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Regulation and Other Forms of Government Intervention in the Canadian Economy and their Relationship to Inflation

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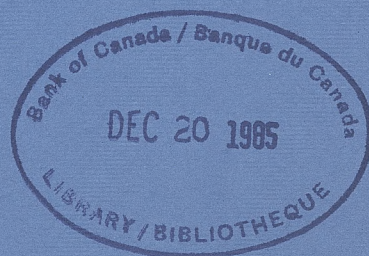REGULATION AND OTHER FORMS OF GOVERNMENT INTERVENTION IN THE CANADIAN
ECONOMY AND THEIR RELATIONSHIP TO INFLATION

1 Introduction

This paper investigates whether certain types of government
intervention in the Canadian economy may help explain the speed of
response of the rate of price inflation to restrictive monetary policy.
It includes a discussion of topics such as regulation and foreign
competition and draws on research undertaken at the Bank of Canada and
elsewhere.

My interest in this question was sparked by Shepherd (1982), who
suggested that the structure of the U.S. economy became increasingly
competitive between 1939 and 1980. He divided the private sector economy
into four segments: pure monopoly, dominant firms, tight oligopoly and
effective competition. The first three categories were characterized by
high concentration ratios, barriers to entry and some evidence of control
over pricing.[1] He estimated that the share of the private sector economy
characterized by effective competition increased from about 56.4% in 1958
to about 76.7% in 1980. He attributed this mainly to increased import
competition, antitrust actions and deregulation. He also viewed much of
what has conventionally been termed deregulation as attributable
fundamentally to antitrust actions.

This structural change may have implications for the responsiveness
of price inflation to tight monetary policy in the U.S. economy. There is
an extensive literature on administered inflation[2] which suggests that
prices may be less responsive to demand in less competitive markets, at
least in the short run. For instance, if firms follow markup pricing
rules in oligopolistic or monopolistic markets, a leftward shift in their
demand curve may not result in a decline in prices. Indeed, prices may
even increase if such firms try to maintain a normal rate of return on
capital. The statistical evidence on the relationship between
concentration ratios and short-run price changes is not that strong.
Nevertheless, some studies suggest that pricing behaviour tends to be more
sluggish in concentrated industries, so that longer lags in the response

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1. More precise definitions of these competitive categories are given in
Shepherd (1982). Industries demonstrating effective competition would
have low concentration ratios, flexible pricing and low entry barriers,
among other characteristics.

2. I have drawn on Scherer (1980) for the following discussion.

of prices to changes in demand and in costs may exist in these industries.[3]

2. Summary of Results

Estimates of the output shares of the tradeable goods sector, the non-tradeables sector, the regulated sector and the public sector over the 1961-82 period were calculated. It was found that the relative importance of the regulated sector rose over this period, while that of the tradeable goods sector fell. Output cycles tended to be largest in the tradeable goods sector and smallest in the regulated sector. As in other studies, cyclical movements in regulated prices have tended to lag those of non-regulated (especially tradeable goods) prices.

Econometric analysis of price-setting behaviour in the tradeable goods, non-tradeables and regulated sectors was undertaken next. In a standard pricing equation, the percent rate of change of prices was a function of the percent rate of change in normalized direct unit costs and of a proxy for excess demand (difference between actual and average capacity utilization rate). In time-series regressions for the tradeable goods, non-tradeable and regulated sectors, the lag in the response of prices to changes in unit costs tended to be longer in the regulated sector than in the other two sectors. In cross-sectional regressions, the responsiveness of prices to changes in unit costs seemed on average to be smallest in the tradeable goods sector and largest in the regulated sector, which seemed inconsistent with the time-series results. The cross-sectional results may be less reliable, given that the coefficient of the excess-demand proxy variable was generally statistically insignificant and negatively signed in all three sectors.

Profit margin equations that included an excess-demand proxy as an explanatory variable were also estimated. In time-series regressions, the responsiveness of profit margins to this excess-demand proxy seemed larger in the tradeable goods sector, though this result was not confirmed in cross-sectional regressions. In cross-sectional estimation, there was evidence that profit margins were more responsive to the excess-demand proxy during recessions in both the tradeable goods and non-tradeables sectors. On the other hand, the coefficient of the excess-demand proxy was generally statistically insignificant and often negative in the equations for the regulated sector. In general, the above evidence suggests that profit margins have been less sensitive to cyclical influences in the regulated sector.

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3. See Encaoua (1983) for a recent study of the effects of industrial structure on the price-adjustment process. For Canada, foreign ownership was one of the most important influences on the speed of price adjustment to changes in costs and demand. It has been suggested to me that foreign ownership levels may be closely correlated with concentration levels. For an assessment of Encaoua (1983), see White (1983), who questions the purported relationship between foreign investment and pricing behaviour.

In Section 4 on import competition, it is noted that the manufacturing sector had become more open to foreign trade between 1966 and 1982. In some descriptive analysis of particular sectors, little evidence was found that rising levels of import penetration had led to increased cyclical price variability. This issue is treated again in Stuber (1984).

3   Regulation

The cyclical responsiveness of regulated consumer prices has been the subject of research at both Statistics Canada and the Bank of Canada.[4] Consumer prices subject to some kind of direct government influence include those of energy, tobacco and alcohol, property taxes, dairy products, public transportation and postal and telephone rates. Prices of many of these goods and services are determined mainly by costs. As well, price changes tend to be infrequent (often only once a year). These factors suggest that regulated prices might tend to respond more slowly to the business cycle than is the case for non-regulated prices and this appears to be the case in Canada, at least since mid-1973.

As is well known, several important sectors (banking, trucking, rail and air transport, long distance telephone service, etc.) in the U.S. economy were subject to some form of deregulation in the 1970s. From Shepherd (1982), it would seem that up to 7% of the private sector was involved in the process of deregulation in this period. This would surely be one of the major structural differences between the evolution of the American and Canadian economies in recent years.

In some recent work, I have tried to estimate the evolution of the regulated part of the Canadian economy, relative to total aggregate output. As a starting point, I used work by Stanbury and Thompson (1980), who estimated the share of total GDP subject to some kind of direct regulation in both Canada and the United States around 1978. They found that about 29% of GDP in Canada was regulated, while about 26% of GDP in the United States was subject to regulation. In their study, regulations on entry and output were considered as well as price regulation.

In Table 1, I list those industries in Canada that I believe to be subject to some major form of direct government regulation. Regulated activity would include oil and gas mining, most transportation industries, communications, utilities, most financial industries and a number of professions. A classification of regulated industries by type of regulation is given in Table 2, for which I have again relied heavily on Stanbury and Thompson (1980).

In establishing this classification of the economy into regulated and non-regulated components, I felt it would also be useful to distinguish between the private and the public sector and to treat tradeable goods

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4.   See Wilson (1982).

industries separately from industries producing non-tradeables in the
non-regulated private sector. The public sector includes virtually all
non-commercial activity[5]; i.e., governments and non-profit
organizations. Tradeable goods industries include those industries where
exports make up a large proportion of total sales and/or imports account
for a large part of the Canadian market, so that foreign competition could
have an important influence on pricing behaviour (the only really
necessary condition is a high price elasticity of import supply).[6] A
classification of industries for the non-regulated tradeable goods and
non-tradeables sectors and the public sector is also given in Table 1.

Economic developments since 1961 were briefly reviewed in an effort
to establish when new regulations came into force.[7] To the best of my
knowledge, there have been only a limited number of changes involving new
regulation or deregulation of prices, output and/or entry in specific
industries over that period.[8] Most of the major changes are shown
in the following list:[9,10]

    Industrial milk - 1967
    Eggs - 1972
    Chickens - 1979

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5.   Except for water distribution and other utilities which I have
included in the regulated sector. The 1970 standard industrial
classification of Statistics Canada was used in distinguishing between
commercial and non-commercial activity.

6.   Tradeable goods industries are generally characterized by high
export orientation (exports account for more than 25% of total shipments)
and/or high import penetration (imports account for more than 25% of total
shipments in Canada). See Clinton and Hannah (1982).

7.   Sources such as the Canada Yearbook and Economic Council of Canada
(1981) were used extensively in this review.

8.   There has been rapid growth in environmental and social regulation
during the 1970s (Priest and Wohl, 1980). However, this type of
regulation was not considered in defining the regulated sector.

9.   I have ignored the period of general controls over wages and profit
margins that was in effect over 1975-78.

10. Other selected changes in regulations are discussed below.
Airline regulation became somewhat less restrictive during the 1970s,
with the removal of capacity constraints on CP Air, the subjection of Air
Canada to the same regulatory provisions as its competitors, the allowance
of domestic advance-booking charters and the offering of discount fares by
the airlines. In 1982, however, some constraints were placed on deep
discount fares (for details, see Reschenthaler and Stanbury, 1983).
Recently there have been suggestions that some degree of deregulation in
this industry will be taking place.
Interconnection of private telephone switchboards and sets to the
Bell Canada line was first allowed in 1980. It would seem that the size
of this market is relatively small ($180 million in sales in 1982,
according to Gary Lamphier, "Shakeout in interconnect", Financial Times of
Canada, December 5, 1983). In any case I treated the electrical products
industry as unregulated throughout the 1961-82 period.

Crude Oil and Natural Gas - 1973-74

Rent Controls

   1974 - B.C.

   1975 - Other provinces (those of Quebec had been controlled since
       1951)

   1982 - Manitoba

Rent Decontrols

   1979 - New Brunswick

   1980 - Alberta

The above information, together with data on value-added real output
(GDP),[11] were used to develop estimates of the shares of total GDP taken
by the regulated sector, the non-regulated tradeable goods sector, the
non-regulated non-tradeable goods and services sector and the public
sector over the 1961-82 period (Chart 1). It is evident that the relative
importance of the regulated sector has increased substantially over this
period, especially during the 1970s. Over half of this growth was due to
the relatively fast growth of industries that were already regulated in
1961 (primarily communications, utilities, air transport and financial
industries). At the same time, the relative importance of the
non-regulated private sector and the public sector[12] declined between
1961 and 1982. If one examines the aggregate output shares of regulated
industries by type of regulation (Chart 2), the bulk of regulated activity
is accounted for by either regulation of both price and entry or of entry
alone. Over the 1961-82 period, the growth in regulated activity has been
concentrated in sectors subject to either control of price and entry[13] or
of price alone.

Regulation of the fishing industry has become increasingly intense in
the 1970s, with greater limitations on entry in most of the industry.
Regulation of output has become more pronounced, especially in the
Atlantic fishery (see Report of the Task Force on Atlantic Fisheries
(1983), Commission on Pacific Fisheries Policy - Final Report (1982) and
Scott and Neher (1981)).

Finally the price of wheat sold for domestic consumption was fixed
between September 1973 and November 1978. Since that time, minimum and
maximum ranges for this price have been set by the federal government. I
have not tried to account for this development in measuring the size of
the regulated sector.

11. Data on GDP were taken from Statistics Canada, Gross Domestic Product
by Industry (61-213) and Real Domestic Product by Industry, 1961-1971
(61-516). Unpublished data of Statistics Canada were also used.

12. There is a possibility of a bias in the estimate of changes in the
share of the public sector over time because of the implicit assumption of
constant labour productivity used in measuring public sector output
(Thiessen, 1983). More generally, the quality of output measures in many
of the service sectors is poor.

13. Growth in the relative share of industries subject to regulation of
both price and entry has been the result mainly of relative strength in
trend output growth of these industries.

Short-term output fluctuations are presented in Charts 3 and 4 and Table 3.[14] It is apparent that cyclical variation has been much larger in the non-regulated private sector (especially the tradeable goods sector) than in either the regulated or the public sectors.[15] Activity in the tradeable goods sector tends to be oriented towards consumer durables and capital goods for both Canadian and foreign markets, and demand for these commodities is highly sensitive to short-term fluctuations in aggregate income and output. Many regulated industries produce services, which are much less affected by cyclical movements in aggregate output. This characteristic of the regulated sector might be an additional reason why turning points in regulated prices have tended to follow turning points in non-regulated prices, given that cyclical fluctuations in the output of the regulated sector have been comparatively mild. Output fluctuations in the different parts of the regulated sector are shown in Chart 5.[16] Short-term changes in production tend to be comparatively similar in those industries subject to regulation of entry only and those where both price and entry are regulated. Given that so few industries are included in the sectors affected by regulation of price or of output, it would be dangerous to make generalizations about their cyclical behaviour.

Measures of gross output prices for the various sectors are presented next. Statistics Canada annual industry product data for the 1971-81 period were used as an economy-wide source of price data.[17,18] The 1971 value-added real output shares were used as weights in constructing the aggregate-price indices.[19] Data on the annual inflation rates of aggregate prices in the four broad sectors of the economy over the 1972-81 period are shown in Chart 6 (also see Table 4). During the two major business cycles of this period, it is readily evident that the prices of tradeable goods were the most cyclically volatile. During the 1972-76 period, the cycle of the price inflation index of non-tradeable goods and services was in phase with that of tradeable goods, though much milder; this is presumably partly explained by the less volatile character of output in the non-tradeables sector during this period. It is of interest to observe that the peak and trough of the regulated-price inflation index

14. To abstract from the effect of adding new industries to the regulated sector, special series were constructed using those industries regulated in 1961.

15. In recent recessions and initial recovery periods, activity in the public sector has clearly tended to be countercyclical.

16. The 1961 regulated industry classification was again used, as discussed in footnote 14.

17. It should be kept in mind that the quality of many service industry deflators is poor.

18. Input-output data might be an alternative source for future research.

19. The total GDP deflator was taken from Statistics Canada data.

lagged that of the tradeable goods sector by a full year.[20] In the 1977-81 period, the peak in the inflation rate for tradeable goods was in 1979, while the inflation rates for the other three sectors began to rise only in 1979 (1980 for the regulated sector) and were still increasing through 1981.

Next I conducted some econometric analysis to determine more precisely whether there were observable differences in price-setting behaviour between the three sectors: tradeables, non-tradeables and regulated. Annual input-output data from Statistics Canada for the 1961-79 period were used to construct time series on normalized unit costs[21] and gross output price deflators. A special effort was made to construct capacity utilization rates as a more reliable measure of excess demand.[22] Industry detail was available for 191 different industries and the definition of the above sectors was made at this level of disaggregation. Tradeable goods industries included those with average export orientation and/or import penetration rates above 25%,[23] while regulated industries included most of those listed in Table 1. Non-regulated industries producing non-tradeable commodities included most other private sector industries.[24] Direct aggregation was used to construct time series for each of the three major sectors.

The form of the pricing equation was as follows:

$$\%\Delta P = a + b*\%\Delta NUC + c* \, J1L(\%\Delta NUC) \qquad (1)$$
$$+ \, d*(CAPU-CAPUAV) + e*J1L(CAPU-CAPUAV),$$

where P = the gross output price level,
 NUC = normalized unit costs,
 CAPU = the capacity utilization rate, and
 CAPUAV = the average capacity utilization rate over the sample period.

Time-series regressions were estimated for each of the three major sectors, and the results are listed in Table 5. Caution should be exercised in interpreting these results, given the paucity of observations. Price inflation in the regulated sector apparently reacts with a longer lag to changes in normalized unit costs, relative to the non-regulated sectors. The responsiveness of price inflation in the

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20. The rate of inflation for non-energy regulated prices is about the same in both 1974 and 1975.

21. Costs included labour income, as well as the cost of energy and raw material inputs. Normal output was defined as a three-year moving average of gross output. Normalized unit costs were defined as the ratio of costs to normal output.

22. For more details on data sources, see Appendix 1.

23. Nominal data on exports, imports and gross output were used to construct the export orientation and import penetration rates.

24. A detailed listing of the industries in each sector is given in Appendix 2.

non-tradeable commodities sector to changes in normalized unit costs is slightly faster than in the tradeable goods sector. The coefficient of the proxy of excess demand is small and statistically insignificant in the current year for each sector but much larger (and correctly signed) in the next year.[25] The lack of apparent difference among the three sectors in the responsiveness of prices to the excess-demand proxy was surprising. In the tradeable goods sector, prices may be influenced by the comparable exchange-rate-adjusted foreign price; it might be appropriate in future research to include a measure of the appropriate foreign price in the price equation for tradeable goods.

Next, cross-sectional pricing equations of the following form were estimated:

$$\%\Delta P = a + b* \ \%\Delta NUC + c*(CAPU-CAPUAV). \qquad (2)$$

Annual equations for each sector for each year over the 1964-79 period were estimated, with the results shown in Table 6. The responsiveness of price inflation to changes in costs seemed on average to be smallest in the tradeable goods sector and largest in the regulated sector. It was difficult to observe a consistent cyclical pattern in the relationship between prices and costs, although prices tended to be extremely responsive to costs during the commodity price boom of 1973-74, especially in the non-regulated sectors. The coefficient of the excess-demand proxy variable was generally statistically insignificant and perverse in all three sectors. The constant term was usually statistically significant, which might suggest misspecification. The lack of a foreign-price variable in the tradeable goods sector might be a serious problem, to the extent that these industries are (foreign) price takers.

I also examined the problem from the point of view of the cyclical responsiveness of profit margins. The proxy for profit margins was defined as the ratio of net income of unincorporated business and other operating surplus to nominal gross output, employing annual input-output data. The form of the profit-margin equation was as follows:

$$PRM = a + b*T + c*(CAPU-CAPUAV) + d*J1L(CAPU-CAPUAV), \qquad (3)$$

where PRM = the profit-margin proxy, and
    T = a time trend.

I would expect the coefficient c to be larger for the tradeable goods sector, presuming that the market structure of industries in this sector would be more competitive than in the other sectors. I might also expect that the effect of changes in the excess-demand proxy on profit margins

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25. I would like to acknowledge a comment by David Longworth that led to a correction in the formulation of the various pricing and profit-margin equations for econometric estimation in this paper.

might operate with a longer lag in the case of the non-tradeables and regulated sectors.

The time-series estimation results are shown in Table 7. My hypothesis about the size of coefficient c is indeed confirmed but not the second hypothesis. We already know that the cyclical fluctuations in the capacity utilization rate are larger in the tradeable goods sector -- it also seems to be true that profit margins are more sensitive to operating rates in this sector. However, the speed of response of profit margins in the tradeable goods sector to the excess-demand proxy does not appear to be faster than in the non-tradeables sector.

Cross-sectional regressions were also estimated for each sector for each year over the 1962-79 period -- these regressions took the following form:

$$PRM = a + b*(CAPU-CAPUAV) + c*J1L(PRM). \qquad (4)$$

The lagged dependent variable was used as a crude proxy for the non-cyclical influences that might influence the structure of profit margins in each sector. The estimation results are shown in Table 8. On average the size of coefficient b was about the same in the tradeable goods and non-tradeables sectors, which was not consistent with the results of the time-series regressions discussed above. In both cases, profit margins appeared to be more responsive to the excess-demand proxy during recessions. In the case of the regulated sector, coefficient b was almost always statistically insignificant and often took a negative value during expansions. Although the statistical significance of this latter finding is doubtful, it would suggest that regulated industries operating at relatively high rates of capacity utilization in periods of general economic expansion tended (or were required) to reduce profit margins, perhaps to partly offset the effect of cost increases on their prices and hence their markets. Institutional lags between cost increases and rate increases imposed by the nature of the regulatory system may have been another factor.

4   Import Competition

Another important source of influence on the short-run and long-run pricing behaviour of domestic firms may arise from the degree of import penetration in the domestic market. If trade barriers, whether natural (e.g., transportation costs) or government-imposed (e.g., tariffs or quotas), are not high, then domestic prices may be more flexible in oligopolistic or monopolistic markets than would have otherwise been the case. Shepherd (1982) found that increasing import competition was responsible for about 20% of the rise in competition in the United States between 1958 and 1980. Higher import penetration was a significant factor in industries such as steel, automobiles, aircraft, tires and tubes,

shipbuilding, television tubes and sets, and artificial fibres.

In analyzing the role played by changes in import competition in Canada, one can begin by examining trends in trade orientation. The Canadian manufacturing sector has shown a tendency towards both rising import penetration and export orientation between 1966 and 1982 (Table 9), presumably as part of the trend of increasing specialization in the world manufacturing sector. Many of the industries listed above for the United States have also experienced increasing import penetration in Canada: man-made fibres, automobiles (major component of motor vehicle manufacturing), and household radios and televisions. Other industries that have experienced very large increases in import penetration would include leather, knitting mills and small electrical products. It is interesting to observe that many of the industries subject to rising import penetration have also experienced rising export orientation levels (rubber products, man-made fibres, aircraft and parts, motor vehicle manufacturing and parts, major appliances, household radios and televisions and communications equipment), which would support the increased-specialization hypothesis.

I now want to briefly treat the role played by government-imposed barriers to international trade. Before the Tokyo Round of trade negotiations, Canada had one of the highest average tariff rates on industrial imports among selected industrial countries.[26] This certainly could have been a factor impairing Canada's relative degree of price flexibility.[27] Tariff rates have been especially high in those industries where Canada is conventionally thought to be at a comparative disadvantage: leather, knitting mills and clothing. It has, however, been the case that nominal and effective tariffs declined between 1966 and 1978 in the manufacturing sector and in most individual manufacturing industries; at the same time the share of manufactured imports not subject to tariffs increased between 1970 and 1979. This could be another explanation for the rise in import penetration in the manufacturing sector. At the same time, the impact of rising import penetration on price flexibility may have been limited by the imposition of quotas in some instances: leather, clothing and automobiles.[28]

I have examined the cyclical variability of prices and output in seven selected industries that experienced at least some increase in

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26. Economic Council of Canada (1983) has been heavily used in the discussion in this paragraph.

27. Canada is scheduled to have one of the largest per cent reductions in average tariff rates among industrial countries after implementation of the Tokyo Round Agreements.

28. Increases in import penetration and export orientation related to increased specialization by multinationals (e.g., Auto Pact) may have less significant effects on price flexibility.

import penetration over the 1966-82 period.[29] In Table 10, I have shown
the annual percentage changes in prices and output in the last year of an
expansion and in the subsequent recession (or "growth recession") year
during the 1966-82 period. If prices were highly flexible, then one might
expect a sharp deceleration in the rate of increase of prices in response
to a slowing of output growth. I was hoping to see whether there had been
any observable increase in price flexibility in response to higher import
penetration.[30]

Four Canadian industries experienced substantial rises in import
penetration over the 1966-82 period: leather, man-made fibres, small
electrical appliances, and household radios and televisions. The selling
price of leather was fairly volatile and appeared correlated with output
fluctuations, (Chart 7), although I speculate that a large part of the
price fluctuation was the result of movements in the costs of raw material
inputs. The relatively small deceleration in the inflation rate during
1982 in spite of a very large decline in output is especially telling.
Raw material input costs may also play an important role in the
determination of the prices of man-made fibres, while the impact of
changes in demand appears comparatively modest and only with a long lag
(Chart 8).[31] Movements in the selling prices of household radios and
televisions would appear to be a classic illustration of normalized unit-
cost pricing (Chart 9), with very little discernible response to changes
in output.[32] Increased foreign competition in the North American auto
market only became significant in 1979-80, but again prices were slow to
respond to the reduction in total demand and in market share (Chart
10).[33] Although the above discussion is rather descriptive, the clear
implication is that rising import competition did not appear to
significantly influence cyclical price variability in a small group of

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29. Industry-selling-price indices were used for leather, motor vehicle
manufacturing, clothing, and household radios and televisions. Data on
gross output prices (associated with the GDP data) were employed for
man-made fibres, rubber products and small electrical appliances. Value-
added real output (GDP statistics) was used to measure production.

30. It has been suggested to me that the impact of import penetration on
price flexibility might depend on the price-setting behaviour of those
firms accounting for the increase in penetration. If these firms already
enjoy market power in their home and other markets, then their
price-setting behaviour in the Canadian market might be less flexible. As
well, consumer prices for import-competing goods might be more cyclically
sensitive, depending on the behaviour of trade margins.

31. Similar comments appear to be appropriate for the U.S. textile
industry.

32. Similar comments appear appropriate for small electrical products.
The variability of producer prices for televisions in the United States
increased during the 1970s, as did output variability. It will be
recalled that import penetration has increased since the 1960s.

33. I would also regard the cyclical variability of prices of rubber
products and of clothing as comparatively small.

manufacturing industries. Admittedly one factor in this development was the imposition of import quotas in industries where import competition was very strong.

Appendix 1
Data Sources

The basic set of data were derived from a set of input-output matrices supplied by Statistics Canada. These annual data covered the 1961-79 period and were disaggregated into 191 industries. The matrices included industry-by-industry use and industry-by-final-demand tables. More information on Statistics Canada's annual input-output tables can be found in Statistics Canada, The Input-Output Structure of the Canadian Economy (15-201) and The Input-Output Structure of the Canadian Economy in Constant Prices (15-202).

The gross output price deflator was used as the price variable. Costs (measured in current dollars) included labour income, as well as raw material and energy costs. The latter two types of costs included purchases of inputs from all primary industries, as well as from the following industries: paper and allied products, wood products, primary metals, non-metallic mineral products, chemicals, petroleum and coal products, electric power, gas distribution and pipelines. Normal output was a three-year moving average of gross output (measured in 1971 dollars). Normalized unit costs were defined as the ratio of costs to normal output.

Data on export orientation and import penetration were also taken from the above input-output database. Export orientation was defined as the ratio of exports (including re-exports) to gross output. Import penetration was defined as the ratio of imports to domestic sales, where domestic sales was the sum of gross output (excluding exports) and imports. In both cases, both the numerator and denominator were measured in 1971 dollars.

Measures of capacity utilization rates were constructed at the Bank of Canada, using a variety of methods. For some industries, net output series were constructed from the input-output database (defined as the difference between gross output and purchases of inputs from other industries). For other industries, net output data were taken from the gross domestic product database supplied by Statistics Canada. These data are described in Statistics Canada, Gross Domestic Product by Industry (61-213) and Real Domestic Product by Industry, 1961-1971 1961=100 (61-516); in some cases, unpublished data were used. Data on mid-year net capital stocks were also employed, using Statistics Canada, Fixed Capital Flows and Stocks (13-211) and unpublished data supplied by Statistics Canada. For industries where capital-stock data were available, ratios of the capital stock to net output were used to construct capacity utilization rates, using the methods described in Schaefer (1980). In other industries, net output data were used to calculate capacity utilization rates, again using methods described in Schaefer (1980).

Appendix 2

Classification of Private Sector Industries by Tradeability and Regulation

Tradeable	Non-tradeable	Regulated
Agriculture	Forestry	Fishing, Hunting and Trapping
Uranium Mines	Salt Mines	Dairy Factories
Iron Mines	Quarries & Sand Pits	Air Transport
Base Metals & Other Metal Mines	Services Incidental to Mining	Services Incidental to Transport
Coal Mines	Slaughtering & Meat Processors	Water Transport
Gypsum Mines	Poultry Processors	Railway Transport
Other Non-Metal Mines	Fruit & Vegetable Processing	Truck Transport
Fish Products Industry	Feed Mfgrs.	Interurban & Rural Bus Transport
Vegetable Oil Mines	Flour & Breakfast Cereal Ind.	Urban Transit System
Distilleries	Biscuit Mfgrs.	Taxicab Operations
Wineries	Bakeries	Pipeline Transport
Leaf Tobacco	Confectionary Mfgrs.	Radio & Television Broadcasting
Rubber Footwear	Sugar Refineries	Other Communication Industries
Other Rubber Industries	Misc. Food Industries	Post Office
Other Plastic Fabricators	Soft Drink Mfgrs.	Electric Power
Leather Tanneries	Breweries	Gas Distribution
Leather Glove Facteries	Tobacco Product Mfgrs.	Banks & Credit Unions
Small Leather Goods	Tire & Tube Mfgrs.	Insurance
Cotton Yarn & Cloth Mills	Shoe Factories	Other Finance Ins. & Real Estate
Wool Yarn & Cloth Mills	Thread Mills	Prof. Services to Bus.
Synthetic Textile Mills	Pressed & Punched Felt Mills	
Fibre Preparing Mills	Carpet, Mat & Rug Industry	
Cordage & Twine Industry	Textile Dying & Finishing	
Narrow Fabric Mills	Canvas Products Industry	
Misc. Textile Industries	Cotton & Jute Bag Industry	
Sawmills	Hosiery Mills	
Misc. Wood Industries	Other Knitting Mills	
Pulp & Paper Industry	Clothing Industries	
Steel Pipe & Tube Mills	Veneer & Plywood Mills	
Iron Foundries	Sash & Door Planing Mills	
Aluminum Smelting & Refining	Wooden Box Factories	
Other Smelting & Refining	Coffin & Casket Ind.	
Aluminum Rolling & Extruding	Household Furniture Ind.	
Metal Casting & Extruding	Office Furniture Ind.	
Hardware Tool & Cutlery	Other Furniture Ind.	

Tradeable	Non-tradeable	Regulated
Machine Shops	Electric Lamp & Shade Ind.	
Misc. Metal Fabricating Ind.	Asphalt & Related Products	
Agricultural Implement Ind.	Paper Box & Bag Mfgrs.	
Misc. Machinery & Equip. Mfgrs.	Other Paper Converters	
Comm. Refrig. & Air Cond. Mfgrs.	Printing & Publishing	
Office & Store Machinery Mfgrs.	Engraving, Stereotyping Ind.	
Aircraft & Parts Mfgrs.	Iron & Steel Ind.	
Motor Vehicle Mfgrs.	Copper & Alloy Rolling	
Motor Veh. Parts & Access Mfgrs.	Boiler & Plate Works	
Misc. Transp. Equip. Ind.	Fabricated Struct. Metal Ind.	
Small Electrical Appliances	Ornamental & Arch. Metal Ind.	
Major Appliances Electrical & Non	Metal Stamp Press & Coal Ind.	
Radio & Television Receivers	Wire & Wire Products Mfgrs.	
Communications Equip. Mfgrs.	Heating Equipment Mfgrs.	
Mfgrs. of Elect. Ind. Equip.	Truck Body & Trailer Mfgrs.	
Mfgrs. of Misc. Elect. Products	Railroad Rolling Stock Ind.	
Clay Products Mfgrs.	Shipbuilding & Repair	
Refractories Mfgrs.	Battery Mfgrs.	
Glass & Glass Products Mfgrs.	Mfgrs. of Electic Wire & Cable	
Abrasives Mfgrs.	Cement Mfgrs.	
	Lime Mfgrs.	
Other Petrol. & Coal Products	Concrete Product Mfgrs.	
Mfgrs. of Mixed Fertilizers	Ready-Mix Concrete Mfgrs.	
Mfgrs. of Plast. & Synthetic Products	Stone Product Mfgrs.	
Mfgrs. of Ind. Chemicals	Other Non-Metallic Products	
Other Chemical Industries	Petroleum Refineries	
Scientific & Prof. Equip. Mfgrs.	Mfgrs. of Pharm. & Medecines	
Jewellery & Silverware Mfgrs.	Paint & Varnish Mfgrs.	
Sporting Goods & Toy Industry	Mfgrs. of Soap & Cleaning Comp.	
Linoleum & Coated Fabrics	Mfgrs. of Toilet Preparations	
Other Misc. Manufacturing Ind.	Broom Brush & Mop Ind.	
	Signs & Displays Ind.	
	Repair Construction	
	Residential Construction	
	Non-Residential Construction	
	Road Highway Airstrip Const.	
	Gas & Oil Facility Const.	
	Dams & Irrigation Projects	
	Railway Telephone Telegraph Con.	

Tradeable	Non-tradeable	Regulated
	Other Engineering Const.	
	Construction-Other Activities	
	Storage	
	Wholesale Trade	
	Retail Trade	
	Motion Picture Theatres	
	Other Recreational Services	
	Advertising Services	
	Laundries & Cleaners	
	Accommodation & Food Services	
	Other Personal Services	
	Photography	
	Misc. Repair & Maintenance	
	Misc. Services to Bus. & Pers.	

Table 1

Structure of Canadian Economy Classified by Private-Public, Tradeable-Non-tradeable and Regulated-Non-regulated Activity in 1982

	Private Sector			Public Sector
	Non-Regulated		Regulated	
	Tradeable Goods	Non-tradeable Goods and Services		
Agriculture	Other Agriculture		Dairy products, poultry, eggs.	
Forestry		Forestry		
Fishing and Trapping			Fishing and Trapping	
Mining	Other Mining		Oil and Gas Mining	
Manufacturing	Rubber and Plastics Leather Textiles Knitting Mills Paper and Allied Chemicals Miscellaneous Wood Primary Metals Machinery Transportation Equipment Electrical Products	Other Food and Beverages Tobacco[1] Clothing[2] Printing and Publishing Oil and Coal Products[3] Furniture Metal Fabricating Non-Metallic Mineral Products	Dairy processing	
Construction		Construction		
Transportation		Trucking (unregulated), Miscellaneous Transportation Services	Air, water, rail, trucking (regulated), bus, urban transit, taxicabs, pipelines.	Highway and bridge maintenance.
Storage		Other Storage	Grain elevators	
Communications			Communications	
Utilities			Utilities	

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	Private Sector			Public Sector
	Non-Regulated		Regulated	
	Tradeable Goods	Non-tradeable Goods and Services		
Trade		Trade		
Finance, Insurance and Real Estate		Security brokers and dealers, Real estate operators (rent not controlled), Royalties, Imputed rents on owner-occupied dwellings.	Deposit accepting establishments, Other credit agencies, Insurance carriers, Insurance and real estate agencies, Real estate operators (rent-controlled).	
Community, Business and Personal Services		Amusement and recreation services, Advertising services, Engineering and scientific services, Other business services, Other personal services, Accommodation and food services, Miscellaneous services.	Other Health Services, Accountants, Architects, Lawyers, Barber and beauty shops.	Education and related services Hospitals Welfare organizations Religious organizations
Public Administration and Defence.				Public administration and defence.

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1. While the industry is not regulated directly, the retail price of tobacco products includes a heavy degree of indirect tax.

2. The low rate of import penetration in the clothing industry is partly the result of tariff and other trade barriers.

3. While the industry is not regulated directly, many of its input costs (as well as indirect taxes) are controlled by various levels of government.

Table 2

Classification of Regulated Sector by Type of Regulation

Output Regulation - Dairy products, poultry, eggs.

Regulation of entry - Fishing and trapping, rail transport, trucking
    (excluding local shipping and Alberta), radio and television
    broadcasting, deposit-accepting and other credit-accepting
    industries, insurance carriers and real estate agencies, accountants,
    architects, lawyers, barber and beauty shops.

Regulation of price - Oil and gas mining, residential rental accommodation
    (in most provinces and with exemptions for newly-constructed
    apartments in many cases).

Regulation of price and entry - Dairy and poultry processing, bus and
    urban transit, water transport, air transport, pipelines, taxis,
    grain elevators, telephones and telegraphs, post office, utilities,
    other health services.

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1.   The fishing industry is also partly subject to some degree
of regulation of output.

Table 3

Output Changes (%) During Recessions (and Growth Slowdowns) and Initial
Recovery Years

| | Total GDP | Regulated | Non-regulated | | Public |
			Tradeable	Non-tradeable	
1967	3.5	5.8	0.1	2.6	7.7
1968	5.6	5.7	7.9	4.6	5.3
1970	2.4	5.2	0.1	1.4	4.5
1971	5.9	5.1	6.0	5.9	7.0
1975	0.9	2.6	-5.7	2.2	3.7
1976	5.1	5.4	6.0	5.9	1.9
1980	1.2	3.5	-1.9	1.5	0.9
1981	2.9	4.3	1.5	3.2	1.7
1982	-4.6	-0.8	-11.0	-6.2	2.2

Table 4

Changes in Gross Output Prices (%) for Selected Periods

	Total	Regulated	Non-Regulated		Public
			Tradeable	Non-tradeable	
1974	16.8	11.9	20.7	15.7	16.3
1975	11.4	13.2	8.6	11.9	15.3
1976	7.9	11.6	3.9	8.9	14.5
1979	10.8	8.1	13.7	9.9	9.5
1980	11.2	10.1	11.2	11.1	11.7
1981	11.3	12.6	9.9	12.0	12.6

Table 5

Time-Series Regressions of Price Inflation

	Tradeable	Non-tradeable	Regulated
Constant	.033 (0.0)	.276 (0.7)	1.09 (2.4)
NUC	.604 (4.3)	.710(12.6)	.233 (2.0)
J1L(NUC)	.474 (3.3)	.197 (3.5)	.509 (4.2)
CAPU-CAPUAV	.058 (0.3)	.069 (0.5)	-.038(-0.2)
J1L(CAPU-CAPUAV)	.334 (2.0)	.354 (2.5)	.295 (1.8)
$\bar{R}^2$	.812	.969	.933
D.W. statistic	1.19	2.16	2.12

Sample period: 1965-79 (annual)
Ordinary least squares.

Table 6

Cross-Sectional Price Inflation Regressions in Private Sector (t-statistic in brackets)

	Tradeable				Non-tradeable				Regulated			
	Constant	Normalized unit costs	Excess demand proxy	$\overline{R}^2$	Constant	Normalized unit costs	Excess demand proxy	$\overline{R}^2$	Constant	Normalized unit costs	Excess demand proxy	$\overline{R}^2$
1964	.306 (0.5)	.308 (4.0)	-.121(-2.3)	.243	1.147 (3.8)	.188 (3.5)	-.033(-0.9)	.116	.962 (1.3)	.265 (1.6)	-.023(-0.2)	.081
1965	3.168 (4.3)	-.095(-1.0)	-.131(-2.0)	.061	1.497 (2.9)	.375 (5.0)	-.109(-1.8)	.220	2.406 (2.4)	.128 (0.8)	.076 (0.6)	-.074
1966	3.085 (4.2)	.110 (1.5)	-.061(-1.0)	.037	1.993 (3.1)	.474 (5.8)	-.050(-0.8)	.289	2.235 (1.8)	-.017(-0.1)	-.082(-0.8)	-.081
1967	2.296 (4.4)	.170 (3.0)	-.063(-1.4)	.156	2.980 (6.4)	.090 (1.5)	-.030(-0.5)	.008	1.720 (1.3)	.556 (2.6)	.030 (0.2)	.208
1968	.979 (0.7)	.141 (1.6)	-.033(-0.5)	.011	2.076 (5.8)	.101 (1.6)	-.032(-0.8)	.013	2.954 (4.1)	.291 (2.1)	.140 (1.2)	.177
1969	3.158 (5.5)	.025 (0.5)	-.147(-3.3)	.120	3.159 (6.3)	.139 (2.5)	-.099(-2.1)	.084	4.314 (2.1)	.102 (0.4)	-.318(-0.8)	-.046
1970	2.710 (4.4)	.047 (1.5)	-.073(-1.4)	.036	2.739 (7.9)	.159 (3.3)	-.038(-1.2)	.096	3.144 (2.5)	.213 (0.9)	-.097(-0.7)	-.014
1971	1.704 (2.3)	.168 (2.7)	-.046(-0.6)	.083	2.939 (7.1)	.060 (1.6)	.030 (0.7)	.017	4.326 (4.5)	.030 (0.2)	-.197(-2.1)	.166
1972	4.005 (3.5)	.092 (0.9)	-.090(-1.3)	.008	2.793 (5.4)	.253 (4.8)	-.066(-1.7)	.213	5.417 (4.3)	-.093(-1.0)	-.385(-2.3)	.154
1973	5.874 (3.9)	.325 (3.5)	.045 (0.4)	.144	4.755 (5.1)	.504 (7.9)	-.029(-0.4)	.441	1.796 (0.8)	.417 (2.7)	-.505(-2.2)	.233
1974	6.880 (3.0)	.731 (7.1)	-.114(-1.0)	.432	6.601 (3.3)	.715 (7.4)	-.251(-2.0)	.378	5.894 (2.0)	.203 (1.2)	.017 (0.1)	-.024
1975	10.312 (6.2)	.459 (4.1)	.043 (0.4)	.205	9.088(11.5)	.289 (4.9)	-.059(-1.0)	.204	8.865 (3.2)	.218 (1.3)	.083 (0.6)	.016
1976	3.862 (3.7)	.156 (2.8)	-.106(-1.7)	.109	5.013 (5.0)	.159 (2.1)	.203 (2.2)	.074	8.956 (5.7)	.157 (1.6)	.014 (0.1)	.032
1977	5.922 (6.2)	.248 (4.1)	.062 (1.2)	.197	5.709 (9.5)	.073 (1.2)	-.173(-3.0)	.087	5.603 (2.2)	.490 (2.1)	-.418(-2.0)	.244
1978	7.845 (8.7)	.118 (2.1)	-.022(-0.5)	.035	6.068(10.3)	.193 (3.4)	-.113(-2.4)	.173	3.605 (1.8)	.750 (3.0)	.065 (0.3)	.331
1979	12.942 (7.1)	.169 (1.7)	-.277(-4.1)	.280	9.402(10.2)	.179 (3.4)	-.049(-1.0)	.118	1.769 (0.5)	.791 (2.2)	-.272 (-2.0)	.209
Average coefficient	4.691	.198	-.071		4.247	.247	-.056		4.058	.281	-.117	

Number of observations (unweighted)   65   88   20

Ordinary least squares

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Table 7

Time-Series Regressions for Profit Margins (t-statistic in brackets)

	Tradeable	Non-tradeable	Regulated
Constant	.237(30.6)	.164 (95.1)	.346 (81.0)
Time trend	-.003(-4.3)	-.0005(-3.2)	-.004(-10.2)
CAPU-CAPUAV	.003 (3.0)	.0009 (2.1)	.001 (0.9)
J1L(CAPU-CAPUAV)	.0006(0.7)	-.0003(-0.7)	-.001 (-1.2)
$\bar{R}^2$	.630	.396	.884
D.W. statistic	0.73	1.19	0.97

Sample period: 1962-79 (annual)
Ordinary least squares.

Table 8

Profit Margin Regressions in Private Sector (t-statistic in brackets)

	Tradeable				Non-tradeable				Regulated			
	Constant	Excess demand proxy	Lagged profit margin	$\overline{R}^2$	Constant	Excess demand proxy	Lagged profit margin	$\overline{R}^2$	Constant	Excess demand proxy	Lagged profit margin	$\overline{R}^2$
1962	.025 (3.7)	.0003 (1.0)	.961(26.4)	.917	.018 (3.6)	-.0000(-0.0)	.927(31.8)	.921	.001 (0.1)	-.0009(-1.9)	.995(37.0)	.987
1963	.015 (2.0)	.0001 (0.3)	.951(25.4)	.913	.002 (0.4)	.0008 (2.4)	.973(31.8)	.923	-.020 (-1.7)	-.0009(-1.1)	1.044(31.3)	.982
1964	-.001(-0.2)	.0005 (1.6)	.989(31.5)	.942	.021 (4.7)	.0002 (0.6)	.906(36.0)	.937	.024 (2.6)	.0004 (0.5)	.965(37.3)	.987
1965	.012 (1.5)	.0000 (0.0)	.942(25.1)	.908	.009 (2.1)	.0002 (0.5)	.960(39.3)	.948	.006 (0.5)	-.0001(-0.1)	.992(31.9)	.984
1966	.001 (0.2)	.0011 (3.0)	.921(29.2)	.931	-.001(-0.1)	.0004 (1.3)	.952(31.5)	.921	.003 (0.3)	-.0004(-0.8)	.985(44.8)	.992
1967	-.001(-0.1)	.0009 (2.7)	.913(27.3)	.921	.005 (1.0)	.0007 (2.3)	.924(30.8)	.920	-.003 (-0.3)	-.0008(-1.4)	.976(38.4)	.990
1968	.019 (2.4)	.0010 (2.2)	.900(21.2)	.876	.004 (1.1)	.0007 (2.8)	.983(42.7)	.955	-.008 (-0.8)	-.0006(-0.6)	1.016(35.5)	.987
1969	.023 (2.2)	-.0007(-1.4)	.877(14.7)	.771	.015 (2.6)	.0006 (1.7)	.924(27.6)	.898	.011 (0.9)	-.0022(-1.4)	.948(29.6)	.979
1970	.005 (0.6)	.0011 (2.3)	.896(17.5)	.833	-.002(-0.5)	.0010 (4.0)	.988(35.7)	.937	-.008 (-1.2)	.0012 (1.9)	1.018(53.2)	.993
1971	.026 (2.9)	.0009 (1.7)	.866(16.4)	.814	.023 (4.6)	.0009 (3.0)	.925(31.7)	.921	-.001 (-0.0)	.0006 (0.9)	.994(40.8)	.989
1972	.008 (0.9)	.0006 (1.4)	.936(19.1)	.851	.003 (0.8)	.0003 (1.5)	.976(41.5)	.952	-.001 (-0.0)	.0017 (1.6)	.976(24.7)	.974
1973	-.006(-0.7)	.0007 (1.4)	1.066(20.6)	.879	.009 (1.9)	.0007 (2.8)	.956(35.6)	.936	-.049 (-3.0)	-.0023(-1.9)	1.120(21.9)	.967
1974	.003 (0.4)	.0009 (2.1)	.978(26.0)	.914	-.004(-0.6)	.0007 (2.0)	.968(24.8)	.883	-.081 (-4.0)	.0021 (1.2)	1.148(18.9)	.955
1975	.016 (1.8)	.0017 (3.4)	.872(21.3)	.879	.019 (3.8)	.0011 (4.3)	.877(30.8)	.924	-.048 (-2.3)	-.0001(-0.1)	1.144(18.9)	.951
1976	.007 (1.0)	.0007 (1.9)	.878(24.8)	.906	-.002(-0.3)	.0006 (1.8)	1.008(33.9)	.935	.009 (0.8)	-.0012(-0.8)	.960(33.8)	.984
1977	.033 (4.2)	.0015 (4.1)	.814(18.1)	.848	.009 (1.8)	.0009 (2.7)	.952(31.3)	.919	-.0037(-0.3)	.0009 (0.6)	1.004(30.7)	.981
1978	.013 (1.5)	-.0001(-0.3)	1.007(18.6)	.844	.005 (0.9)	.0004 (1.2)	.985(31.9)	.922	.010 (0.9)	-.0005(-0.4)	.984(33.4)	.984
1979	.012 (1.4)	.0005 (1.6)	.961(18.8)	.846	.006 (1.2)	.0005 (2.3)	.940(33.6)	.928	-.003 (-0.3)	-.0003(-0.3)	.986(30.4)	.983
Average coefficient	.012	.0007	.929		.008	.0006	.951		-.011	-.0002	1.014	

Number of observations (unweighted)   65   88   20

Ordinary least squares

Table 9

Changes in Trade Orientation for Selected Manufacturing Industries

Import Penetration (imports to total domestic sales - %)

	1966	1979	1982
Manufacturing	21.0	32.6	29.8
Rubber	13.4	29.9	27.1
Leather	14.4	33.4	36.1
Man-Made Fibres	22.7	40.8	40.1
Knitting Mills	11.3	30.5	28.8
Clothing	5.1	12.2	15.0
Aircraft & Parts	40.5	73.7	53.2
Motor Veh. Mfg.	23.7	63.1	86.7
Motor Veh. Parts	70.7	100.4	100.1
Small Elect. App.	30.0	54.9	55.5
Major Appliances	13.5	25.6	23.8
Household Radios & TVs	22.9	78.0	69.9
Comm. Equipment	33.1	53.0	49.5

Export Orientation (exports to total shipments - %)

	1966	1979	1982
Manufacturing	18.8	30.3	31.4
Rubber	3.0	16.6	28.0
Man-Made Fibres	6.3	12.1	17.4
Aircraft & Parts	47.7	69.6	63.0
Motor Veh. Mfg.	27.4	66.4	93.8
Motor Veh. Parts	48.7	100.8	100.3
Major Appliances	6.1	18.7	22.2
Household Radios & TVs	11.3	40.5	26.9
Comm. Equipment	16.4	36.1	42.6

Source: Department of Industry, Trade and Commerce and Regional Expansion, Manufacturing Trade and Measures 1966-1982, 1983.

Table 10

Changes in Prices and Output for Selected Manufacturing Industries for Selected Years (%)

	Leather		Man-made fibres		Small electrical appliances		Household radios and televisions		Motor vehicles Manufacturing		Rubber Products		Clothing	
	Price	Output	Price	Output	Price	Output	Price	Output	Price	Output	Price	Output	Price	Output
1966	9.6	1.0	-1.6	4.3	-0.6	18.7	-1.0	7.3	-0.8	5.5	2.2	10.8	2.8	3.0
1967	0.0	-2.8	-2.8	7.3	0.6	4.3	0.9	-0.5	0.0	32.8	-0.1	6.9	3.0	-1.7
1969	5.0	0.0	-3.7	19.7	0.6	7.9	0.5	4.4	0.7	12.7	3.1	6.1	4.4	-0.1
1970	2.2	-5.8	-2.8	-6.2	1.8	-10.5	-3.2	-14.0	1.3	-12.6	1.5	-1.1	3.5	6.1
1974	10.7	1.9	18.0	-7.7	9.6	17.1	4.5	0.0	7.2	12.2	14.6	-2.8	15.8	-0.2
1975	6.0	-0.8	4.1	-2.0	11.6	-16.2	3.9	-22.4	7.8	9.2	12.5	-8.8	10.3	2.8
1979	25.0	3.3	14.4	12.8	3.3	6.0	3.4	10.8	12.2	1.6	12.8	10.6	9.7	5.8
1980	2.5	-5.9	13.9	-6.5	6.7	-6.3	2.2	-3.3	11.9	-24.1	17.4	-15.2	11.6	-7.5
1981	6.8	5.0	10.8	5.0	8.8	2.0	5.1	-8.1	12.2	-3.4	13.1	4.8	8.8	0.0
1982	3.8	-15.4	N/A	N/A	N/A	N/A	0.1	-29.7	4.3	-6.2	N/A	N/A	7.3	-14.1

CHART 1

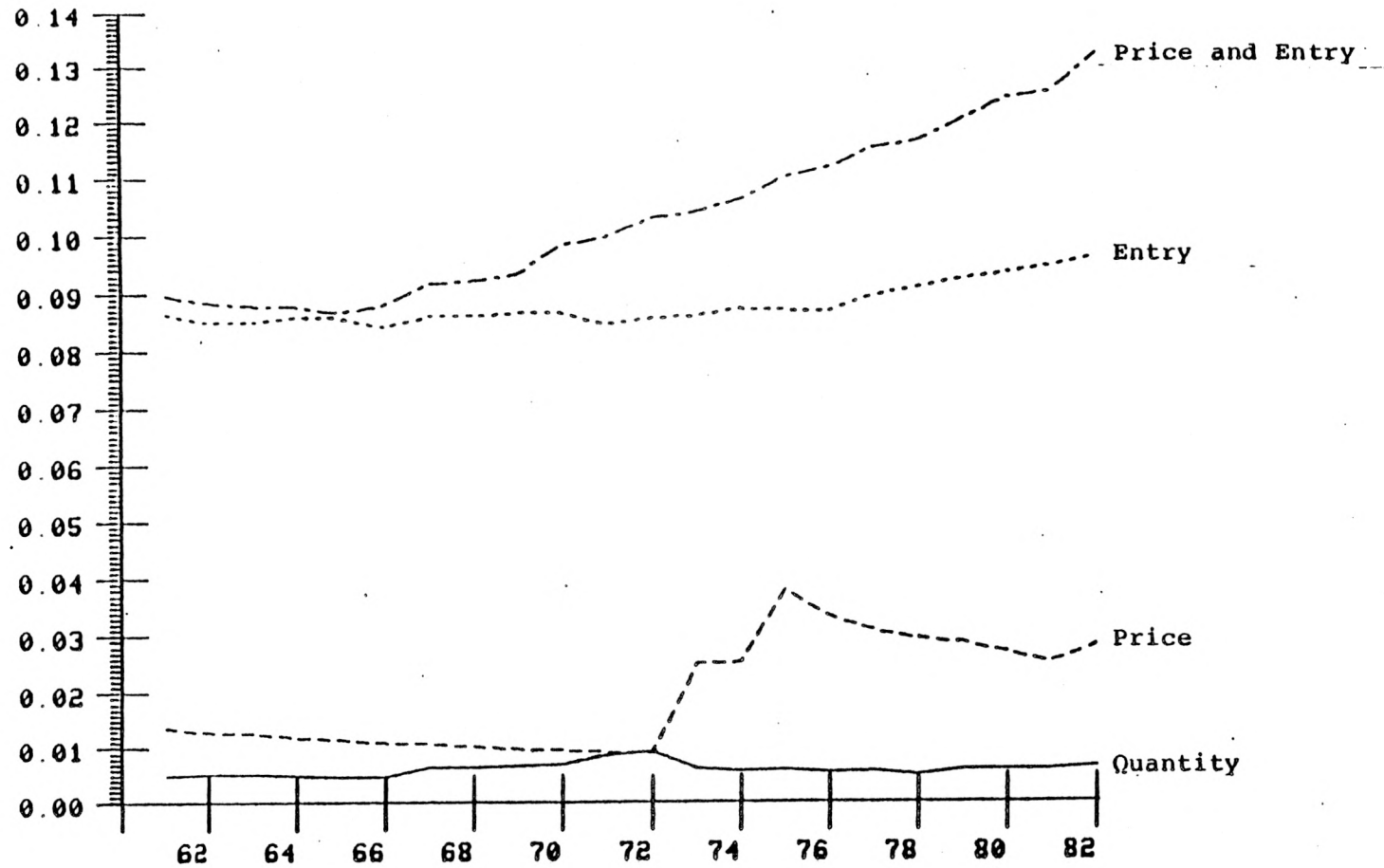STRUCTURE OF CANADIAN ECONOMY (% OF TOTAL GDP)
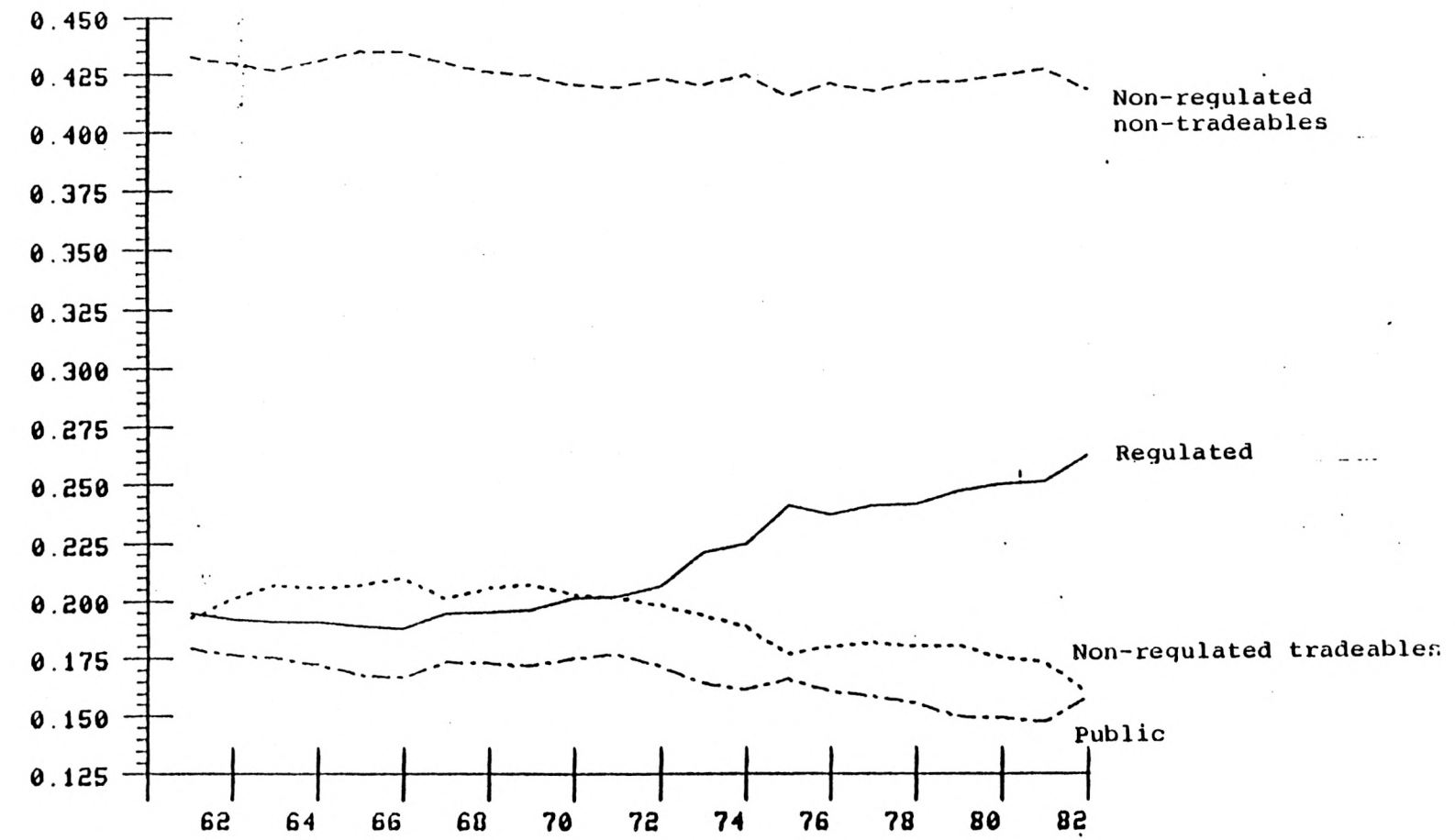
SHECR .... SHPRNT ------ SHPRNA -----SHPUBS

SHECR - Regulated sector   SHPRNA - Non-regulated sector non-tradeables
SHPRNT - Non-regulated sector tradeables   SHPUBS - Public sector

CHART 2

REGULATED SECTOR BY TYPE OF REGULATION (% SHARE OF TOTAL GDP)

0.14
0.13 — Price and Entry
0.12
0.11
0.10 — Entry
0.09
0.08
0.07
0.06
0.05
0.04
0.03 — Price
0.02
0.01 — Quantity
0.00

62 64 66 68 70 72 74 76 78 80 82

61- 82

———— SHQCT .... SHECT ————— SHPCT —.—.— SHPECT

SHQCT – Quantity Controls   SHPCT – Price Controls
SHECT – Entry Controls   SHPECT – Price and Entry Controls

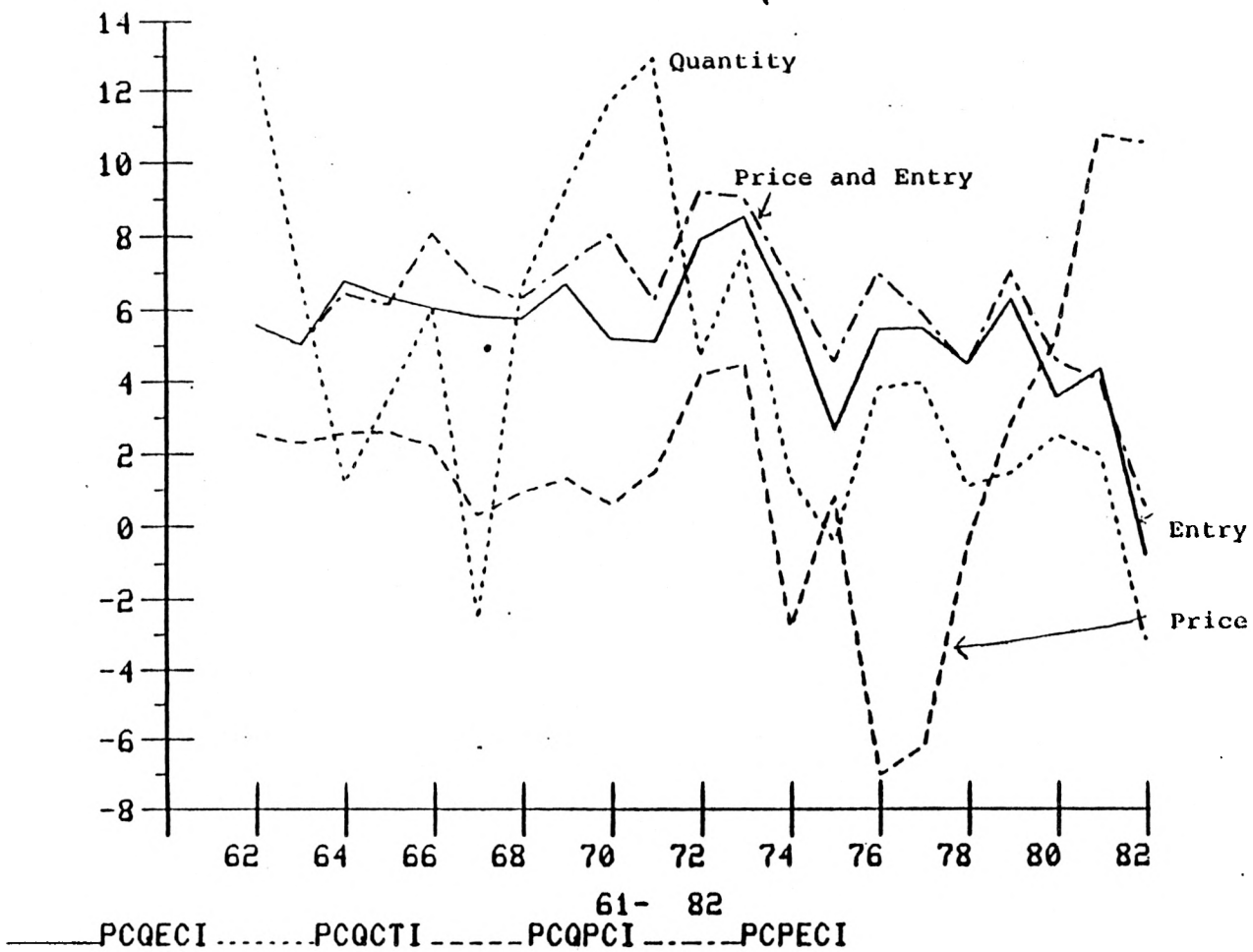CHART 3

OUTPUT BY SECTOR (% CHANGE) - 1961 COMPOSITION

PCPRTI ....PCPRNI -----PCQTOT

PCPRTI - Non-regulated-tradeables
PCPRNI - Non-regulated-non-tradeables
PCQTØT - Aggregate output
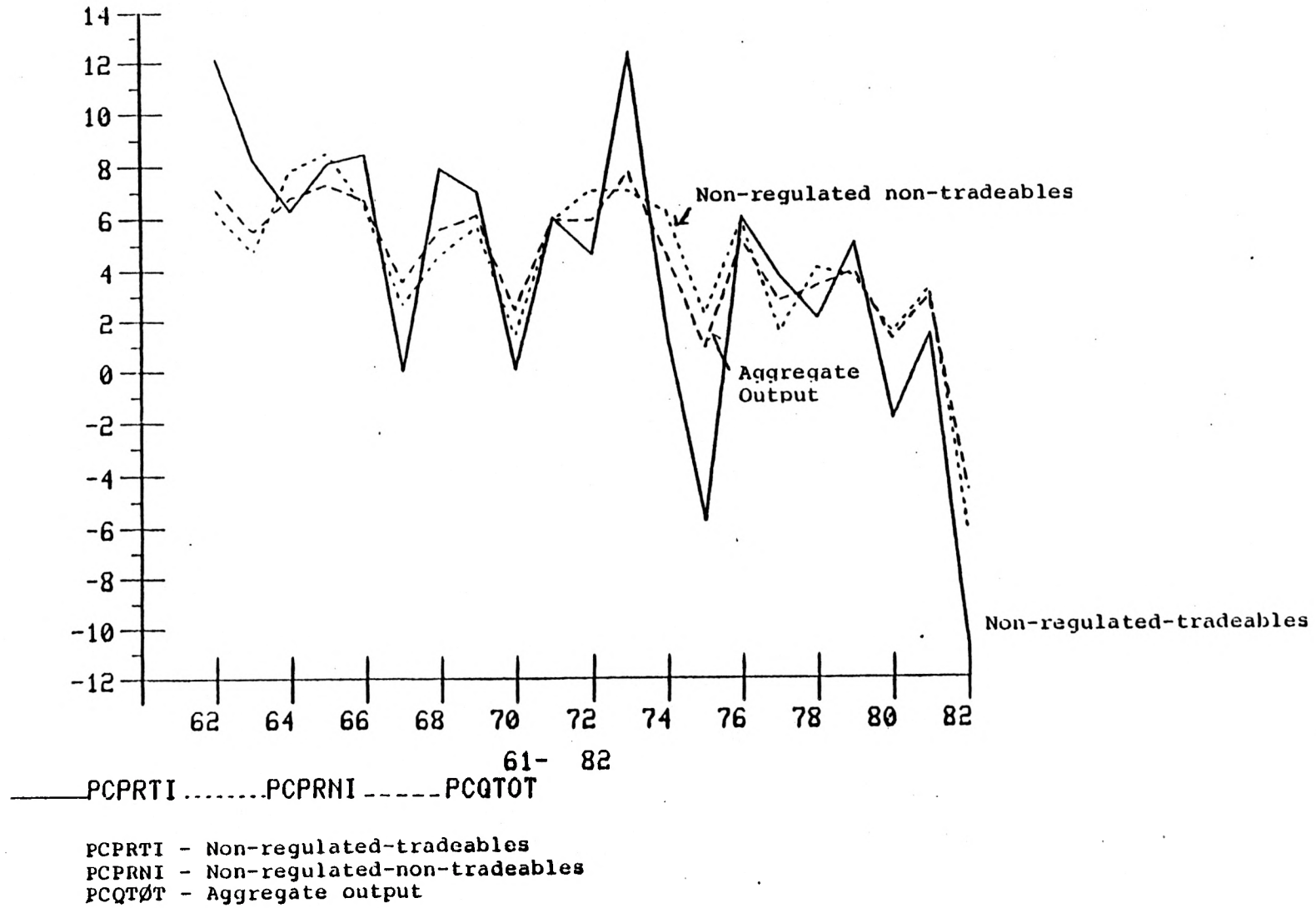
CHART 4

OUTPUT BY SECTOR (%CHANGE) - 1961 COMPOSITION

PCQECI .... PCPUBS ----- PCQTOT
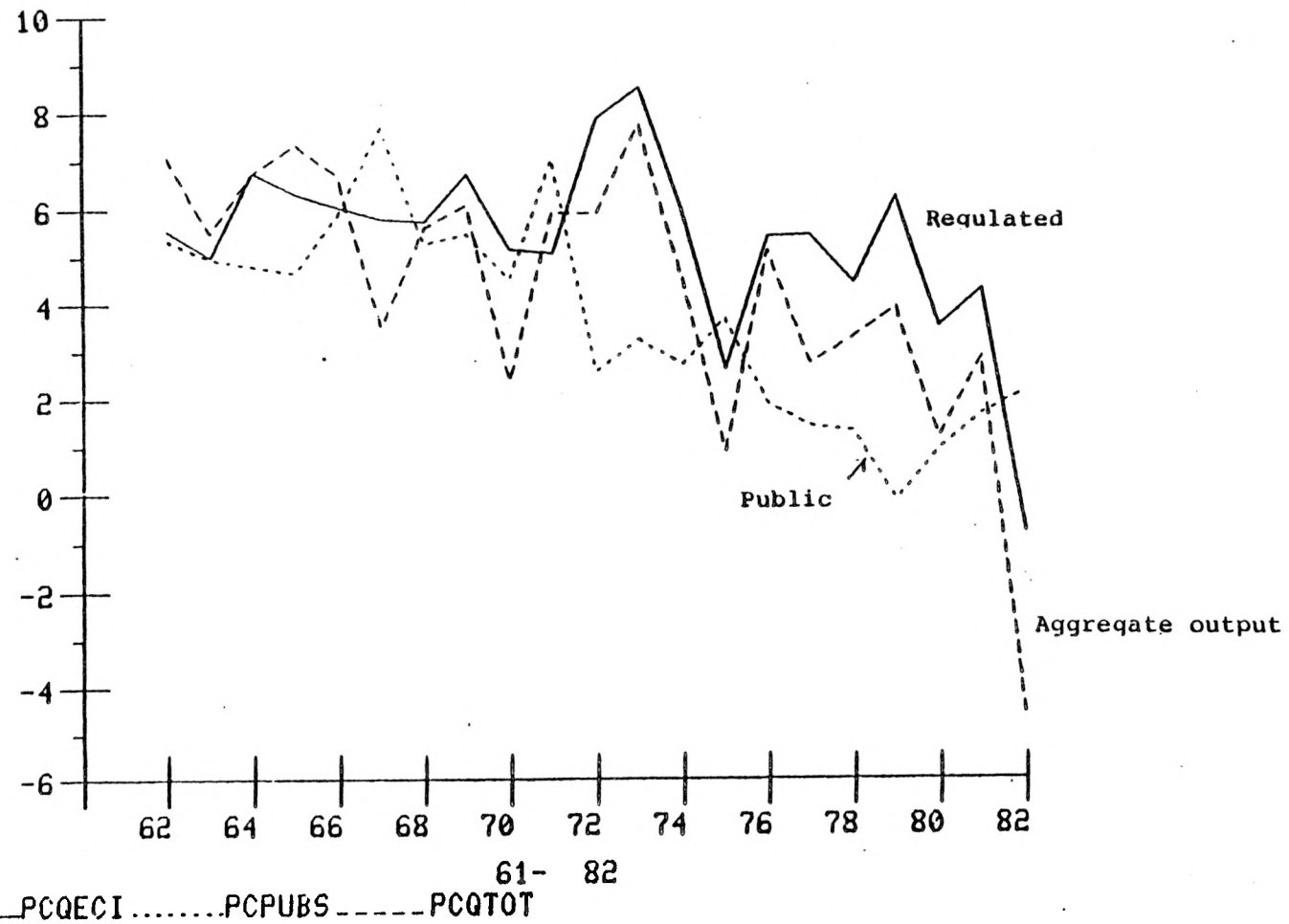
PCQECI - Regulated
PCPUBS - Public
PCQTØT - Aggregate output

CHART 5

OUTPUT IN REGULATED SECTOR BY TYPE OF REGULATION (% CHANGE)

61- 82

———PCQECI ....PCQCTI ____PCQPCI _.._PCPECI

PCQECI - Entry   PCQPCI - Price
PCQCTI - Quantity   PCPECI - Price and Entry

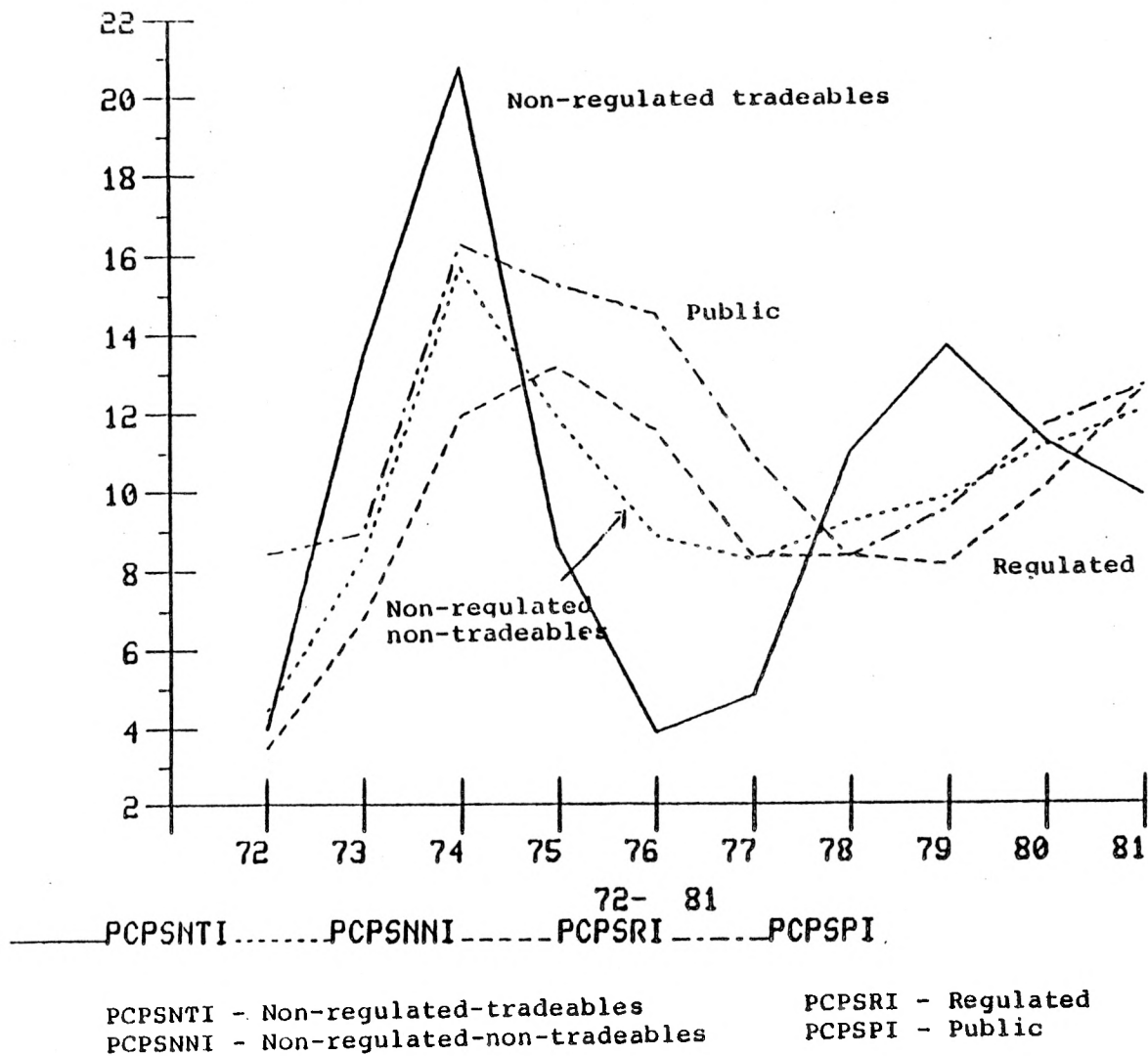CHART 6

CHANGES IN GROSS OUTPUT PRICES BY SECTOR (% CHANGE)

72- 81

———— PCPSNTI .... PCPSNNI ——— PCPSRI —··— PCPSPI

PCPSNTI - Non-regulated-tradeables   PCPSRI - Regulated
PCPSNNI - Non-regulated-non-tradeables   PCPSPI - Public

CHART 7

LEATHER (% CHANGE)

Price

Output

—————PCPLEA ....PCQLEA

61- 82

PCPLEA - Price
PCQLEA - Output
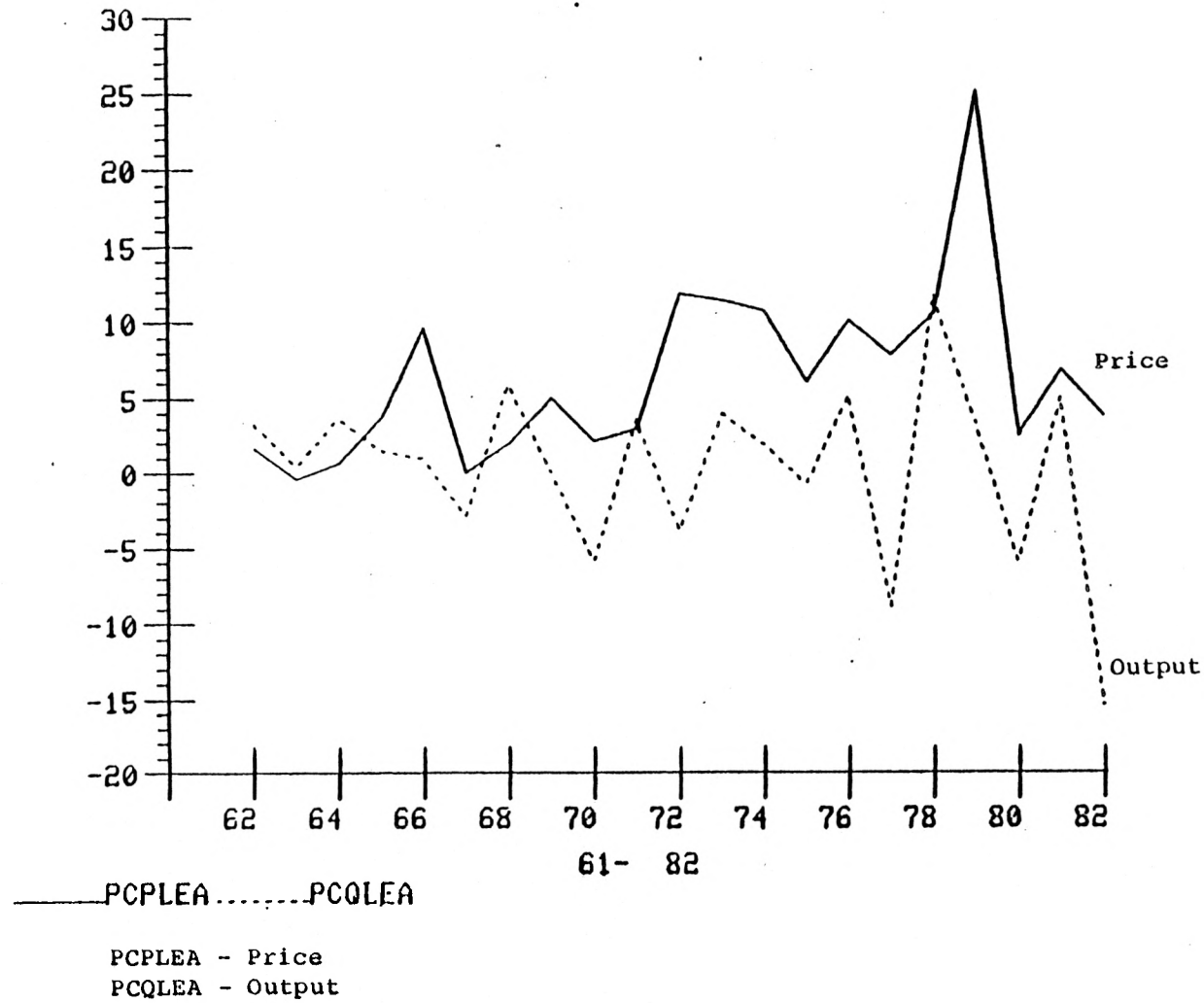
CHART 8

MAN-MADE FIBRES (% CHANGE)

Price

Output

PCPGMM .... PCGNMM

PCPGMM - Prices
PCQNMM - Output
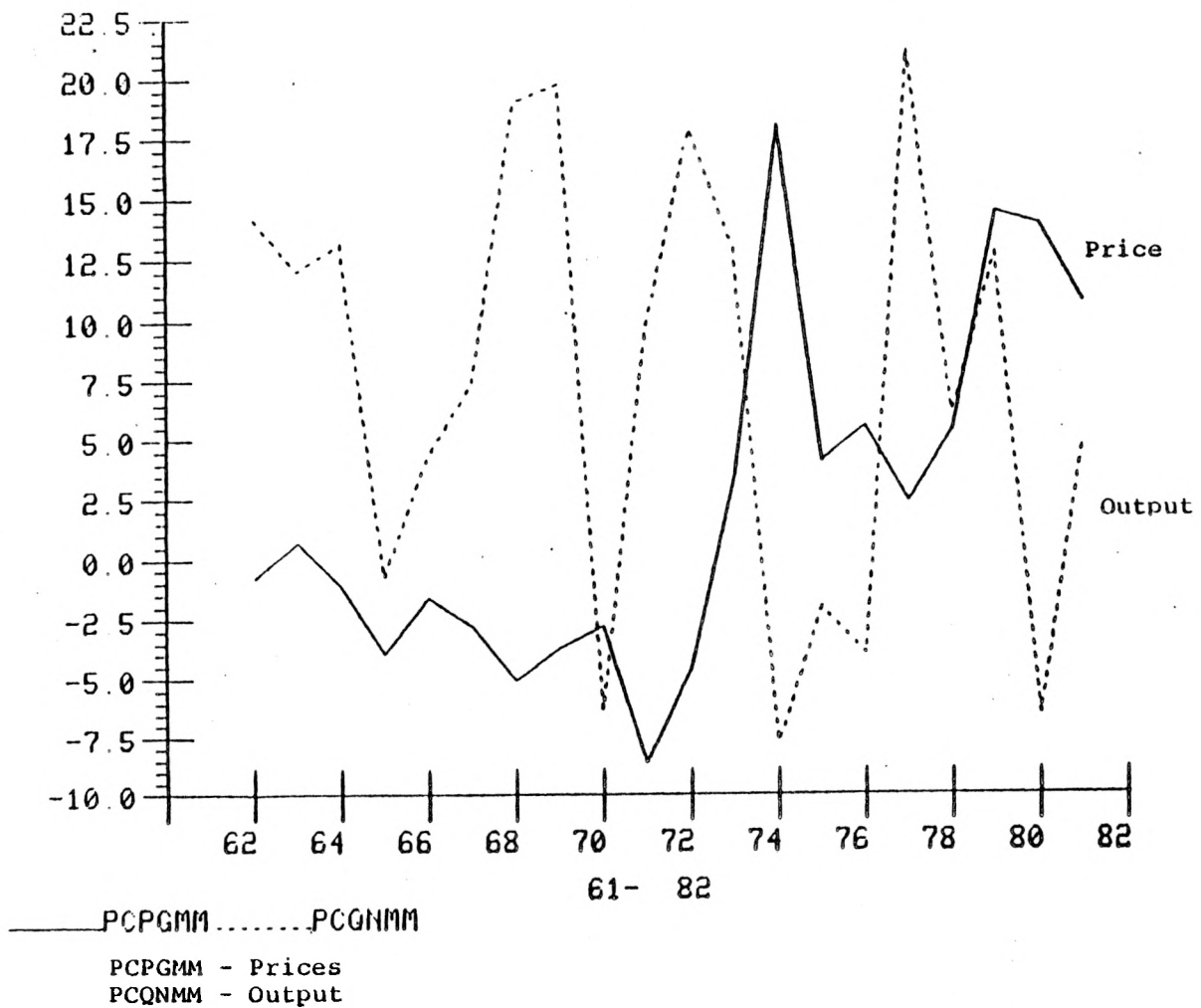
CHART 9

HOUSEHOLD RADIOS AND TELEVISIONS (% CHANGE)

61- 82

PCPHRT .... PCQHRT

PCPHRT - Prices
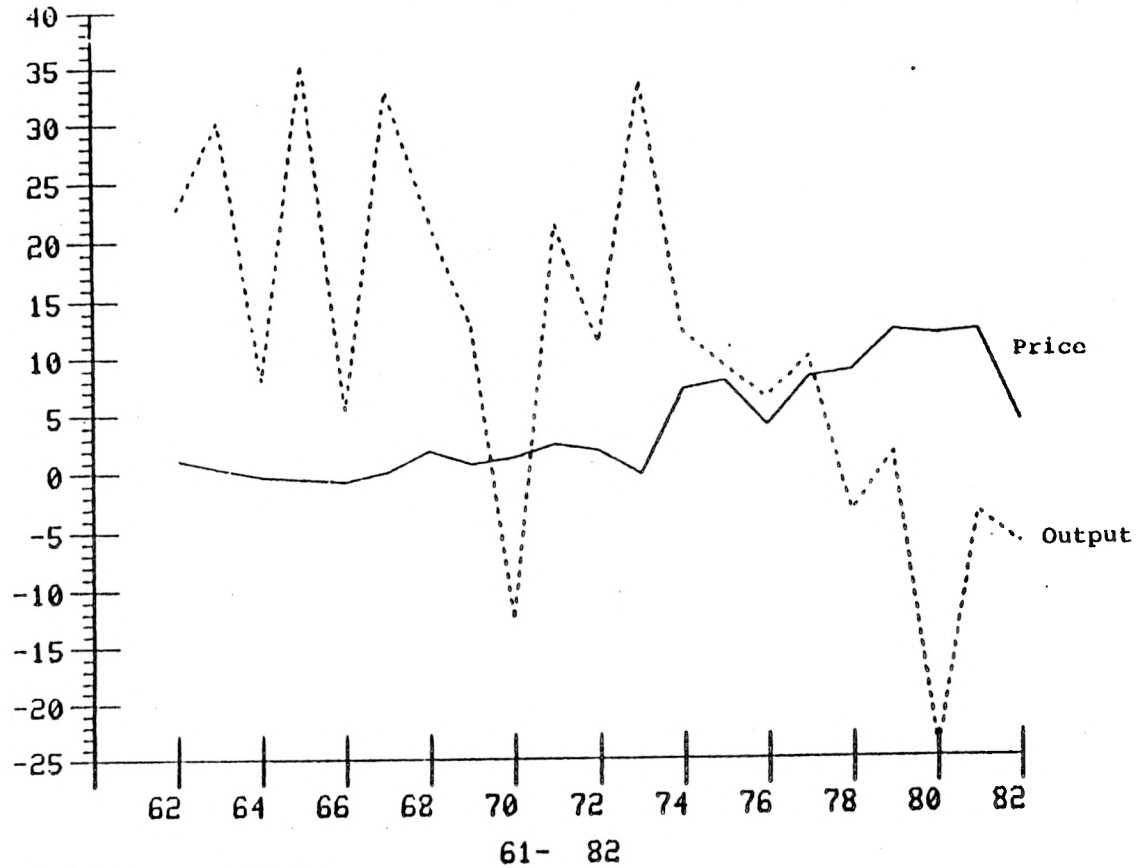PCQHRT - Output
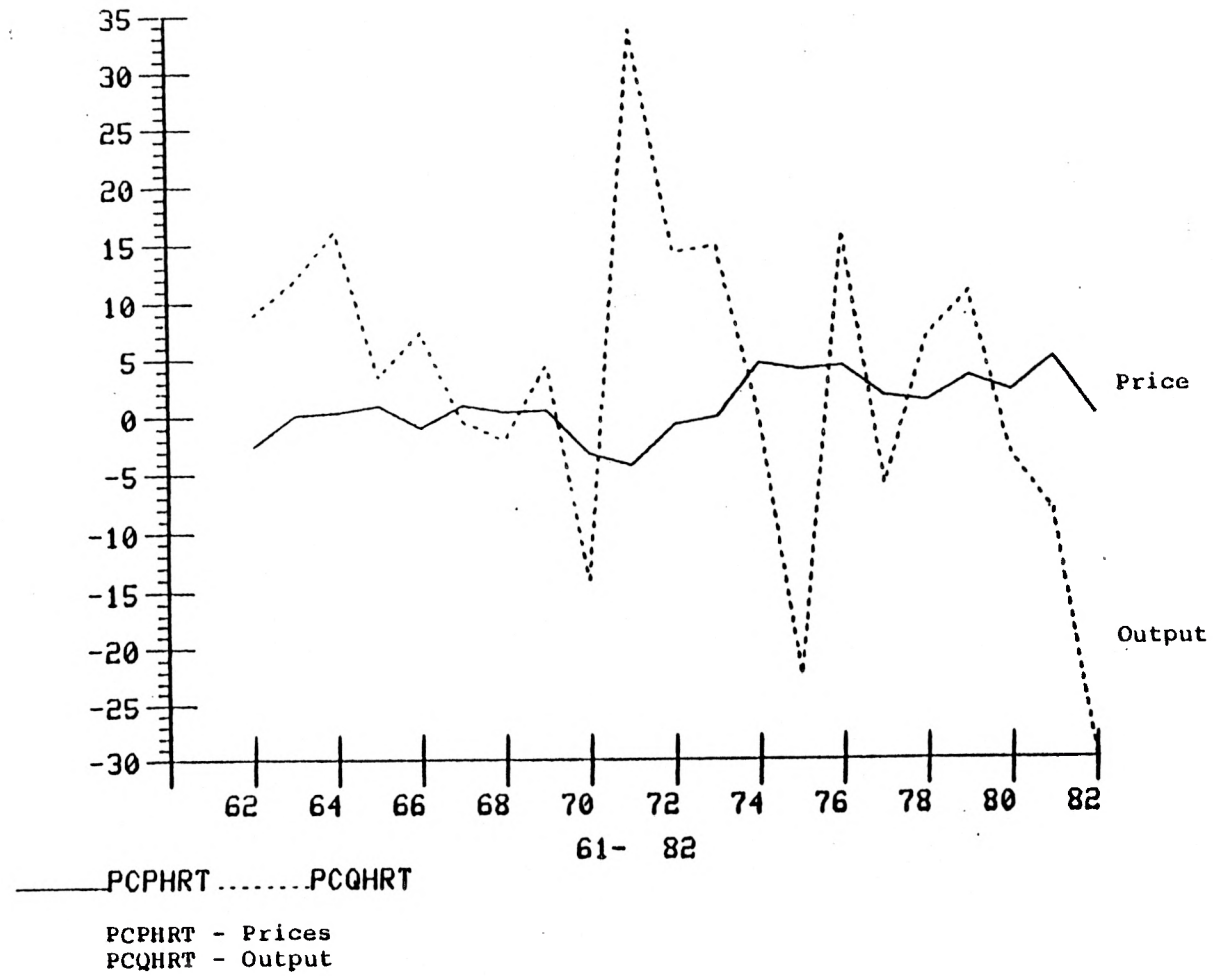
CHART 10

MOTOR VEHICLE MANUFACTURING (% CHANGE)

61- 82

PCPMVM........PCQMVM

PCPMVM - Prices
PCQMVM - Output

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