consolidated with the intermediate inputs shown in table 1. This manipulation raised the proportion of the supply of services purchased by the manufacturing sector from 10.6 to 11.1. The proportion of the manufactured products purchased by the service sector rose from 5 percent to 12.1 percent. If dummy industries are treated as in the analysis of table 1, the percentages rise from 8.0 to 15.1 percent and from 17.0 to 17.5 percent.

If this last set of figures provides a fairly accurate picture of the relationship between the manufacturing and service industries shown, we might summarize by saying that in 1961 the manufacturing industries purchased about 17.5 percent of the supply of commercial services, and that the total service sector purchased about 15.1 percent of all manufactures. In addition, the manufacturing sector received services from government which are not shown in the table.

L. Turner

Table 15

REAL DOMESTIC PRODUCT

(Annual Growth Rates¹)

	1947 1971	1961 1971	1967 1971
Real Domestic Product	4.8	5.5	4.4
Agriculture	1.6	2.1	5.6
Forestry	2.5	3.3	1.1
Fishing & Trapping	1.2	1.1	-1.8
Mines	7.9	6.2	7.3
Manufacturing	5.2	6.2	4.0
-Non Durable	4.8	5.0	4.2
-Durable	5.5	7.5	3.9
Construction	5.4	4.9	2.6
Transportation, Storage & Communication	5.1	6.2	5.4
-Transportation	4.8	6.5	5.3
-Storage	4.6	3.0	3.6
-Communication	6.2	5.9	5.6
Electric Power, Gas & Water	8.8	7.7	8.1
Trade	4.9	5.5	3.9
-Wholesale	5.5	6.5	4.1
-Retail	4.5	4.9	3.8
Finance, Insurance & Real Estate	N.A.	4.0	3.0
Community, Business & Personal Services	4.9	6.6	5.1
-Education & Related Services	6.8	9.8	6.7
-Health & Welfare	5.4	5.6	4.9
-Motion Pictures & Recreation	N.A.	6.2	4.6
-Business Management	5.4	6.4	4.2
-Personal	N.A.	3.5	3.0
-Miscellaneous	N.A.	10.0	6.7
Public Administration & Defence	N.A.	3.0	3.0
" Federal	"	0.9	0.9
" Provincial	"	7.4	7.2
" Local	"	3.7	3.3
R.D.P. less Agriculture	5.1	5.6	4.3
Goods	5.0	5.6	4.5
Goods less Agriculture	5.6	6.0	4.4
Services	4.7	5.3	4.2

61-005 Indexes of Real Domestic Product by Industry, June 1972.

(1) Based on the Least Squares of Logs Method.

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