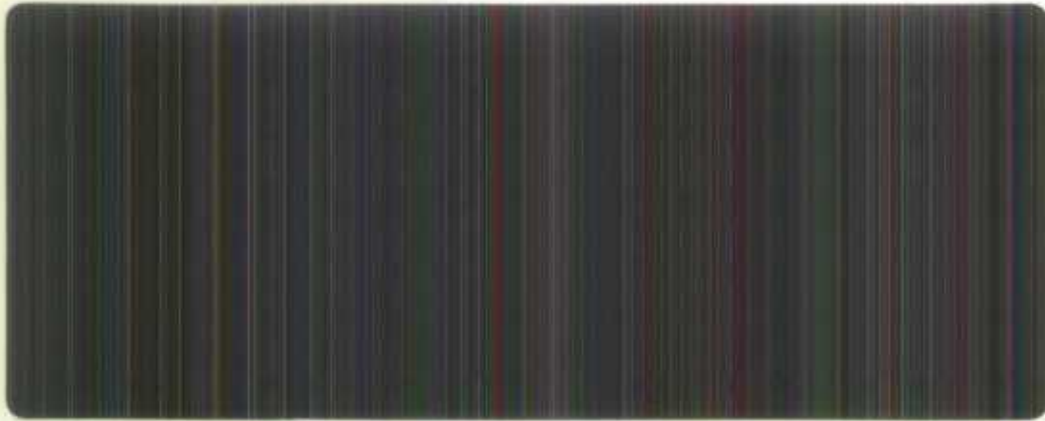
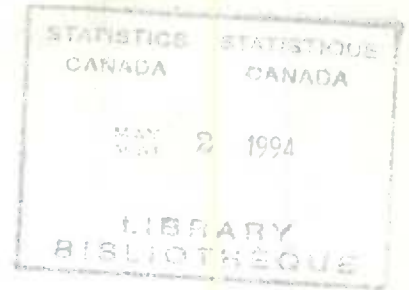


C.2 15-602 No. 54



Input-output Division



Technical Series



Statistics
Canada

Statistique
Canada

Canada



Input-Output Technical Series

The Input-Output Division Technical Series are intended for users interested in input-output tables and related research for analysis and applications. Readers of the series are encouraged to contact the authors with comments and suggestions. A complete list of the titles that have been released appears at the back of this paper.

Papers in the series are distributed to Statistics Canada Regional Offices and Provincial Bureaus of Statistics. The series appears in the "Listing of Supplementary Documents" (11-207). A complete set is also maintained in the Statistics Canada Library and is available for consultation.

To obtain the list of titles and/or an individual paper, please contact:

Consulting and Marketing
Input-Output Division
Statistics Canada
23rd Floor, R.H. Coats Building
Ottawa, Ontario, K1A 0T6
(613) 951-3697

**Statistics Canada
National Accounts and Analytical Studies
System of National Accounts
Input-Output Division**

**Scope of the Public Sector Grants
In the Canadian Economy Revisited**

By

P.S.K. Murty

54

January, 1993

Prepared for presentation at the Annual meetings of the Allied Social Science Associations in Anaheim, California in a joint session of the American Economic Association and the Association for the Study of the Grants Economy to be held January 5-7, 1993. The views expressed in this paper are those of the author and not necessarily those of Statistics Canada.

AEA93: Rev. 911993

**SCOPE OF THE PUBLIC SECTOR GRANTS
IN THE CANADIAN ECONOMY REVISITED**

by

P.S.K. Murty

Table of Contents		Page
I	Introduction	5
II	Advantages of the New Approach	7
III	Concepts and Database	
	1. Concepts	
	(i) Grants	9
	(ii) Public Sector	12
	(iii) Personal Sector	13
	(iv) Business Sector	13
	(v) Public Grants to the Personal Sector	14
	(vi) Public Grants to the Incorporated Business Sector	15
	(vii) Personal Sector Grants to the Public Sector	16
	(viii) Business Sector Grants to the Public Sector	17
	2. Database	18
IV	Analysis of Grant Flows	
	1. Public Sector Versus Personal Sector	26
	2. Public Sector Versus Incorporated Business Sector	30
	3. Grant Originating	33
V	Summary and Conclusions	38
	References	41
 Tables		
Table 1	Transfers from the Government Sector to the Personal Sector	21
Table 2	Subsidies as Published in Official Statistics and their Classification for this Study	23

**SCOPE OF THE PUBLIC SECTOR GRANTS
IN THE CANADIAN ECONOMY REVISITED**

by

P.S.K. Murty

Table of Contents (Cont'd)		Page
Table 3	<i>Transfers from the Personal Sector to the Government Sector</i>	25
Table 4	<i>New Paradigm Grant Payments from Government to Persons & Unincorporated Business</i>	42
Table 5	<i>Personal & Unincorporated Business Sector Grants</i>	48
Table 6	<i>Grants Involving Incorporated Business Sector: Components</i>	49
Table 7	<i>Incorporated Business Sector Grants</i>	51
Table 8	<i>Comparison of Incorporated Business Sector Grants & Personal & Unincorporated Business Sector Grants</i>	52
Table 9	<i>Net Grants as a Percentage of Government Expenditures</i>	53
Table 10	<i>Grant Originating from Personal Sector for Selected Years</i>	27
Table 11	<i>Grant Originating from Incorporated Business Sector for Selected Years</i>	33
Table 12A	<i>GDP and Grant Originating in Private Sector for Selected Years</i>	34
Table 12B	<i>Government Expenditure and Grant Originating in Private Sector for Selected Years</i>	37

**SCOPE OF THE PUBLIC SECTOR GRANTS
IN THE CANADIAN ECONOMY REVISITED**

by

P.S.K. Murty

Table of Contents (Cont'd)		Page
Charts		
Chart 1	Grants Between Public Sector & Personal Sector (Including Unincorporated Business)	28
Chart 2	Grants Between Public Sector & Personal Sector (Including Unincorporated Business)	29
Chart 3	Grants Between Public Sector & Incorporated Business Sector	31
Chart 4	Grants Between Public Sector & Incorporated Business Sector	32
Chart 5	Net Grants as Percentage of G.D.P.	35
Chart 6	Net Grants to Public Sector	36

**SCOPE OF THE PUBLIC SECTOR GRANTS
IN THE CANADIAN ECONOMY REVISITED**

by

P.S.K. Murty

I Introduction

The purpose of this paper is to add a new perspective to the analysis of public grants by examining the data on a net outflows basis between the donor and donee sectors of the economy. Gross public grant outflows to any sector of the economy should be netted against the grant inflows from the same donee sector before

*P.S.K. Murty is the Chief of Public Sector, Input-Output Division, Statistics Canada. The views in this paper are those of the author, not necessarily those of Statistics Canada. This paper draws on the materials in the papers: (1) "Government Expenditures on Goods and Services and Transfer Payments in Canada, 1961-1985" by P.S.K. Murty and Yusuf Siddiqi presented at the joint session of the American Economic Association and the Association for the Study of Grants Economy held in Atlanta on December 30, 1989; (2) "New Paradigm to Analyze Government Transfer Payments with Special Reference to Canada" by P.S.K. Murty presented at the Second Annual Convention of International Congress of Political Economists held in Boston, January 9-12, 1991; (3) "A New Paradigm to Analyze Commodity Indirect Taxes and Subsidies, 1986-1989" by P.S.K. Murty and Yusuf Siddiqi, an extract of which was published in the Canadian Economic Observer, Statistics Canada, Catalogue 11-010, Ottawa, May 1991; (4) "Scope of Public Grants Economy in Canada" by P.S.K. Murty and Yusuf Siddiqi presented at the joint session of the American Economic Association and the Association for the Study of the Grants Economy held in New Orleans, January 3-5, 1992; and (5) "Transfer Payments in National Accounts and Grants Economics" by P.S.K. Murty and Yusuf Siddiqi presented at the 22nd General Conference of the International Association for Research in Income and Wealth held in Flims, Switzerland, August 30 - September 5, 1992.

evaluating and commenting on the gross public grant outflows. The net grant outflow calculated in this manner for any sector of the economy can also be called "Grant Originating" (GO) and it can be expressed by the formula:

$$GO = GP \text{ less } GR$$

where

GO = Grant Originating,

GP = Grant Payments, and

GR = Grant Receipts.

This GO concept would reveal the effect of counterflows and it would be possible to evaluate the grant transactions on the basis of inter-sectoral net contributions. In this context, the three sector model of the System of National Accounts (SNA) is used covering the government (or public) sector, the business sector and the personal sector¹. In this study, the government sector as defined in the SNA is the public sector while the business and personal sectors constitute the private sector.

It should be noted that these three SNA sectors are essentially quite different groups of transactors, but are homogeneous within themselves in their motivation and behaviour.

¹There is also a fourth sector in the SNA, namely, the non-resident sector which covers the transactions that take place between the rest of the world and the other three sectors. The non-resident sector is not examined here in this study as our purpose is mainly to demonstrate the point of examining the net outflows of public grants in the domestic economy.

For example, the government sector is focussed around the transactions of the public authorities, while the business sector covers transactions of transactors producing goods and services for sale in the market. The personal sector is essentially concerned with persons or households in their capacity as final consumers.

The GO concept applied here to the three sector model produces two dimensions, namely, (i) Grants between the Public Sector and the Business Sector; and (ii) Grants between the Public Sector and the Personal Sector. In essence, the transactions falling within these two dimensions have been measured and net grant outflows derived in a set of sectoral Grant Accounts at the macro-level and analyzed. There are several advantages in analyzing the net grant outflows based on the GO concept.

II Advantages of the New Approach

By looking at the levels of gross outflows or inflows, only one side of the transaction would be seen, namely, how much is the amount involved in the donor sector outflows. It would not tell us how much is the amount involved in the grant inflow from the donee sector, nor would it indicate the net outflows thereof to give a total picture of public grants. To illustrate this point, let us take a simple example. If the public grant to the personal sector is \$100 and if the personal sector gives back \$60 in the form of a grant to the public sector (i.e. income taxes), it is the net outflow of \$40 (\$100 less \$60) that reveals the scope of the public

grant to the personal sector. The public sector in this case got back \$60 in the form of a grant from the personal sector and therefore, the scope of the public grant is not an outflow of \$100; by the same token, the scope of the personal grant is not an outflow of \$60 either. The net public grant outflow in this case is only \$40.

There is also another advantage of analyzing net outflows of public grants. Such an analysis of net outflows would also capture the changes in the grant giving techniques. For example, let us suppose that the public sector, instead of increasing the grant outflows, chooses to decrease the direct taxes (i.e. income taxes) payable by the donee sector to \$45 from \$60. In such an event, to take the first example, the net public sector grant outflow will increase to \$55 (\$100 less \$45) although the gross outflow of \$100 remains the same. This change in the net outflow will not be captured in the time-series analysis of gross outflows which show no change at all as they remained at \$100 in both cases.

In some cases, there may not be a net public grant outflow at all; there may in fact be a net public grant inflow. Let us take another simple example in which the public grant to the personal sector is \$60 while the personal grant to the public sector is \$100. There is no net grant outflow from the public sector; but there is a net inflow of \$40 from the personal sector to the public sector. Although there was a gross public grant outflow of \$60,

there was also an inflow of \$100 which more than offset the public grant outflow.

Therefore, it is essential to study not only the gross outflows of public grants to other sectors of the economy, but also the inflows of grants from other sectors to the public sector in order to obtain a more meaningful and realistic total picture of the net outflow from each sector.

In the previous papers, only public grant gross outflows were examined. This situation has now been rectified in this study where the net flows between the public sector and the two other sectors of the economy, namely, the business and personal sectors, have been developed in the form of sectoral Grant Accounts and analyzed. These Grant Accounts can be extended to sub-sectors and categories of sub-sectors depending on the analytical requirements.

III Concepts and Database.

1. Concepts

(i) Grants

"Grants", of course, have the same definition as the one assigned in Grants Economics. In Grants Economics, Boulding et al. define a grant as "a one-way transfer of exchangeables, which in an accounting sense increases the net worth of the

recipient and diminishes the net worth of the grantor"². In other words, if A gives something exchangeable to B and if B gives nothing exchangeable to A, the transaction will fall in the definition of a "one-way transfer" or a "grant". As restated by Professor Janos Horvath in his paper on "Rural America and the Grants Economy", the "Grant is such a transaction which involves no recompense". "A decrease of the donor's net worth and an increase of the donee's net worth signify the occurrence of granting"³. This is the concept of grants which has been used in this study.

According to this grants concept, direct taxes such as income taxes, succession duties, estate taxes, hospital and medical insurance premiums, which are transfers for the SNA, are regarded as grants which flow to the public sector from other sectors.

It should be mentioned in this connection, that indirect taxes have an element of quid pro quo but they have no element of grants. Let us examine further. There are two types of indirect taxes: commodity type and non-commodity type. The commodity type indirect taxes such as sales taxes are embodied

²Kenneth E. Boulding, Martin Pfaff, Janos Horvath, "Grants Economics: A Simple Introduction", American Economist, Spring 1972 pp. 19-20.

³Janos Horvath, "Rural America and the Grants Economy", American Journal of Agricultural Economics, December 1971, 53 (5), p. 740.

in the market prices of commodities -- goods and services -- which have to be paid by consumers in exchange for the specific goods and services. They are a part of the pricing mechanism. As the consumer pays the commodity indirect tax and receives back the goods and services, there is a clear quid pro quo visible in the transactions concerned. However, in the case of non-commodity type indirect taxes, such as property taxes and business licences, there is an invisible quid pro quo, since these taxes are paid in exchange for some special privileges and benefits. For example, the property tax payers get continuing title to their property which entitles them to several municipal services, such as snow removal, and to that extent their net worth increases; similarly the payers of licence fees (e.g. business establishments) obtain a right to carry on their business activities and their net worth increases to that extent. In this context, the indirect taxes have an element of quid pro quo but they have no element of grants. Also, in the macro-economic analysis based on the System of National Accounts (SNA), property owners who pay property taxes are treated as business establishments -- whether incorporated or unincorporated -- because they generate rental income which is routed to themselves. In the Input-Output Accounts of the Canadian SNA, the industry concerned routes the imputed rent as output while the property taxes are treated as an input in their cost of operating a business. Thus, the indirect taxes

get specifically incorporated in the input structure of the output and also in the market prices of goods and services produced in the economy.

Indirect taxes and subsidies are sometimes misunderstood as offsetting transactions of the same category. This is not so because they are different transactions of different categories. While indirect taxes tend to get added to the cost of goods and services, subsidies tend to get deducted from the cost to arrive at lower market prices. The only common characteristic in these two different types of transactions is that they both affect the market prices but in different directions -- the indirect taxes are an addition to while the subsidies are a deduction from market prices. Moreover, indirect taxes being a part of market prices have the element of quid pro quo while the subsidies do not have such quid pro quo as the grant element is inherent in them. In view of these reasons, indirect taxes and subsidies should be construed as distinct transactions of different categories and they should not be mixed up as one and the same category.

(ii) Public Sector

The public sector as defined here is limited to the "government sector" as measured in the Canadian System of National Accounts (CSNA). It represents the three levels of government -- federal, provincial, and local -- and includes

public hospitals, as most of these hospitals are under the financial and operational control of government. It includes government departments, agencies, commissions, and boards which also operate essentially on a non-commercial basis and which carry out various functions delegated to them by public authorities. The government sector which represents the term "public sector" used in this study does not include government business enterprises which are included elsewhere in the business sector since they operate on the same principles as those of private enterprises.

(iii) Personal Sector

The personal sector includes households, individuals, non-profit institutions and also unincorporated business such as self-employed persons (i.e. individual farmers, independent retailers, professional practitioners, and other proprietors who operate their own businesses). Due to the difficulty in separating the data of the unincorporated business between the business account and the personal account, the data of persons and unincorporated business are combined together in the Canadian System of National Accounts. These are the same data that are used for this study.

(iv) Business Sector

The business sector includes incorporated business establishments and government business enterprises. It is

realized that a complete business sector should cover both incorporated and unincorporated business such as independent proprietors and farmers. However, as separate data for such unincorporated business enterprises are not available at the present time, the farm and unincorporated business enterprises are added to the personal sector as explained earlier. Therefore, the business sector defined here covers only incorporated business establishments.

(v) Public Grants to the Personal Sector

Public Grants to the personal sector include payments such as family and youth allowances; old age security payments; scholarships and fellowships; payments to disabled persons, among others. The published official statistics on transfer payments to the personal sector contain a mixture of transactions which have been filtered through the grants concept for this study. The transactions which do not conform to the grants concept have been reclassified to the categories such as "trust fund" type and "quid pro quo" type to which they belong. (See Table 1 for details)

The public grants to the personal sector also include subsidies and capital assistance to unincorporated business. As a clear disaggregation of subsidy data between incorporated and unincorporated business does not exist in the official published data at the present time, estimates have been made

for the purpose of this study for the required split between incorporated and unincorporated business. According to these estimates, federal subsidies for agriculture and housing assistance constitute the subsidies to unincorporated business. The data for capital assistance have the required disaggregation available in the published data and there is no statistical problem in this regard.

(vi) Public Grants to the Incorporated Business Sector

Public Grants to the incorporated business sector contain subsidies and capital assistance to incorporated business. In the published database, the disaggregation between incorporated and unincorporated business is available for capital assistance, but such a split is not available for subsidies. As such a split for subsidies is essential for consistency in the data used in this study, it is assumed that the items relating to the federal subsidy for agriculture and housing assistance are entirely related to the unincorporated business while the balance is related entirely to the incorporated business. (Table 2)

By definition, subsidies are grants to business establishments given by the government on "current account"⁴ and there is no direct exchange of goods or services between

⁴United Nations, National Accounts Statistics: Main Aggregates and detailed tables 1986, New York 1986, p. XVI.

business and government.

In addition to subsidies on current account transactions, the government also gives capital assistance to business establishments. Such capital assistance to business is intended to stimulate the purchase of new machinery, equipment and new construction. The business sector receives the funds and incurs a capital outlay for those purposes, and here again goods or services are not exchanged between business and the government. However, the net worth of the government decreases with a corresponding increase in the net worth of the business sector. The increase in the net worth of the business sector is synonymous with a profit. In this context, the capital assistance is also a form of subsidy aimed at capital account transactions.

(vii) Personal Sector Grants to the Public Sector

The grants outflows from the personal sector to the public sector cover income taxes, succession duties, estate taxes, hospital and medical insurance premiums and the like. (Table 3) The published official data of transfers from the personal sector have been adjusted by reclassifying data on "motor vehicle licences" to quid pro quo transactions, because there is an element of quid pro quo in them. The government, by granting the licence for a set fee is authorizing the licence holder to utilize the vehicle on highways and roads.

Such authorization in the form of a licence entitles the licence holder to drive the vehicle on public highways and roads. In this context, the licence should be treated as a "sale of service" by the government and a corresponding purchase of a service by the licensee.⁵ The published data of transfer receipts by the government from the personal sector have been adjusted accordingly and used in this study to conform to the grants concept.⁶ (See Table 3 for details)

(viii) Business Sector Grants to the Public Sector

The Business Sector's grants to the Public Sector contain direct taxes on profits such as Federal Income taxes, the Federal Petroleum and Gas Revenue tax, Provincial Income taxes, and Provincial taxes on mining and logging profits.

⁵This is the treatment which is recommended for all sectors of the economy.

⁶In this study, the adjustment is limited to motor vehicle licences paid by the personal sector. For lack of precise readily available data, such adjustment is not possible at this time for other licences. For example, hunting, fishing, and marriage licences also have an element of quid pro quo as the licence holders obtain, in exchange for the license fees, an additional privilege which they did not possess before. To that extent, it can be argued that their net worth increased to the extent of the additional privilege they possessed after they were given the licences. These too, should be removed from the official published data of transfers as they do not conform to the concept of grants defined here.

2. Database

The database used in this study is from the Canadian National Income and Expenditure Accounts⁷. In that publication, data are available for Sector Accounts along with government transfer payments to the Personal Sector and transfers to the Business Sector in the form of subsidies and capital assistance.

The publication also contains transfer receipts from those sectors in the form of direct taxes and other current transfers. Those are the published data that have been used for this study. Before using them for the analysis, the published detail of transfer payments and receipts have been filtered through the "grants" concept. As a result, several items were disqualified from the category of "grants". The presently published government "transfer payments" to persons have "trust fund payments", "quid pro quo" payments, and "grants". The data used for this analysis represents "grants" only, after removing from the published data the divergences by reclassifying them to the categories to which they properly belong.⁸ (See Tables 1 and 3 for details) By using this

⁷Statistics Canada, National Income and Expenditure Accounts, Annual estimates, 1926-86 Catalogue 13-531, Ottawa, June 1988; Catalogue no. 13-201 Annual, 1978-1989, Ottawa, December 1990, pages 64-69; Annual estimates, Catalogue no. 13-201 Annual, 1980-1991, Ottawa, August 1992.

⁸See the previous study by Murty P.S.K. and Yusuf Siddiqi, Scope of Public Grants Economy in Canada, Statistics Canada, Input-Output Division Technical Series, presented at the joint session of

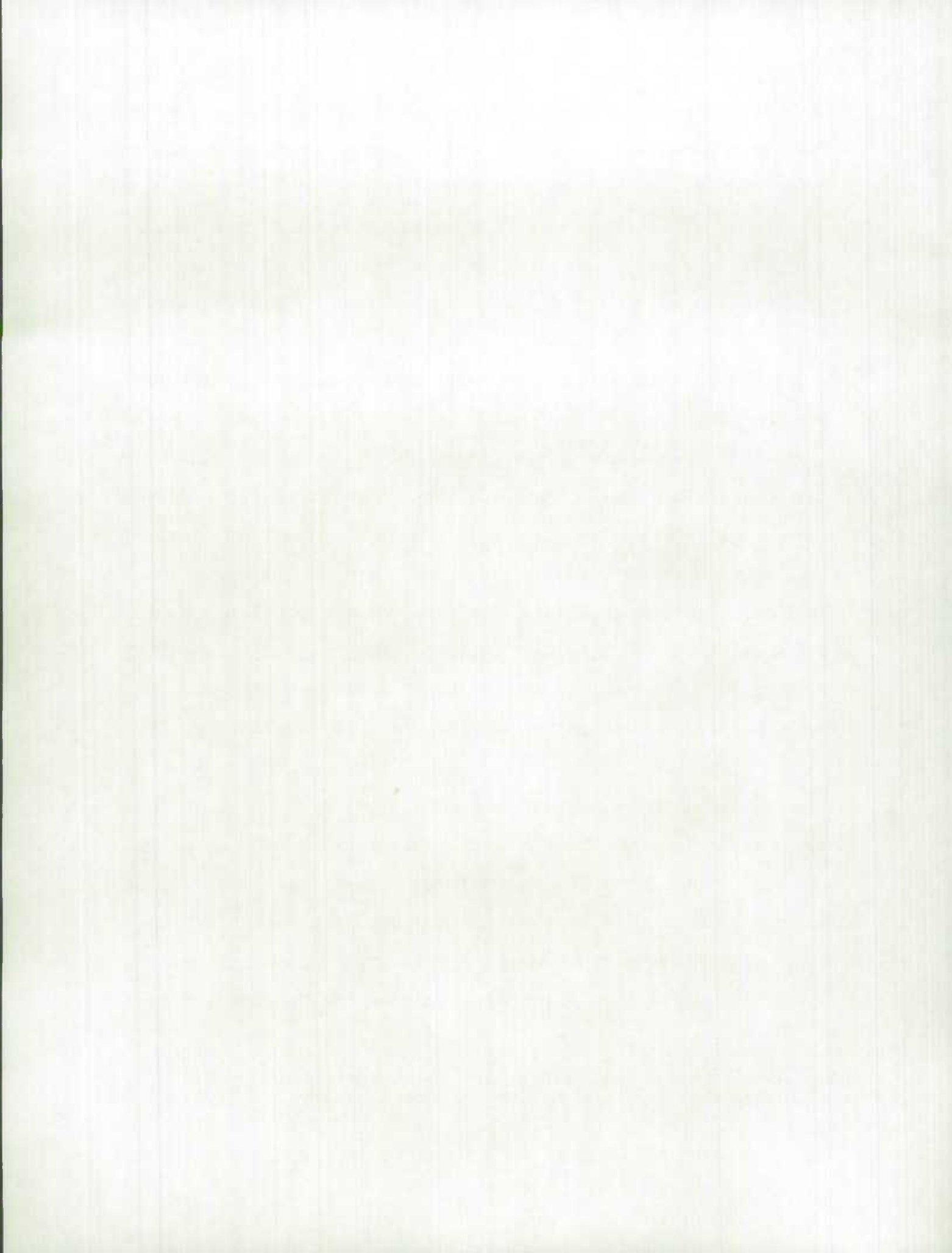
filtering process, a new data structure using grants economics concepts has been developed and the new database on grants which is called the "new paradigm" meets with the criteria of grants as it contains only the legitimate grant outflows and inflows. The net public grants have been calculated based on the formula mentioned earlier and analyzed. (Tables 4 and 6)

The unincorporated business data contain two elements, namely, that which is attributable to individuals in the capacity of consumers and that which is attributable to individuals in the capacity of business. These two elements cannot be separated at this time unless considerable research is undertaken. Therefore, the data of the unincorporated business are combined with the personal sector in the Sector Accounts of the Canadian National Income and Expenditure Accounts. The same data are used in this study with some adjustments for conceptual and statistical consistency.

As already mentioned earlier, subsidies have not been split into incorporated and unincorporated business in the data of that publication and estimates based on the following procedure have been made for this study. (See Table 2)

- (i) The federal payments for agriculture and housing assistance which are shown in the publication have

the American Economic Association and the Association for the Study of the Grants Economy held in New Orleans, January 3-5, 1992.



been assumed to be for unincorporated business.

- (ii) The remainder of the subsidy payments by all levels of government have been assumed to be for incorporated business.

As the remainder may contain some items of the unincorporated business, further research is necessary to examine all the subsidy programs and classify the numerous recipients between incorporated and unincorporated businesses. In the meantime, however, the published data on subsidies have been split on the above basis and used here for statistical consistency between the sectors.

In summary, the published database as adjusted in this study contained two dimensions:

- (i) Grants between the Public Sector and the Personal Sector including unincorporated business; and
- (ii) Grants between the Public Sector and the incorporated business sector.

The major trends in the data of 3 decades from 1961 to 1991 are highlighted in the next section. The identification of reasons for the trends requires further research and such a task should be the subject of future papers in the area of Grants Economics.

TABLE 1. TRANSFERS FROM THE GOVERNMENT SECTOR TO THE PERSONAL SECTOR

<u>AS PUBLISHED</u>	<u>GRANTS</u>	<u>TRUST FUND TYPE</u>	<u>QUID PRO QUO</u>
A.Federal			
1.Family & youth allowances	1.Family and youth allowances		
2.Pensions - World Wars I & II		2.Pensions - World Wars I & II	
3.War veterans' allowances		3.War veterans' allowances	
4.Re-establishment credits		4.Re-establishment credits	
5.Rehabilitation benefits		5.Rehabilitation benefits	
6.Unemployment insurance benefits		6.Unemployment insurance benefits	
7.Pensions to government employees		7.Pensions to government employees	
8.Old age security payments	8.Old age security payments		
9.Grants from Canada Council	9.Grants from Canada Council		
10.Scholarships and grants - research	10.Scholarships and grants - research		
11.Adult occupational training payments	11.Adult occupational training payments		
12.Assistance to immigrants	12.Assistance to immigrants		
13.Prairie farm assistance act	13.Prairie farm assistance act		
14.Payments to western grain producers	14.Payments to western grain producers		
15.Grants to universities			15.Grants to universities
16.Local initiatives program			16.Local initiatives program
17.Grants to native peoples			17.Grants to native peoples
18.Grants to national organizations			18.Grants to national organizations

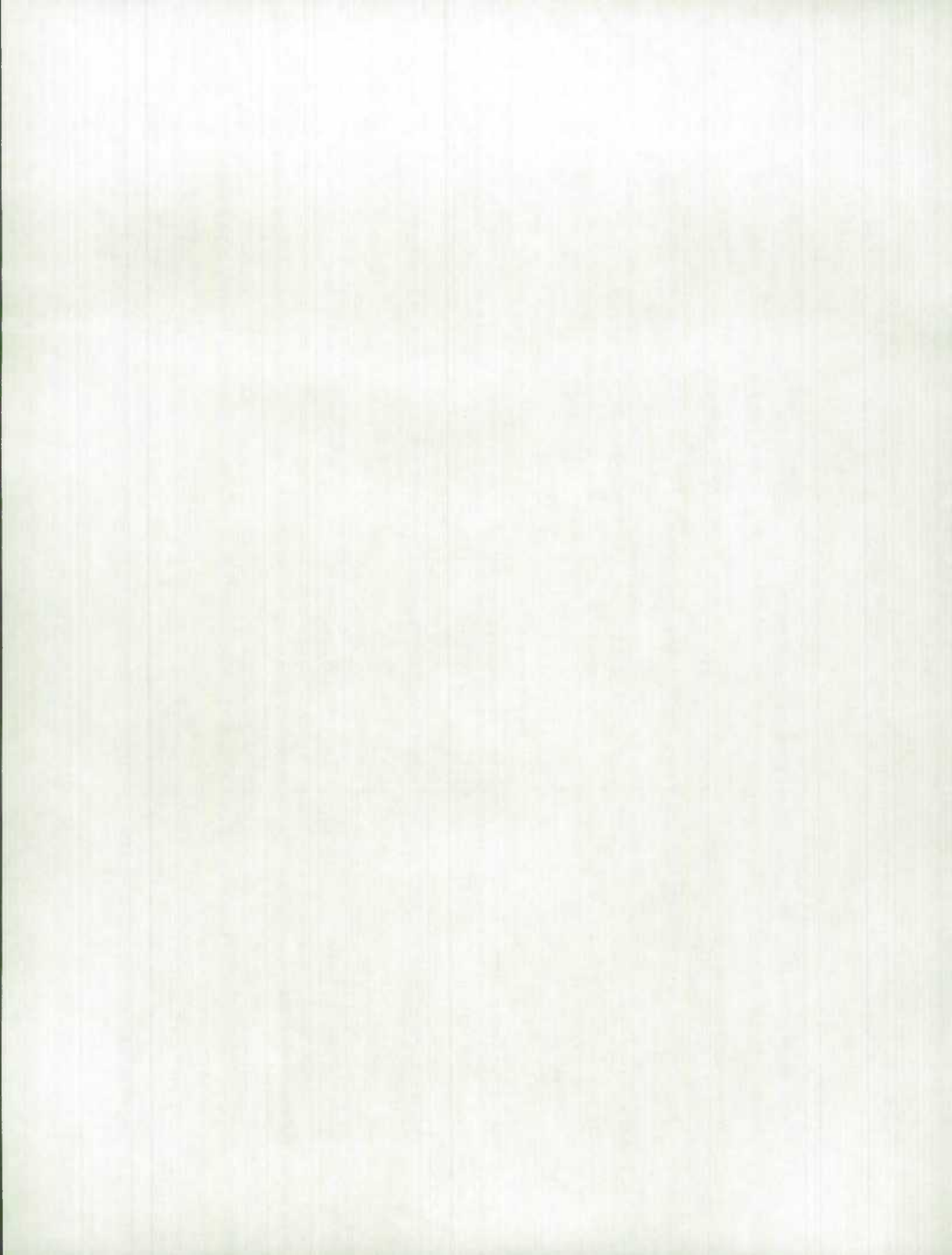


TABLE 1. TRANSFERS FROM THE GOVERNMENT SECTOR TO THE PERSONAL SECTOR

<u>AS PUBLISHED</u>	<u>GRANTS</u>	<u>TRUST FUND TYPE</u>	<u>QUID PRO QUO</u>
19.Grants - international development assist programs	19.Grants - international development assist prgms		
20.Miscellaneous	20.Miscellaneous		
B.Provincial			
1.Direct relief	1.Direct relief		
2.Old age and blind pensions	2.Old age and blind pensions		
3.Mothers & disabled allowances	3.Mothers & disabled allowances		
4.Workmen's compensation benefits		4.Workmen's compensation benefits	
5.Pensions to government employees		5.Pensions to government employees	
6.Grants to post-secondary educational institutions			6.Grants to post-secondary educational institutions
7.Grants to benevolent associations			7.Grants to benevolent associations
8.Miscellaneous	8.Miscellaneous		
C.Local			
1.Direct relief	1.Direct relief		
2.Grants to charitable & other organizations			2.Grants to charitable & other organizations
D.Canada Pension Plan		D.Canada Pension Plan	
E.Quebec Pension Plan		E.Quebec Pension Plan	

TABLE 2. SUBSIDIES AS PUBLISHED IN OFFICIAL STATISTICS AND THEIR CLASSIFICATION FOR THIS STUDY

<u>AS PUBLISHED</u>	<u>CLASSIFIED TO INCORPORATED BUSINESS</u>	<u>CLASSIFIED TO UNINCORPORATED BUSINESS</u>
A.Federal		
1.Canadian Wheat Board trading loss		1.Canadian Wheat Board trading loss
2.Freight assistance on western feed grains		2.Freight assistance on western feed grains
3.Assistance re storage costs on grain		3.Assistance re storage costs on grain
4.Two-price wheat		4.Two-price wheat
5.Western grain stabilization plan payments		5.Western grain stabilization plan payments
6.Fluid milk		6.Fluid milk
7.Canadian Dairy Commission payments		7.Canadian Dairy Commission payments
8.Hog premiums		8.Hog premiums
9.Agr stabilization board loss or payments		9.Agr stabilization board loss or payments
10.Miscellaneous		10.Miscellaneous
11.Emergency gold mines assistance	11.Emergency gold mines assistance	
12.Movement of coal	12.Movement of coal	
13.Atlantic region freight assistance act	13.Atlantic region freight assistance act	
14.Maritime freight rates act	14.Maritime freight rates act	
15.Other payments to railways	15.Other payments to railways	
16.Grants to Canadian Broadcasting Corporation	16.Grants to Canadian Broadcasting Corporation	
17.Training-on-the-job program	17.Training-on-the-job program	
18.Payts to importers crude oil & petroleum	18.Payts to importers crude oil & petroleum	
19.Petroleum compensation fund payments	19.Petroleum compensation fund payments	
20.Housing assistance		20.Housing assistance
21.Assist to industry for applied research	21.Assist to industry for applied research	

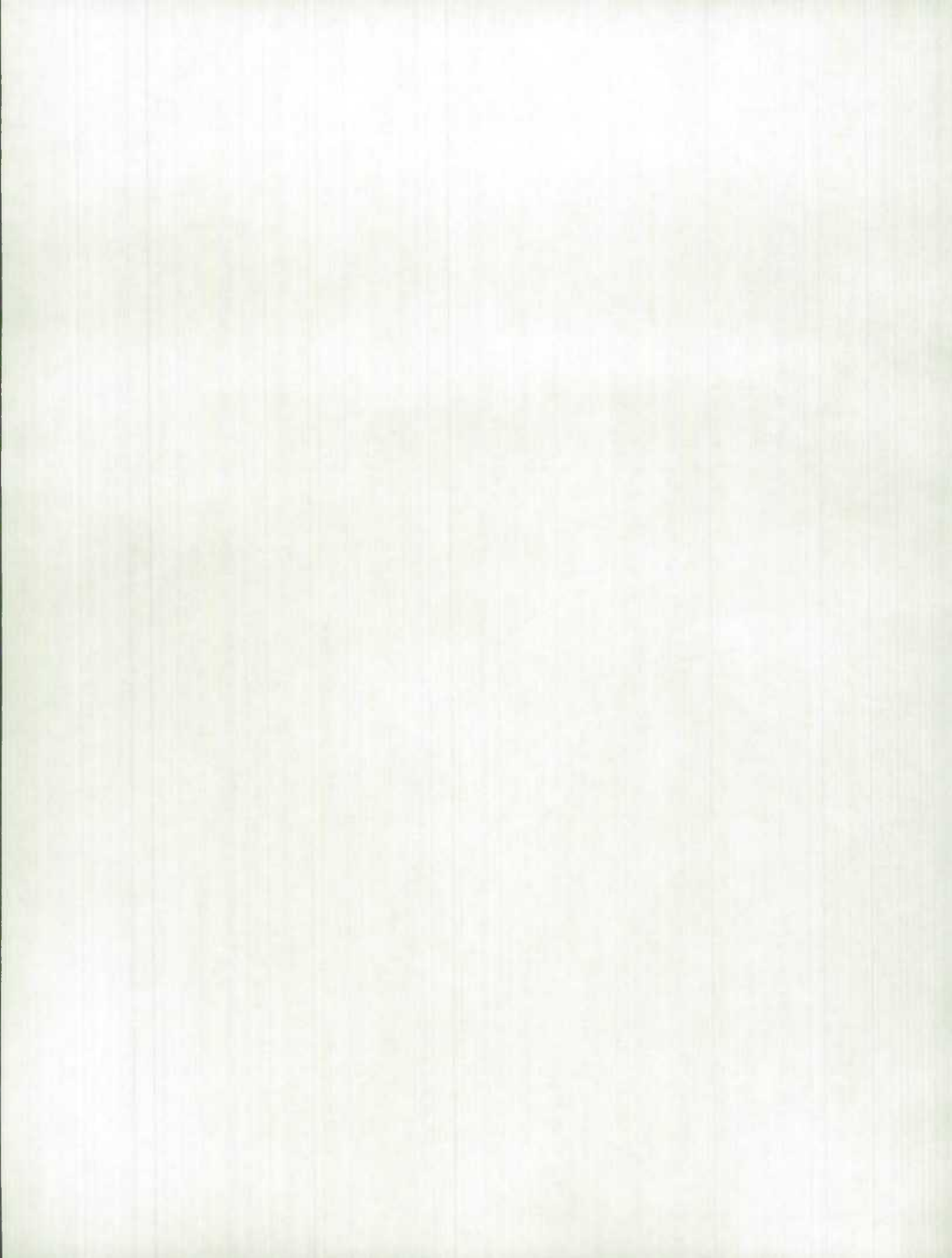


TABLE 2. SUBSIDIES AS PUBLISHED IN OFFICIAL STATISTICS AND THEIR CLASSIFICATION FOR THIS STUDY

<u>AS PUBLISHED</u>	<u>CLASSIFIED TO INCORPORATED BUSINESS</u>	<u>CLASSIFIED TO UNINCORPORATED BUSINESS</u>
22.Grants to Canada Post	22.Grants to Canada Post	
23.Miscellaneous	23.Miscellaneous	
24.Adjustment to accrual basis	24.Adjustment to accrual basis	
B.Provincial	B.Provincial	
25.Total provincial	25.Total provincial	
26.(Of which: adjustment to accrual basis)	26.(Of which: adjustment to accrual basis)	
C.Local	C.Local	

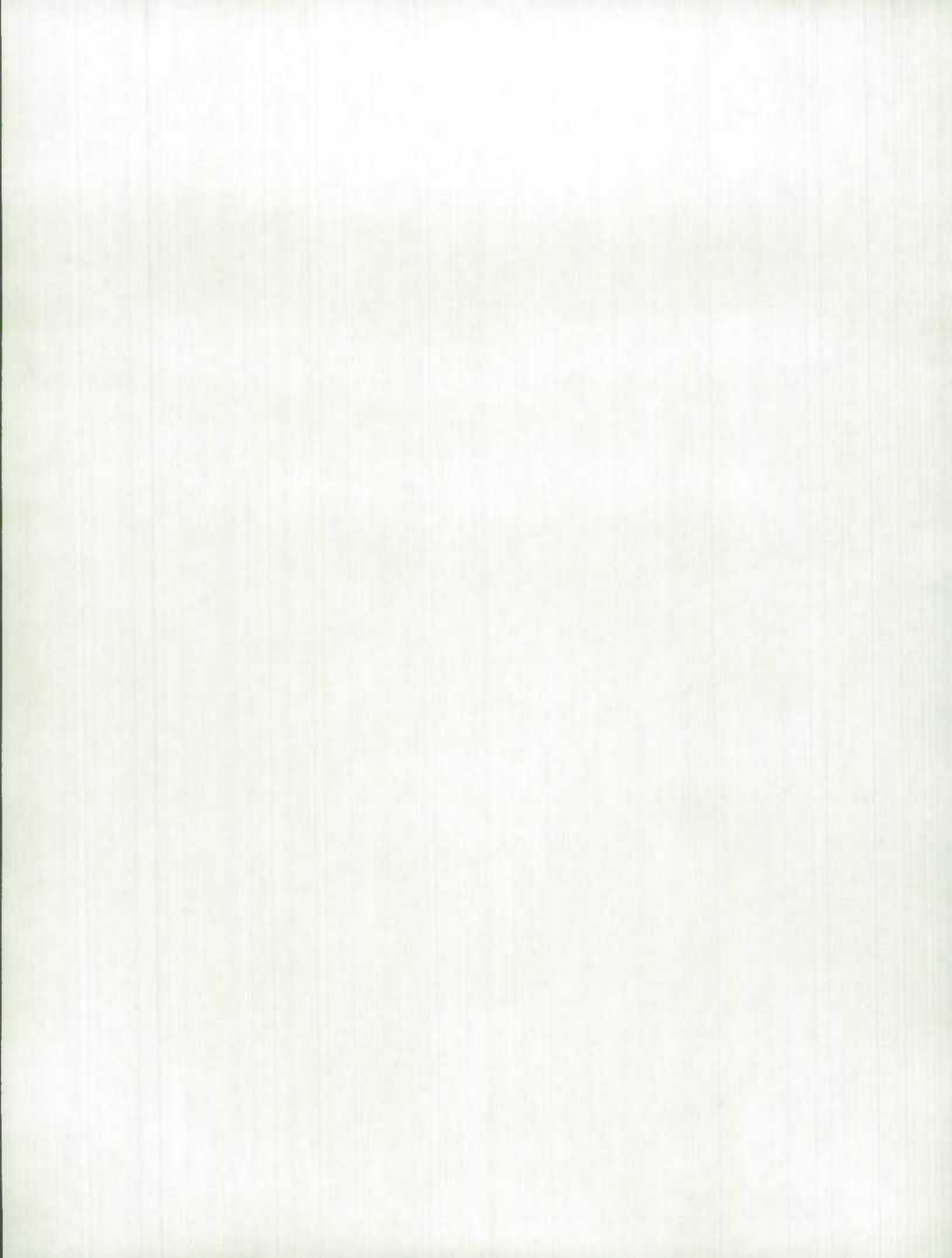


TABLE 3. TRANSFERS FROM THE PERSONAL SECTOR TO THE GOVERNMENT SECTOR

<u>AS PUBLISHED</u>	<u>GRANTS</u>	<u>TRUST FUND TYPE</u>	<u>QUID PRO QUO</u>
A.Federal			
1.Income taxes	1.Income taxes		
2.Succession duty & estate tax	2.Succession duty & estate tax		
3.Employer & employee contribs - ps pensions		3.Employer & employee contributions - ps pensions	
4.Employer & employee contribs - unemployment insurance		4.Employer & employee contributions - unemployment insurance	
5.Other	5.Other		
B.Provincial			
1.Income taxes	1.Income taxes		
2.Succession duties	2.Succession duties		
3.Employer & employee contribs - ps pensions		3.Employer & employee contributions - ps pensions	
4.Employer contributions to workmen's compensation		4.Employer contributions to workmen's compensation	
5.Employer & employee contribs industrial employees vacation		5.Employer & employee contributions industrial employees vacation	
6.Employer & employee contribs to Canada Pension Plan		6.Employer & employee contributions to Canada Pension Plan	
7.Employer & employee contribs to Quebec Pension Plan		7.Employer & employee contributions to Quebec Pension Plan	
8.Motor veh licences & permits			8.Motor vehicle licences & permits
9.Hospital & medical insurance	9.Hospital & medical insurance		
10.Miscellaneous	10.Miscellaneous		
C.Local	C.Local		
D.Hospitals	D.Hospitals		

IV Analysis of Grant Flows

1. Public Sector Versus Personal Sector Including Unincorporated Business

In 1961, the public sector which in this case is the donor sector gave grants amounting to \$1.6 billion to the personal sector including unincorporated business i.e. the donee sector; the public sector received back grant inflows of \$2.4 billion from the personal sector. (Tables 4 and 5) As the inflow was larger than the outflow, there was a net negative public grant outflow of \$849 million (i.e. less than a billion dollars) to the personal sector. In other words, the personal sector gave back \$849 million or 53% more than it got from the public sector in 1961. (Table 5)

By 1991, the public grants to that donee sector rose from about \$2 billion in 1961 to \$42 billion -- or a 21-fold increase in 3 decades. In contrast, the public sector received back grant inflows of about \$104 billion in 1991 -- a 52-fold increase during the 3 decades. Here again, as the inflow to the public sector was larger than the outflow, there was still a negative grant outflow which rose from about \$1 billion in 1961 to about \$62 billion in 1991 -- a 62-fold increase. In other words, in 1991 the personal sector gave back about \$62 billion or 147% more than it received from the public sector. (Table 5) There was therefore a significant upward trend in the level of Grant Originating from the

personal sector (including unincorporated business) from about 53% of what it received as public grant in 1961 to about 147% in 1991. (Tables 5 and 10; Charts 1 and 2)

Table 10: Grant Originating from Personal Sector for Selected Years

Year	Grants from Personal Sector to Public Sector	Public Grants to Personal Sector	Grant Originating Amount	% of Public Grants
\$ Millions				
1961	2,449	1,600	849	53.1%
1971	11,336	4,943	6,393	129.3%
1981	41,182	17,086	24,096	141.0%
1990	102,149	36,393	65,756	180.7%
1991	103,648	41,987	61,661	146.9%

(See Table 5 for other years)

If we analyze only the gross outflows of the public sector, we would notice the 21-fold increase in the gross outflows from 1961 to 1991, but we would miss the 52-fold increase of inflows as well as the 62-fold increase in the Grant Originating from the personal sector.

Chart 1. Grants between Public Sector & Personal Sector (including Unincorporated Business)

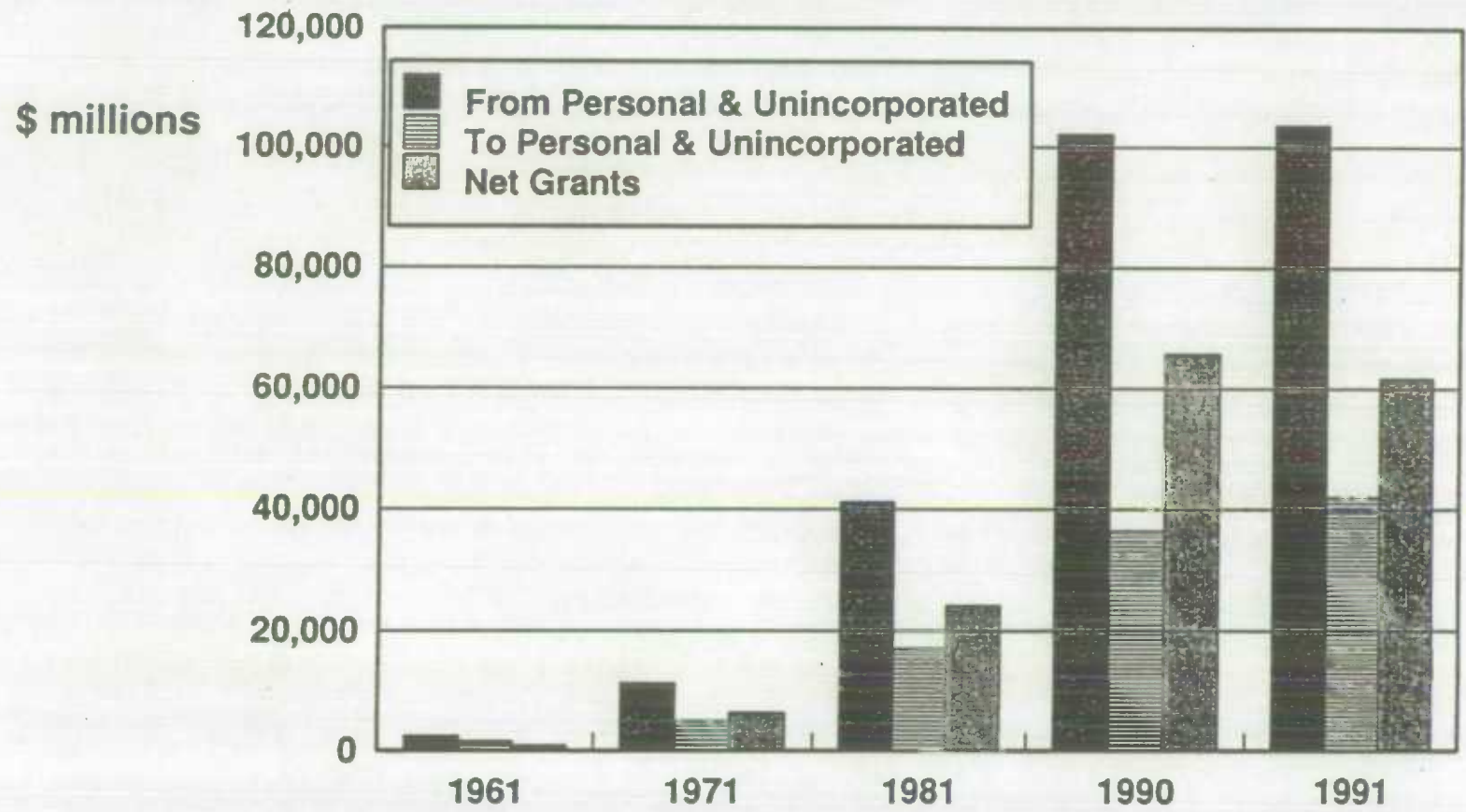
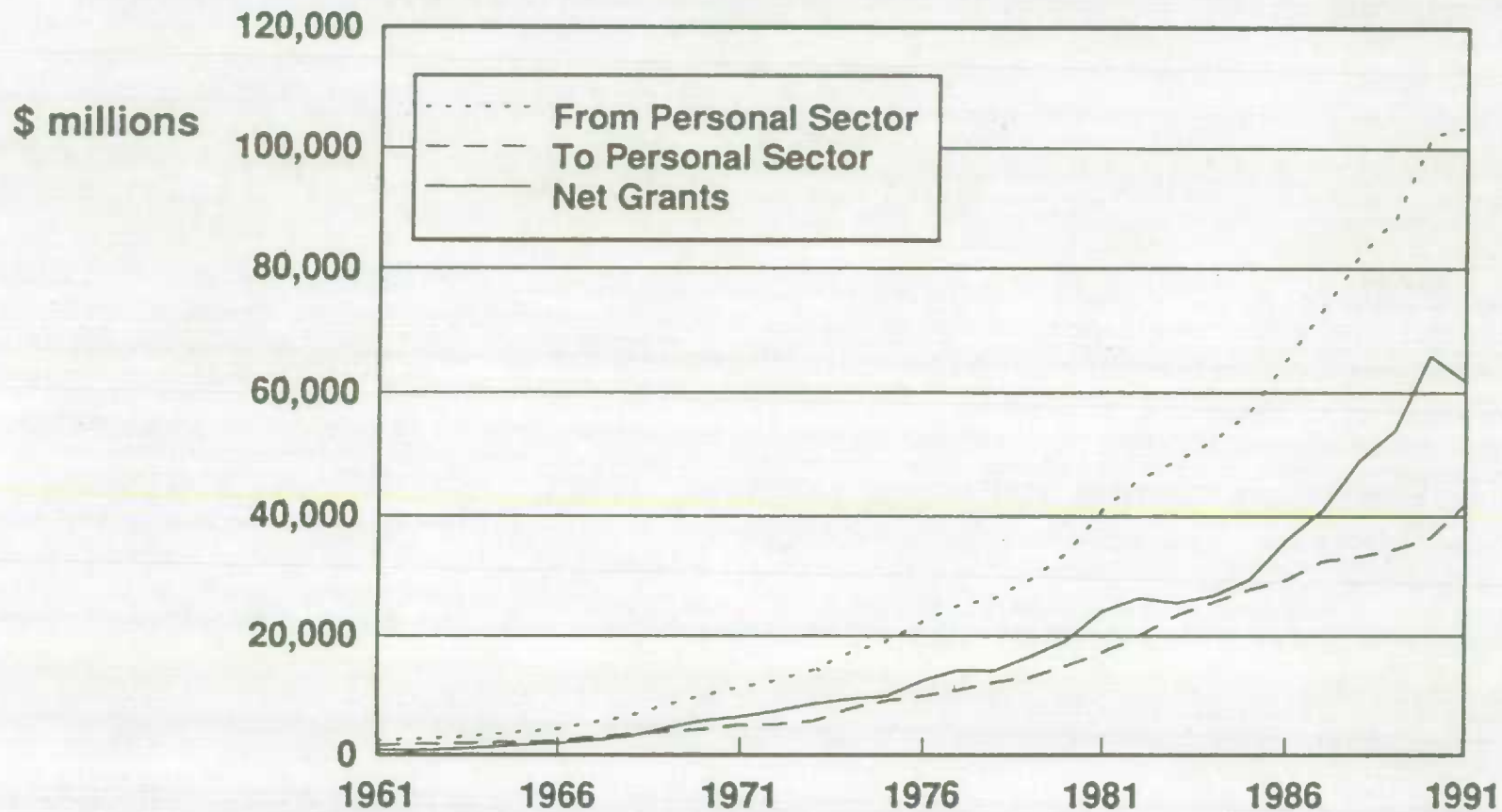
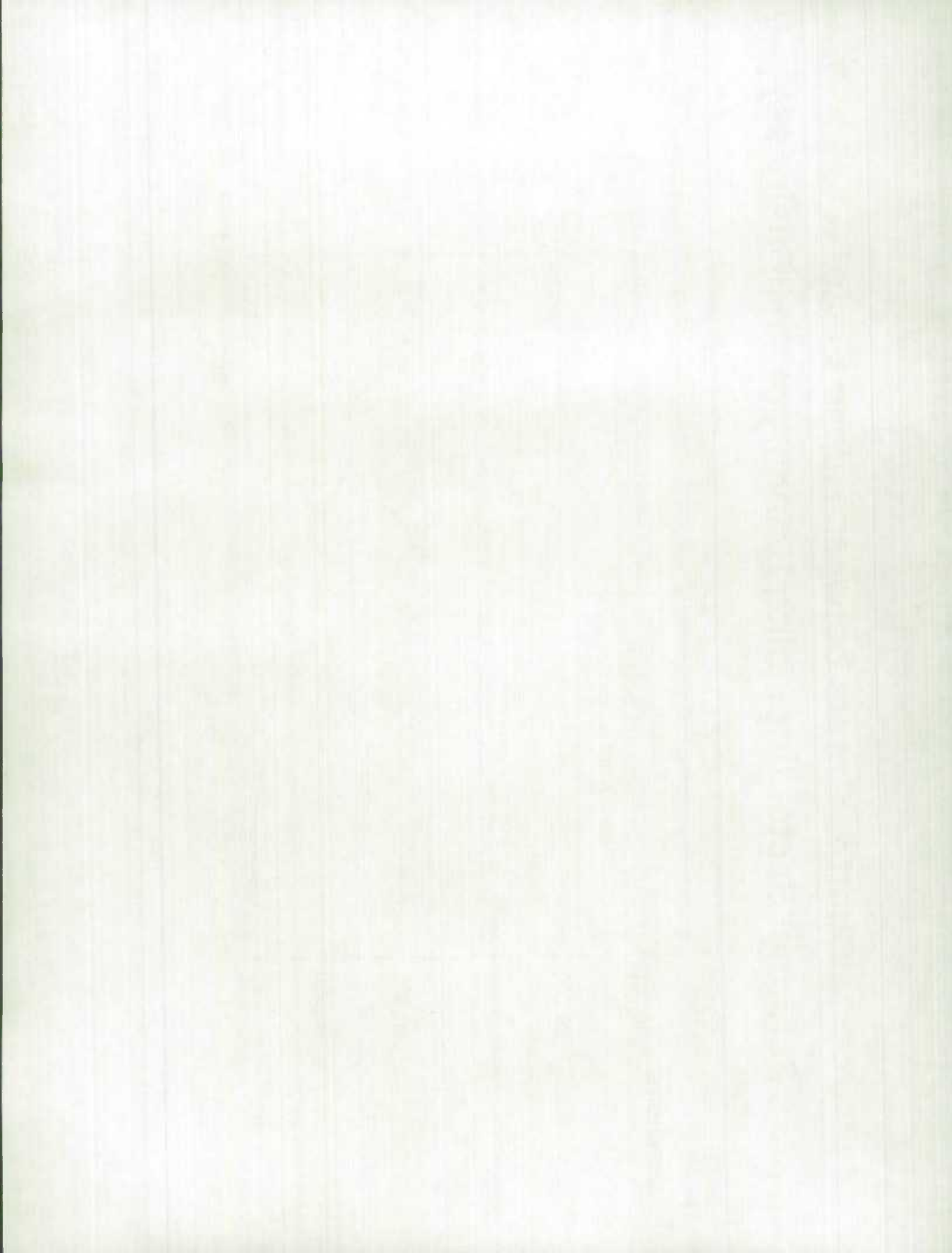


Chart 2. Grants between Public Sector & Personal Sector (including Unincorporated Business)





2. Public Sector Versus Incorporated Business Sector

In 1961, the public grants to the incorporated business sector amounted to about one quarter billion dollars (i.e. \$251 million) but the public sector received back \$1.6 billion as grants from the donee sector. (Tables 6 and 7) As the amount received back is larger than that was given, the net outflow from the public sector was a negative \$1.4 billion in 1961. This means, in 1961 the incorporated business sector gave back \$1.4 billion or 557% more than it got from the public sector. (Table 7)

By 1991, the public grants to the incorporated business sector, rose from one quarter billion dollars in 1961 to \$13.4 billion in 1991 -- a 53-fold increase in 3 decades. In contrast, the grant outflow from the incorporated business sector to the public sector rose from about \$2 billion in 1961 to about \$14 billion by 1991 with an 8-fold increase. Therefore, the incorporated business sector gave back about \$300 million or 2% more than it got from the donor sector in 1991. The net outflow from the public sector was still a negative one but it was much smaller than that of 1961. In other words, what the public sector gave as grants to the incorporated business rose substantially over the 3 decades much higher than what it got back as grants from that sector. This resulted in a sharp declining trend in the Grant Originating from the incorporated business sector from about

Chart 3. Grants between Public Sector & Incorporated Business Sector

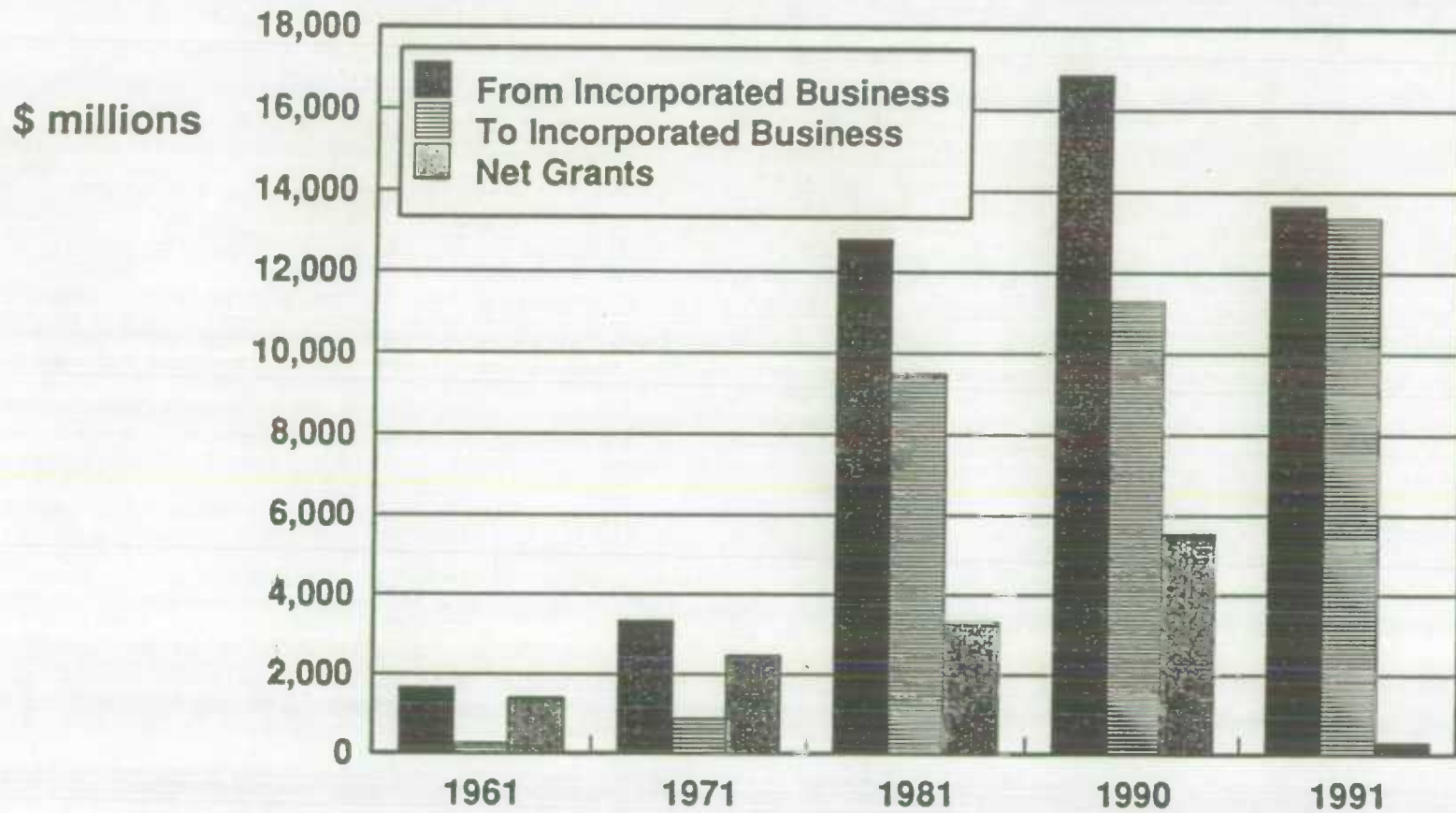
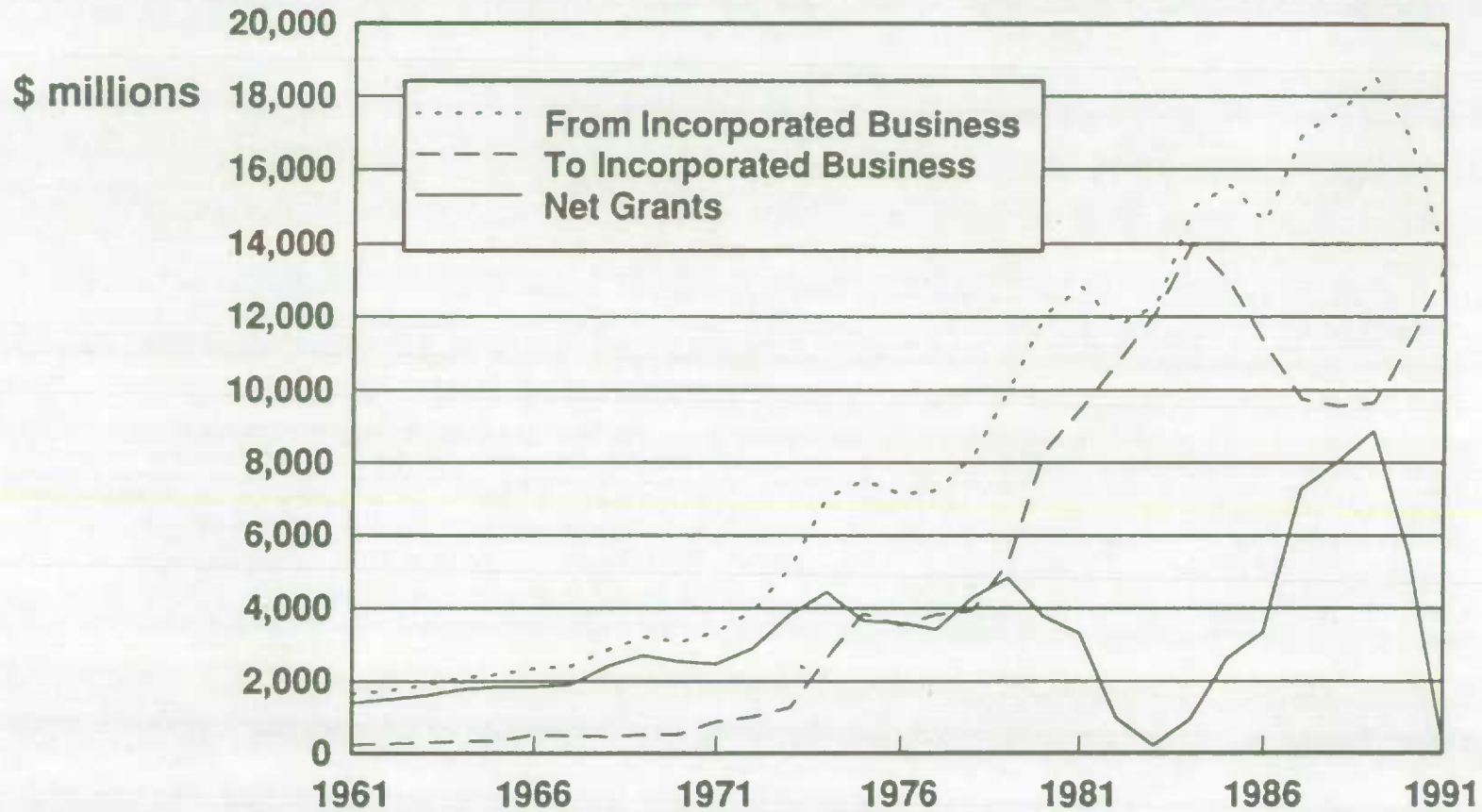
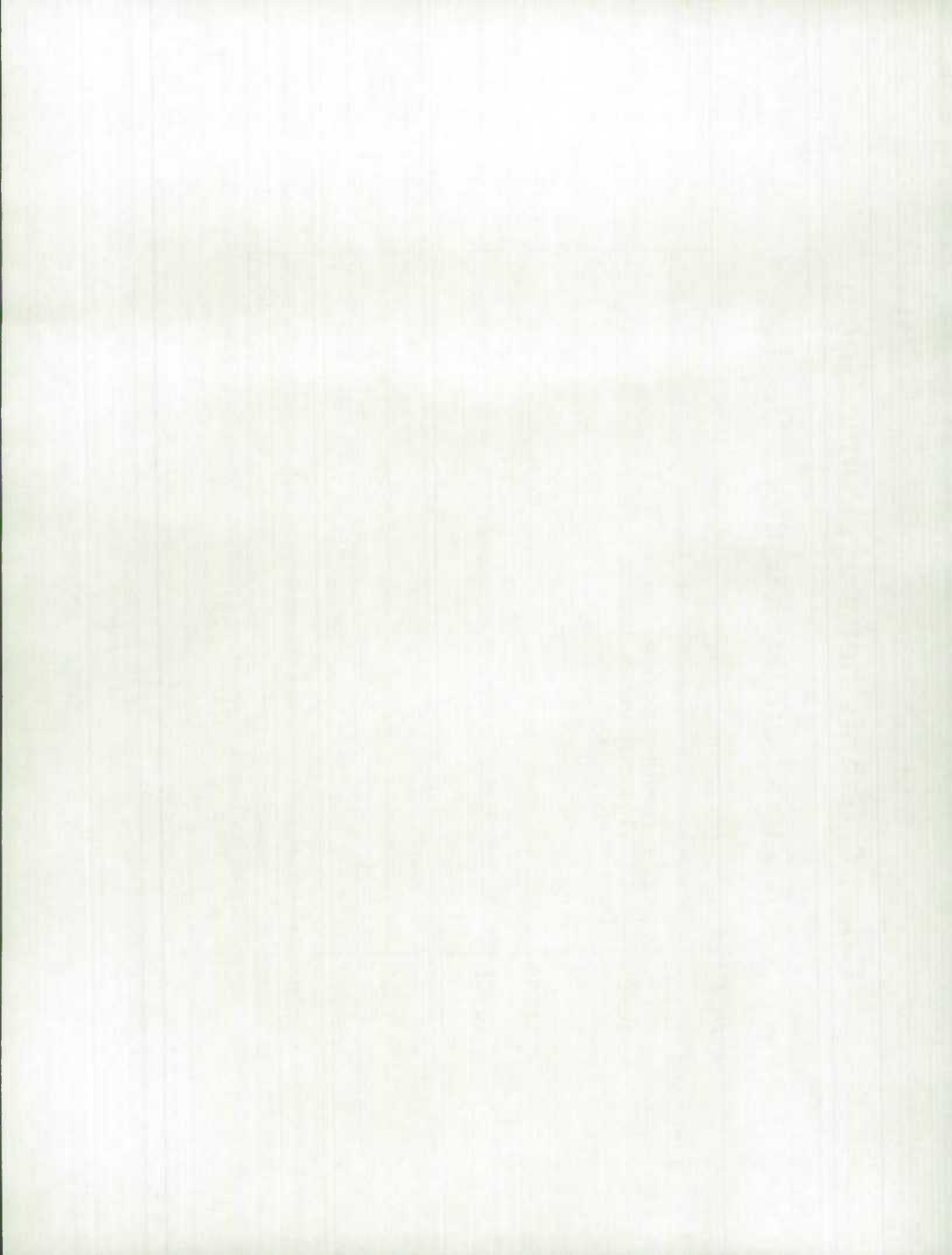


Chart 4. Grants between Public Sector & Incorporated Business Sector





557% of what the public sector gave to that sector in 1961 to about 2% by 1991. (Tables 7 and 11; Charts 3 and 4)

Table 11: Grant Originating from Incorporated Business Sector for Selected Years

Year	Grants from Incorporated Business Sector to Public Sector	Public Grants to Incorporated Business Sector	Grant Originating	
			Amount	% of Public Grants
\$ Millions				
1961	1,649	251	1,398	557.0%
1971	3,346	884	2,462	278.5%
1981	12,796	9,481	3,315	35.0%
1990	16,851	11,298	5,553	49.2%
1991	13,649	13,353	296	2.2%

(See Table 7 for other years)

Here again, if we analyze only the gross outflows of public grants, we would notice the 53-fold increase in the gross outflows from 1961 to 1991, but we would miss the 8-fold increase of inflows as well as the substantial drop of Grant Originating in the incorporated business sector.

3. Grant Originating (GO)

Based on the Canadian experience, the net grant outflow from the public sector to the private sector, consisting of both the personal and business sectors, was negative from 1961 to 1991. In other words, the Grant Originating in the public sector, as far as the private sector is concerned, is zero, because the counterflows from the private sector to the public sector were larger than the public grants for the 3 decades.

Within the private sector, the Grant Originating in the personal sector is significantly larger than that of the incorporated business sector. (Charts 5 and 6; and Table 12A)

In terms of GDP (i.e. GDP at market prices), the incorporated Business sector's net outflow was 3.4% of the GDP in 1961 and it declined steadily to almost nothing by 1991. (Tables 8 and 12A) By 1990, it was only about 1%. In sharp contrast, the net outflows of the personal sector (including unincorporated business) which were only about 2% of GDP in 1961 rose steadily to about 9% by 1991. (Tables 8, 12A and Chart 5)

Table 12A: GDP and Grant Originating in Private Sector for Selected Years

Year	GDP at market prices	Grant Originating in		% of Grant Originating to GDP	
		Personal Sector	Incorporated Business Sector	Personal Sector	Incorporated Business Sector
\$ Millions					
1961	40,886	849	1,398	2.1%	3.4%
1971	97,290	6,393	2,462	6.6%	2.5%
1981	355,994	24,096	3,315	6.8%	0.9%
1990	667,843	65,756	5,553	9.8%	0.8%
1991	674,388	61,661	296	9.1%	0.04%

(See Table 8 for other years)

The net grant inflow or the grant originating from the private sector in terms of government expenditure on goods and services (as measured in the final demand table of the GDP) reveals interesting relationships.

Chart 5. Net Grants as Percentage of G.D.P.

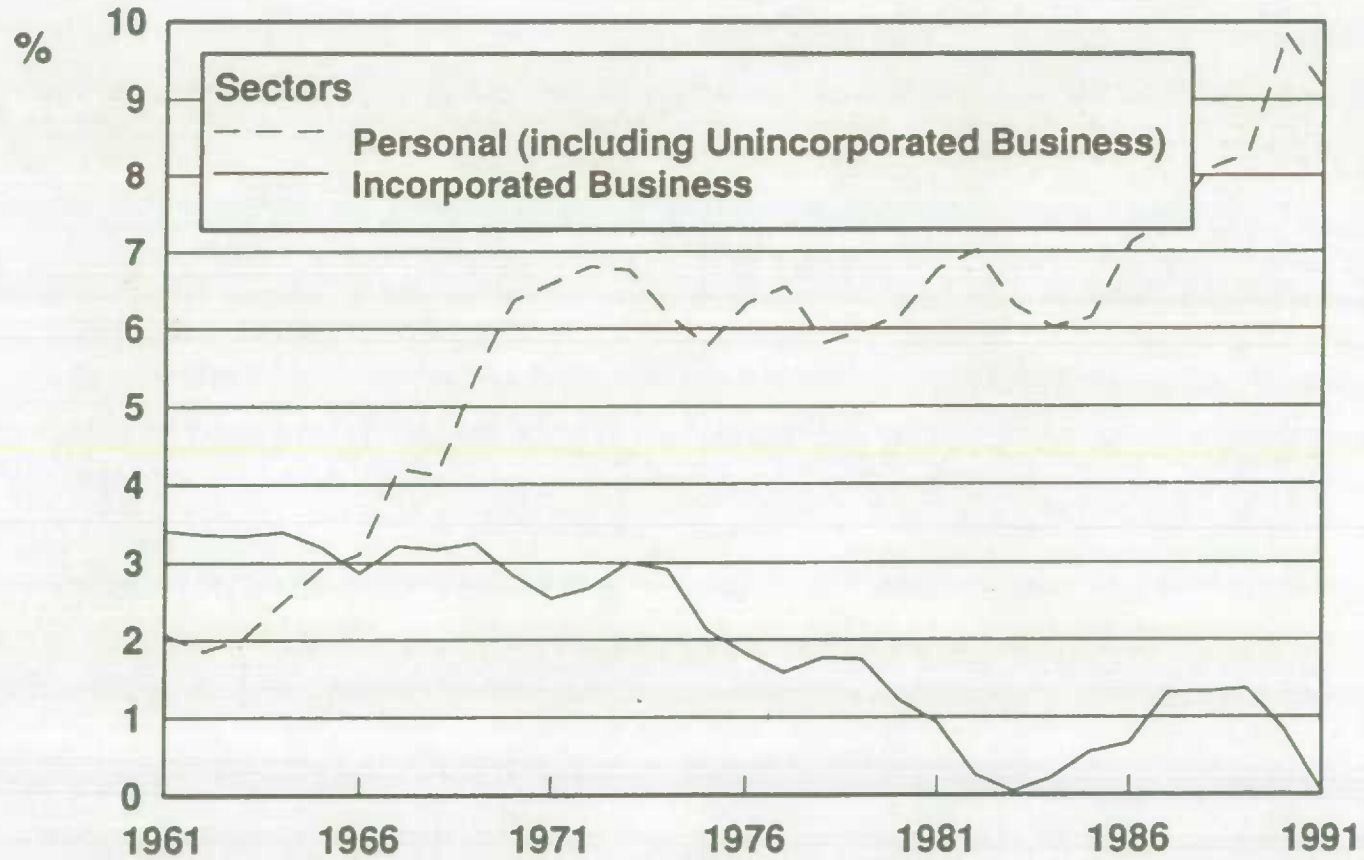
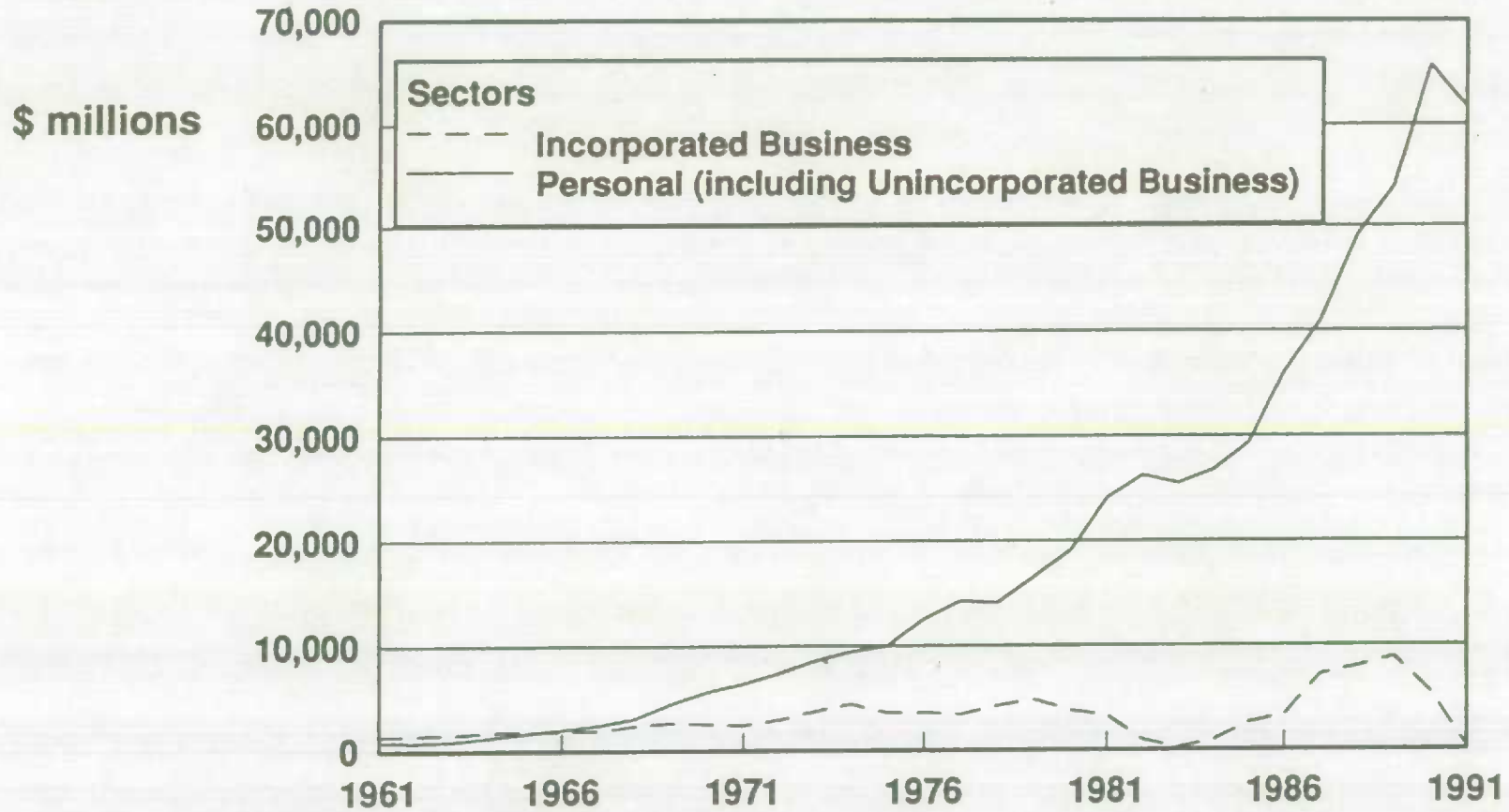


Chart 6. Net Grants to Public Sector



In 1961, the grant originating in the private sector was about 29% of the government expenditure on goods and services and it rose to about 40% by 1991. (Table 12B)

Within the private sector, the grant originating in the personal sector was about 11% of government expenditure on goods and services in 1961 while the grant originating in the incorporated business sector was about 18%. By 1991, this relationship changed significantly. The grant originating in the personal sector rose from about 11% in 1961 to about 39% in 1991 while the GO in the incorporated business sector declined from about 18% in 1961 to less than 1% (0.2%) in 1991. (Tables 9 and 12B)

Table 12B: Government Expenditure and Grant Originating in Private Sector for Selected Years

Year	Government Expenditure on Goods and Services	Grant Originating in		% of Grant Originating to Government Expenditure on Goods and Services	
		Personal Sector	Incorporated Business Sector	Personal Sector	Incorporated Business Sector
\$ Millions					
1961	7,848	849	1,398	10.8%	17.8%
1971	21,933	6,393	2,462	29.1%	11.2%
1981	78,034	24,096	3,315	30.9%	4.2%
1990	150,529	65,756	5,553	43.7%	3.7%
1991	157,046	61,661	296	39.3%	0.2%

(See Table 9 for other years)

Summary and Conclusions

1. In summary, this study demonstrated the usefulness of using net outflows. It is based on the GO concept, namely, Grant Originating concept which combines the public grant outflows with the grant inflows from the donee sector to derive the level of grant originating. Although the gross outflows denote the absolute levels and changes thereof, they do not tell us how much offsets are involved due to the grant inflows from the donee sectors. If the net public sector grant outflows are also analyzed as proposed in this study, the aspect of counterflows would come to the surface for evaluation of equity and fairness in the grant transactions.

The relative importance of the net flows from other sectors of the economy to the public sector can be assessed only by the study of the net flow approach based on the GO concept recommended here.

2. The data of net grant outflows in Canada indicate that the Grant Originating in persons and unincorporated business sector is much larger than that of the incorporated business sector and grew significantly from 1961 to 1991. The net outflows of the incorporated business sector declined substantially from about 3% of GDP in 1961 to about 1% in 1990, while those of the personal sector

increased significantly from 2% in 1961 to 10% in 1990.
(Table 8)

3. Also, the net outflow measurement based on the GO concept would reflect the effect of implicit grants involved in the government policies of grant giving. If, instead of giving a certain amount of grant, the government decides to give a reduction in the grant inflow from the sector concerned, the effect of the implicit grant transaction for which data are normally not available would be hidden.
4. It has also been demonstrated that the official statistics of government transfer payments and receipts measured in the System of National Accounts should be filtered through the grants concept of Grants Economics for a realistic evaluation of grants. Although transfers in the National Accounts should, by definition, be the same as "grants", the present classification procedures do not conform to the grants concept and they need changes as suggested here.
5. With this GO concept, let us see where we can go from here. There are several uses of this GO concept. For example, the interdependency of sectors by net grant flows can be studied. These studies can be extended to other countries and inter-country comparisons can be made.

6. Also, as the grant outflows from the personal and business sectors are mainly income taxes, the GO concept can be used in studies concerning income taxation. For example, grants originating can be shown by income groups or occupational groups depending on the data availability. In other words, this study can be done between any sub-group of the business sector and the public sector. It can also be done between any sub-group of the personal sector and the public sector. Such studies would require detailed information of the sectors along with the content of those sectors to develop the databases. These are just a few uses of the GO concept.
7. The sectoral Grant Accounts developed in this study at the macro-level using the three-sector model of the SNA can be extended to the four-sector model covering the non-resident sector also to include the international grants. Such Grant Accounts would be very useful for policy analysts, policy makers and other researchers.
8. As the main purpose of this paper is to add a new perspective to the analysis of public grants, the highlights of the analysis presented here contain only the major trends in the data of 3 decades from 1961 to 1991. The identification of reasons for the trends requires further research and such a task should be the subject of future papers in the area of Grants Economics.

REFERENCES

1. Boulding, Kenneth E., Martin Pfaff, and Janos Horvath, "Grants Economics: A Simple Introduction", American Economist, Spring 1972.
2. Horvath, Janos "On the Evaluation of International Grants Policy", Public Finance, 1971.
3. Horvath, Janos "Rural America and the Grants Economy", American Journal of Agricultural Economics, December 1971.
4. Murty, P.S.K. and Yusuf Siddiqi, Government Expenditures on Goods and Services and Transfer Payments in Canada, 1961-1985, presented at the joint session of the American Economic Association and the Association for the Study of the Grants Economy held in Atlanta on December 30, 1989.
5. Murty, P.S.K. and Yusuf Siddiqi, A New Paradigm to Analyze Commodity Indirect Taxes and Subsidies, 1986-1989, Statistics Canada. Ottawa, April 5, 1991.
6. Murty, P.S.K., New Paradigm to Analyze Government Transfer Payments with Special Reference to Canada, presented at the Second Annual Convention of the International Congress of Political Economists held in Boston, January 9-12, 1991.
7. Murty, P.S.K. and Yusuf Siddiqi, Scope of Public Grants Economy in Canada, presented at the joint session of the American Economic Association and the Association for the Study of the Grants Economy held in New Orleans, January 3-5, 1992.
8. Murty, P.S.K. and Yusuf Siddiqi, Transfer Payments in National Accounts and Grants Economics, presented at the 22nd General Conference of the International Association for Research in Income and Wealth held in Flims, Switzerland, August 30 - September 5, 1992.
9. Statistics Canada, National Income and Expenditure Accounts, Annual estimates, 1926-86, Catalogue 13-531, Ottawa, June 1988; Annual estimates, 1978-89, Catalogue 13-201, Ottawa, December 1990; and Annual estimates 1980-1991, Catalogue 13-201, Ottawa, August 1992.
10. Statistics Canada, National Income and Expenditure Accounts, Volume 3, A Guide to the National Income and Expenditure Accounts, Definitions - Concepts - Sources - Methods, Catalogues 13-549E, Ottawa, September 1975.

04:01:32 PM
03-DEC-1992

TABLE 4. NEM PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS & UNINCORPORATED BUSINESS (\$ millions)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
I.a. GRANTS FROM PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR - DIRECT TAXES																	
A. FEDERAL																	
1. INCOME TAXES	2050	1994	2102	2465	2612	2846	3473	4167	5415	6302	7081	7889	9228	11121	12278	14477	14283
2. SUCCESSION DUTIES AND ESTATE TAXES	80	93	89	91	101	106	96	112	104	111	136	80	22	9	6	12	22
3. TOTAL FEDERAL	2130	2087	2191	2556	2713	2952	3569	4279	5519	6413	7217	7969	9250	11130	12284	14489	14305
B. PROVINCIAL																	
4. INCOME TAXES	75	322	385	492	743	1057	1431	1755	2049	2509	3062	3496	4057	5034	5741	6570	9373
5. SUCCESSION DUTIES	66	72	82	89	111	109	110	118	137	155	143	150	183	169	150	136	117
6. TOTAL PROVINCIAL	141	394	467	581	854	1166	1541	1873	2186	2664	3205	3646	4240	5203	5891	6706	9490
7. TOTAL GRANTS - DIRECT TAXES	2271	2481	2658	3137	3567	4118	5110	6152	7705	9077	10422	11615	13490	16333	18175	21195	23795
I.b. GRANTS FROM PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR - OTHER																	
A. FEDERAL	2	1	2	2	3	3	3	4	2	2	4	5	6	8	8	11	13
B. PROVINCIAL																	
1. HOSPITAL & MEDICAL INSURANCE PREMIUMS	122	122	125	150	187	197	220	367	544	774	778	683	680	701	687	944	1055
2. MISCELLANEOUS	20	23	24	26	29	31	35	47	70	74	79	80	93	109	115	137	146
3. TOTAL PROVINCIAL	142	145	149	176	216	228	255	414	614	848	857	763	773	810	802	1081	1201
C. LOCAL	32	35	38	43	51	56	63	52	44	46	49	51	56	57	61	76	85
D. HOSPITALS	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	22	25
4. TOTAL GRANTS - OTHER	178	184	192	224	273	290	324	473	664	900	914	823	839	879	875	1190	1324
5. TOTAL GRANTS BY PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR (I.a.7 + I.b.4)	2449	2665	2850	3361	3840	4408	5434	6625	8369	9977	11336	12438	14329	17212	19050	22385	25119

04:01:32 PM
03-DEC-1992

TABLE 4. NEW PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS & UNINCORPORATED BUSINESS (\$ millions)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
II. GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS																	
A. FEDERAL																	
1. FAMILY AND YOUTH ALLOWANCES	517	529	537	559	599	606	611	615	618	618	619	611	711	1769	1961	1942	2084
2. OLD AGE SECURITY PAYMENTS	597	713	767	871	890	994	1318	1478	1659	1862	2114	2430	2824	3303	3753	4305	4692
3. GRANTS FROM CANADA COUNCIL	9	7	14	12	10	8	16	20	26	30	32	40	38	43	54	60	66
4. SCHOLARSHIPS AND GRANTS- RESEARCH	0	0	17	24	27	52	61	90	89	99	106	100	107	109	121	133	148
5. ADULT OCCUPATIONAL TRAINING PAYMENTS	0	0	0	0	0	0	21	101	121	148	166	150	147	150	171	190	195
6. ASSISTANCE TO IMMIGRANTS	2	1	2	2	2	1	2	4	5	2	2	2	3	1	5	2	2
7. PRAIRIE FARM ASSISTANCE ACT	35	30	15	9	11	6	3	8	9	6	3	3	5	0	0	0	0
8. PAYMENTS TO WESTERN GRAIN PRODUCERS	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. GRANTS - INTERNAT'L DEV ASSIST PROGS	0	0	0	0	0	0	0	0	0	7	11	16	18	25	32	33	33
10. MISCELLANEOUS	33	37	29	36	19	31	30	43	58	46	134	95	94	124	71	64	248
11. TOTAL FEDERAL	1193	1357	1381	1513	1558	1698	2062	2359	2585	2818	3187	3447	3947	5524	6168	6729	7468
B. PROVINCIAL																	
12. DIRECT RELIEF	34	39	49	59	73	143	257	381	454	535	712	751	828	1014	1200	1392	1611
13. OLD AGE AND BLIND PENSIONS	82	103	103	116	122	101	68	40	24	18	17	23	78	162	274	334	327
14. MOTHERS & DISABLED PERSONS ALLOWANCES	72	81	79	93	108	113	91	69	55	41	50	41	37	43	39	64	72
15. MISCELLANEOUS	50	58	59	64	80	93	200	320	396	391	464	268	268	309	332	317	398
16. TOTAL PROVINCIAL	238	281	290	332	383	450	616	810	929	985	1243	1083	1211	1528	1845	2107	2408
C. LOCAL																	
17. DIRECT RELIEF	75	79	81	80	83	89	98	131	141	211	258	244	248	214	255	270	266
18. SUB-TOTAL GRANTS BY GOVERNMENT SECTOR	1506	1717	1752	1925	2024	2237	2776	3300	3655	4014	4688	4774	5406	7266	8268	9106	10142
19. a. FEDERAL SUBSIDIES TO UNINCORPORATED BUSINESS	94	128	140	143	141	163	180	219	245	295	233	228	268	483	672	591	587
b. CAPITAL ASSISTANCE TO UNINCORPORATED BUSINESS	0	0	0	0	0	0	0	0	0	0	22	46	59	71	205	192	165
20. TOTAL GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS	1600	1845	1892	2068	2165	2400	2956	3519	3900	4309	4943	5048	5733	7820	9145	9889	10894

04:01:32 PM
03-DEC-1992

TABLE 4. NEW PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS &
UNINCORPORATED BUSINESS (\$ millions)

SUMMARY	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
I. GRANTS BY PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR	2449	2665	2850	3361	3840	4408	5434	6625	8369	9977	11336	12438	14329	17212	19050	22385	25119
II. GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS	1600	1845	1892	2068	2165	2400	2956	3519	3900	4309	4943	5048	5733	7820	9145	9889	10894
III. NET GRANTS: FROM PERSONAL SECTOR TO GOVERNMENT SECTOR (I - II)	849	820	958	1293	1675	2008	2478	3106	4469	5668	6393	7390	8596	9392	9905	12496	14225

SOURCE: National Income and Expenditure Accounts, Annual Estimates,
1926-1986, Catalogue 13-531 Occasional Tables 49, 52 & 55
1978-1989, Catalogue 13-201 Annual Tables 50, 53 & 56
1980-1991, Catalogue 13-201 Annual Tables 42, 45 & 48

04:01:32 PM
03-DEC-1992

TABLE 4. NEM PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS &
UNINCORPORATED BUSINESS (\$ millions)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
I.a. GRANTS FROM PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR - DIRECT TAXES														
A. FEDERAL														
1. INCOME TAXES	13689	16321	19131	22976	25746	26809	28189	32141	37503	41741	46160	50642	58056	58442
2. SUCCESSION DUTIES AND ESTATE TAXES	18	15	1	1	1	0	0	0	0	0	0	0	0	0
3. TOTAL FEDERAL	13707	16336	19132	22977	25747	26809	28189	32141	37503	41741	46160	50642	58056	58442
B. PROVINCIAL														
4. INCOME TAXES	10981	11408	13009	16214	18186	19575	21405	22062	24875	28592	32728	34001	42131	43042
5. SUCCESSION DUTIES	99	94	71	53	56	65	47	65	13	8	7	2	3	2
6. TOTAL PROVINCIAL	11080	11502	13080	16267	18242	19640	21452	22127	24888	28600	32735	34003	42134	43044
7. TOTAL GRANTS - DIRECT TAXES	24787	27838	32212	39244	43989	46449	49641	54268	62391	70341	78895	84645	100190	101486
I.b. GRANTS FROM PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR - OTHER														
A. FEDERAL	15	17	17	15	15	16	18	22	23	25	24	34	35	33
B. PROVINCIAL														
1. HOSPITAL & MEDICAL INSURANCE PREMIUMS	1171	1265	1337	1498	1758	1967	2093	2171	2229	2346	2536	2750	997	1099
2. MISCELLANEOUS	169	190	200	229	262	280	287	278	311	357	417	472	471	539
3. TOTAL PROVINCIAL	1340	1455	1537	1727	2020	2247	2380	2449	2540	2703	2953	3222	1468	1638
C. LOCAL	88	112	136	154	166	175	192	197	224	233	284	264	296	315
D. HOSPITALS	22	30	34	42	56	59	71	84	101	113	129	145	160	176
4. TOTAL GRANTS - OTHER	1465	1614	1724	1938	2257	2497	2661	2752	2888	3074	3390	3665	1959	2162
5. TOTAL GRANTS BY PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR (I.a.7 + I.b.4)	26252	29452	33936	41182	46246	48946	52302	57020	65279	73415	82285	88310	102149	103648

04:01:32 PM
03-DEC-1992

TABLE 4. NEW PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS & UNINCORPORATED BUSINESS (0 millions)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
II. GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS														
A. FEDERAL														
1. FAMILY AND YOUTH ALLOWANCES	2224	1696	1812	1958	2204	2303	2393	2492	2524	2552	2595	2632	2711	2824
2. OLD AGE SECURITY PAYMENTS	5238	6085	7020	8213	9304	10137	10999	12150	13148	14006	14801	15718	16705	17954
3. GRANTS FROM CANADA COUNCIL	50	43	44	50	59	65	70	72	81	87	84	96	96	96
4. SCHOLARSHIPS AND GRANTS- RESEARCH	164	170	210	273	330	377	442	459	492	495	521	554	665	691
5. ADULT OCCUPATIONAL TRAINING PAYMENTS	141	77	91	97	97	100	103	132	63	0	0	0	0	0
6. ASSISTANCE TO IMMIGRANTS	2	12	27	26	26	24	0	0	0	0	0	0	0	0
7. PRAIRIE FARM ASSISTANCE ACT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. PAYMENTS TO WESTERN GRAIN PRODUCERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. GRANTS - INTERNAT'L DEV ASSIST PROGS	48	52	72	80	112	153	173	207	0	0	0	0	0	0
10. MISCELLANEOUS	485	405	480	410	486	1055	1631	1572	1462	1411	1452	1362	2135	3402
11. TOTAL FEDERAL	8352	8540	9756	11107	12618	14214	15811	17084	17770	18551	19453	20362	22312	24967
B. PROVINCIAL														
12. DIRECT RELIEF	1762	1941	2214	2617	3313	4077	4509	4888	5120	5363	5584	5911	6637	7979
13. OLD AGE AND BLIND PENSIONS	309	294	565	615	649	663	673	706	727	813	845	832	882	931
14. MOTHERS & DISABLED PERSONS ALLOWANCES	89	107	116	151	173	204	254	265	295	290	280	282	304	346
15. MISCELLANEOUS	506	638	788	904	957	1047	1249	1501	1642	1769	1955	2243	2358	2575
16. TOTAL PROVINCIAL	2666	2980	3683	4287	5092	5991	6685	7360	7784	8235	8664	9268	10181	11831
C. LOCAL														
17. DIRECT RELIEF	307	337	394	443	532	666	726	773	865	968	1038	1185	1553	2031
18. SUB-TOTAL GRANTS BY GOVERNMENT SECTOR	11325	11857	13833	15837	18242	20871	23222	25217	26419	27754	29155	30815	34046	38829
19. a. FEDERAL SUBSIDIES TO UNINCORPORATED BUSINESS	695	827	605	900	910	1258	1696	1944	2622	4496	3886	3454	2169	2733
b. CAPITAL ASSISTANCE TO UNINCORPORATED BUSINESS	185	262	398	349	824	1306	644	520	247	216	210	184	178	425
20. TOTAL GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS	12205	12946	14836	17086	19976	23435	25562	27681	29288	32466	33251	34453	36393	41987

04:01:32 PM
03-DEC-1992

TABLE 4. NEW PARADIGM GRANT PAYMENTS FROM GOVERNMENT TO PERSONS &
UNINCORPORATED BUSINESS (\$ millions)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
SUMMARY														
I. GRANTS BY PERSONS & UNINCORPORATED BUSINESS TO GOVERNMENT SECTOR	26252	29452	33936	41182	46246	48946	52302	57020	65279	73415	82285	88310	102149	103448
II. GRANTS FROM GOVERNMENT SECTOR TO PERSONS & UNINCORPORATED BUSINESS	12205	12946	14836	17086	19976	23435	25562	27681	29288	32466	33251	34453	36393	41987
III. NET GRANTS: FROM PERSONAL SECTOR TO GOVERNMENT SECTOR (I - II)	14047	16506	19100	24096	26270	25511	26740	29339	35991	40949	49034	53857	65756	61461

SOURCE: National Income and Expenditure Accounts, Annual Estimates,
1926-1986, Catalogue 13-531 Occasional Tables 49, 52 & 55
1978-1989, Catalogue 13-201 Annual Tables 50, 53 & 56
1980-1991, Catalogue 13-201 Annual Tables 42, 45 & 48

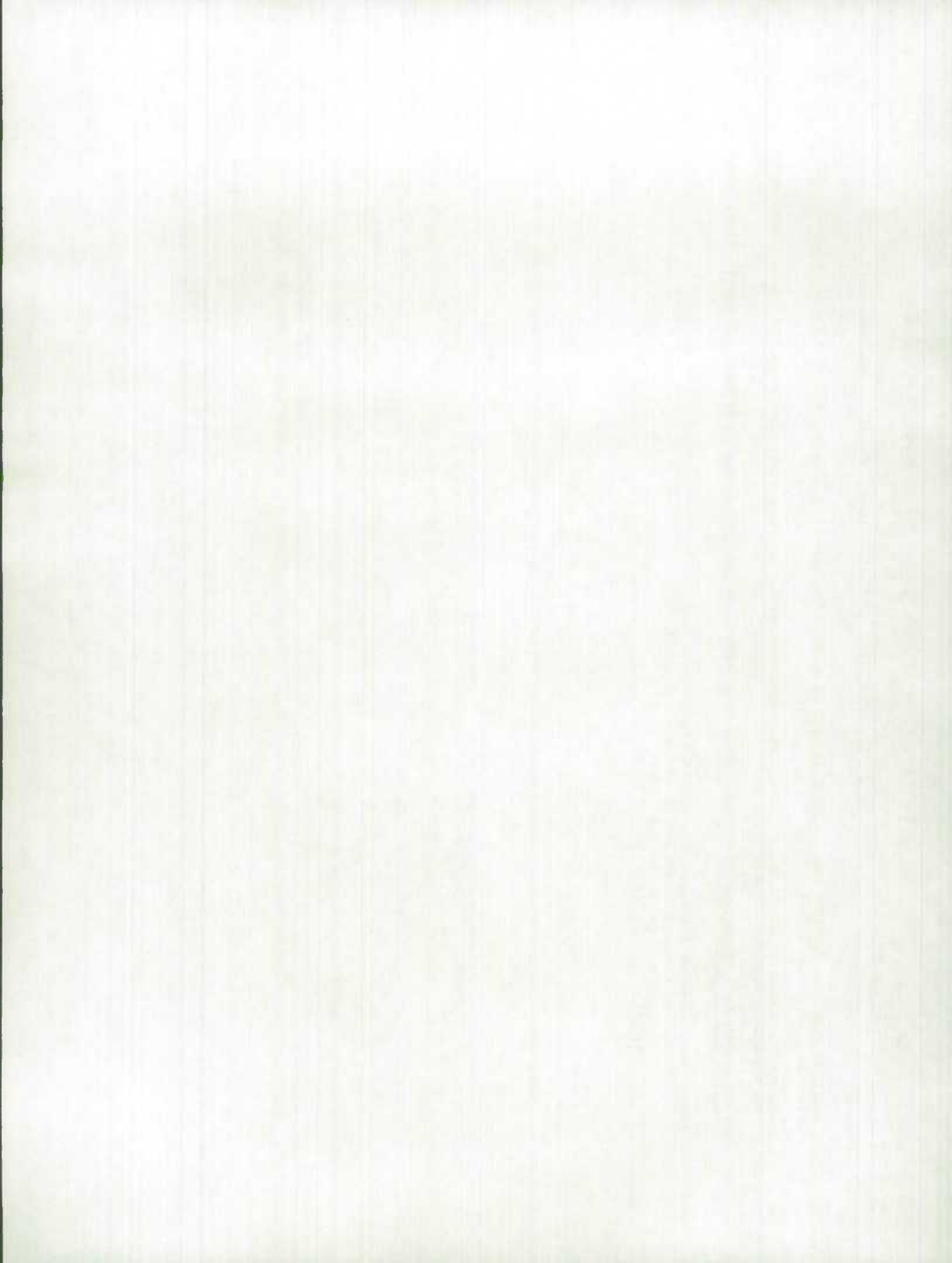


TABLE 5. PERSONAL & UNINCORPORATED BUSINESS SECTOR GRANTS (# millions)

10:42:22 AM
04-DEC-1992

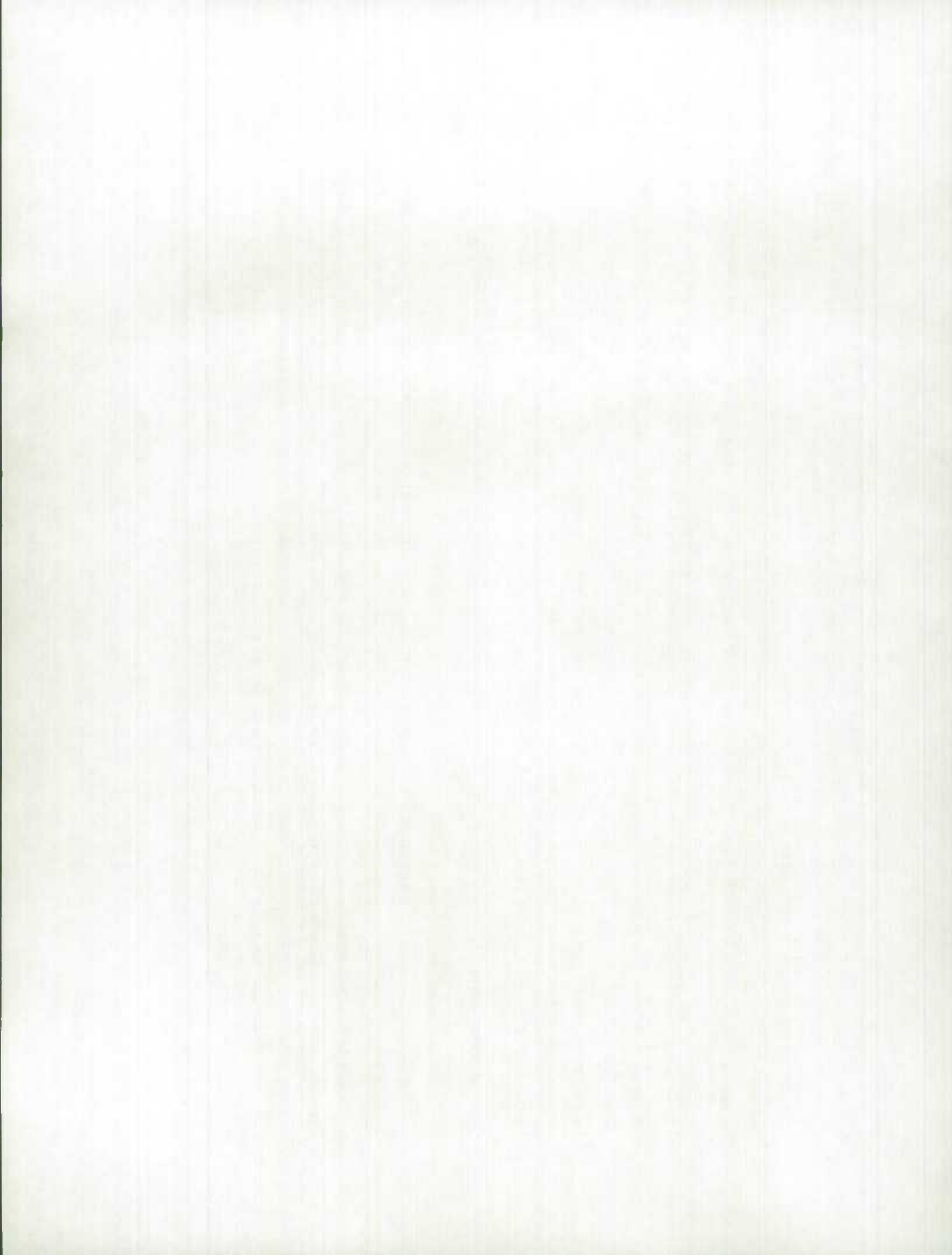
	1	2	3	4	5	6	7
	GRANTS FROM PERSONAL & UNINCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR	GRANTS FROM GOVERNMENT SECTOR TO PERSONAL & UNINCORPORATED BUSINESS SECTOR	2 AS % OF 1	NET GRANTS FROM PERSONAL & UNINCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR	4 AS % OF 1	4 AS % OF 2	1 AS % OF 2
1961	2449	1600	65.3	849	34.7	53.1	153.1
1962	2665	1845	69.2	820	30.8	44.4	144.4
1963	2850	1892	66.4	958	33.6	50.6	150.6
1964	3361	2068	61.5	1293	38.5	62.5	162.5
1965	3840	2165	56.4	1675	43.6	77.4	177.4
1966	4408	2400	54.4	2008	45.6	83.7	183.7
1967	5434	2956	54.4	2478	45.6	83.8	183.8
1968	6625	3519	53.1	3106	46.9	88.3	188.3
1969	8369	3900	46.6	4469	53.4	114.6	214.6
1970	9977	4309	43.2	5668	56.8	131.5	231.5
1971	11336	4943	43.6	6393	56.4	129.3	229.3
1972	12438	5048	40.6	7390	59.4	146.4	246.4
1973	14329	5733	40.0	8596	60.0	149.9	249.9
1974	17212	7820	45.4	9392	54.6	120.1	220.1
1975	19050	9145	48.0	9905	52.0	108.3	208.3
1976	22385	9889	44.2	12496	55.8	126.4	226.4
1977	25119	10894	43.4	14225	56.6	130.6	230.6
1978	26252	12205	46.5	14047	53.5	115.1	215.1
1979	29452	12946	44.0	16506	56.0	127.5	227.5
1980	33936	14836	43.7	19100	56.3	128.7	228.7
1981	41182	17086	41.5	24096	58.5	141.0	241.0
1982	46246	19976	43.2	26270	56.8	131.5	231.5
1983	48946	23435	47.9	25511	52.1	108.9	208.9
1984	52302	25562	48.9	26740	51.1	104.6	204.6
1985	57020	27681	48.5	29339	51.5	106.0	206.0
1986	65279	29288	44.9	35991	55.1	122.9	222.9
1987	73415	32466	44.2	40949	55.8	126.1	226.1
1988	82285	33251	40.4	49034	59.6	147.5	247.5
1989	88310	34453	39.0	53857	61.0	156.3	256.3
1990	102149	36393	35.6	65756	64.4	180.7	280.7
1991	103648	41987	40.5	61661	59.5	146.9	246.9

03:27:46 PM
03-DEC-1992

TABLE 6. GRANTS INVOLVING INCORPORATED BUSINESS SECTOR (0 millions)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
I. GRANTS FROM CORPORATIONS & GOVERNMENT BUSINESS ENTERPRISES TO GOVERNMENT SECTOR:																	
A. FEDERAL																	
1. FEDERAL INCOME TAXES - CORPORATIONS	1325	1293	1395	1560	1643	1762	1744	2088	2380	2257	2463	2885	3628	4993	5350	5011	5099
2. (OF WHICH: PETROLEUM & GAS REVENUE TAX)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3. FEDERAL INCOME TAXES - GOVT BUS ENTERPRISES	20	21	17	16	9	12	14	19	22	19	14	16	15	19	30	50	36
4. (OF WHICH: PETROLEUM & GAS REVENUE TAX)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. SUB-TOTAL FEDERAL INCOME TAXES	1345	1314	1412	1576	1652	1774	1758	2107	2402	2276	2477	2901	3643	5012	5380	5061	5135
B. PROVINCIAL																	
6. PROVINCIAL INCOME TAXES	279	408	442	484	499	535	584	682	751	723	825	971	1280	1854	1912	1909	1973
7. PROVINCIAL TAX ON MINING & LOGGING PROFITS	25	31	37	41	46	46	54	63	68	71	44	48	156	185	202	158	130
8. SUB-TOTAL PROVINCIAL INCOME TAXES & TAX ON PROFITS	304	439	479	525	545	581	638	745	819	794	869	1019	1436	2039	2114	2067	2103
9. TOTAL DIRECT TAXES	1649	1753	1891	2101	2197	2355	2396	2852	3221	3070	3346	3920	5079	7051	7494	7128	7238
II. GRANTS FROM GOVERNMENT SECTOR TO INCORPORATED BUSINESS SECTOR:																	
a. SUBSIDIES - ESTIMATED INCORPORATED	251	260	294	326	352	511	493	461	515	535	632	761	946	2313	3528	3083	3252
b. CAPITAL ASSISTANCE - INCORPORATED	0	0	0	0	0	0	0	0	0	0	252	262	318	310	325	443	563
c. SUB-TOTAL - INCORPORATED	251	260	294	326	352	511	493	461	515	535	884	1023	1264	2623	3853	3526	3815
III. NET GRANTS FROM INCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR (I.9 - II.3)	1398	1493	1597	1775	1845	1844	1903	2391	2706	2535	2462	2897	3815	4428	3641	3602	3423

SOURCE: National Income and Expenditure Accounts, Annual Estimates, 1926-1986, Catalogue 13-531 Occasional Tables 50, 56 & 57
1978-1989, Catalogue 13-201 Annual Tables 51, 57 & 58
1980-1991, Catalogue 13-201 Annual Tables 43, 49 & 50



03:27:46 PM
03-DEC-1992

TABLE 6. GRANTS INVOLVING INCORPORATED BUSINESS SECTOR (\$ millions)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
I. GRANTS FROM CORPORATIONS & GOVERNMENT BUSINESS ENTERPRISES TO GOVERNMENT SECTOR:														
A. FEDERAL														
1. FEDERAL INCOME TAXES - CORPORATIONS	5700	6788	8271	9129	8971	9319	11084	11336	10102	11735	11777	12687	11472	9381
2. (OF WHICH: PETROLEUM & GAS REVENUE TAX)	0	0	0	995	1537	1731	2000	1902	399	0	0	0	0	0
3. FEDERAL INCOME TAXES - GOVT BUS ENTERPRISES	37	72	135	194	241	217	235	250	200	129	80	77	183	35
4. (OF WHICH: PETROLEUM & GAS REVENUE TAX)	0	0	0	52	97	93	118	124	38	0	0	0	0	0
5. SUB-TOTAL FEDERAL INCOME TAXES	5737	6860	8406	9323	9212	9536	11319	11586	10382	11864	11857	12764	11655	9416
B. PROVINCIAL														
6. PROVINCIAL INCOME TAXES	2291	2911	3390	3340	2473	2689	3605	3921	4216	5051	5640	5634	4987	4089
7. PROVINCIAL TAX ON MINING & LOGGING PROFITS	160	267	282	133	70	95	60	56	55	75	89	120	209	144
8. SUB-TOTAL PROVINCIAL INCOME TAXES & TAX ON PROFITS	2451	3178	3672	3473	2543	2784	3665	3977	4271	5126	5729	5754	5196	4233
9. TOTAL DIRECT TAXES	8188	10038	12078	12796	11755	12320	14984	15563	14573	16990	17586	18518	16851	13649
II. GRANTS FROM GOVERNMENT SECTOR TO INCORPORATED BUSINESS SECTOR:														
a. SUBSIDIES - ESTIMATED INCORPORATED	3322	4650	7628	8599	8430	8757	10547	9633	7889	7150	7354	7481	9439	11508
b. CAPITAL ASSISTANCE - INCORPORATED	595	567	679	882	2344	3354	3485	3308	3361	2600	2214	2168	1859	1845
c. SUB-TOTAL - INCORPORATED	3917	5217	8307	9481	10774	12111	14032	12941	11250	9750	9568	9649	11298	13353
III. NET GRANTS FROM INCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR (I.9 - II.3)	4271	4821	3771	3315	981	209	952	2622	3323	7240	8018	8869	5553	296

SOURCE: National Income and Expenditure Accounts, Annual Estimates, 1926-1986, Catalogue 13-531 Occasional Tables 50, 56 & 57
1978-1989, Catalogue 13-201 Annual Tables 51, 57 & 58
1980-1991, Catalogue 13-201 Annual Tables 43, 49 & 50

TABLE 7. INCORPORATED BUSINESS SECTOR GRANTS (\$ millions)

10:00:14 AM
04-DEC-1992

	1	2	3	4	5	6	7
	GRANTS FROM INCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR	GRANTS FROM GOVERNMENT SECTOR TO INCORPORATED BUSINESS SECTOR	2 AS % OF 1	NET GRANTS FROM INCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR	4 AS % OF 1	4 AS % OF 2	1 AS % OF 2
1961	1649	251	15.2	1398	84.8	557.0	657.0
1962	1753	260	14.8	1493	85.2	574.2	674.2
1963	1891	294	15.5	1597	84.5	543.2	643.2
1964	2101	326	15.5	1775	84.5	544.5	644.5
1965	2197	352	16.0	1845	84.0	524.1	624.1
1966	2355	511	21.7	1844	78.3	360.9	460.9
1967	2396	493	20.6	1903	79.4	386.0	486.0
1968	2852	461	16.2	2391	83.8	518.7	618.7
1969	3221	515	16.0	2706	84.0	525.4	625.4
1970	3070	535	17.4	2535	82.6	473.8	573.8
1971	3346	884	26.4	2462	73.6	278.5	378.5
1972	3920	1023	26.1	2897	73.9	283.2	383.2
1973	5079	1264	24.9	3815	75.1	301.8	401.8
1974	7051	2623	37.2	4428	62.8	168.8	268.8
1975	7494	3053	51.4	3641	48.6	94.5	194.5
1976	7128	3526	49.5	3602	50.5	102.2	202.2
1977	7238	3815	52.7	3423	47.3	89.7	189.7
1978	8188	3917	47.8	4271	52.2	109.0	209.0
1979	10038	5217	52.0	4821	48.0	92.4	192.4
1980	12078	8307	68.8	3771	31.2	45.4	145.4
1981	12796	9481	74.1	3315	25.9	35.0	135.0
1982	11755	10774	91.7	981	8.3	9.1	109.1
1983	12320	12111	98.3	209	1.7	1.7	101.7
1984	14984	14032	93.6	952	6.4	6.8	106.8
1985	15563	12941	83.2	2622	16.8	20.3	120.3
1986	14573	11250	77.2	3323	22.8	29.5	129.5
1987	16990	9750	57.4	7240	42.6	74.3	174.3
1988	17586	9568	54.4	8018	45.6	83.8	183.8
1989	18518	9649	52.1	8869	47.9	91.9	191.9
1990	16851	11298	67.0	5553	33.0	49.2	149.2
1991	13649	13353	97.8	296	2.2	2.2	102.2

10:05:31 AM
04-DEC-1992

TABLE 8. COMPARISON OF INCORPORATED BUSINESS SECTOR GRANTS &
PERSONAL & UNINCORPORATED BUSINESS SECTOR GRANTS (\$ millions)

	GDP AT MARKET PRICES	NET GRANTS FROM INCORPORATED BUSINESS SECTOR TO GOVERNMENT SECTOR	AS PERCENTAGE OF GDP	NET GRANTS FROM PERSONAL & UNINCORP BUSINESS SECTOR TO GOVERNMENT SECTOR	AS PERCENTAGE OF GDP
1961	40886	1398	3.4	849	2.1
1962	44408	1493	3.4	820	1.8
1963	47678	1597	3.3	958	2.0
1964	52191	1775	3.4	1293	2.5
1965	57523	1845	3.2	1675	2.9
1966	64388	1844	2.9	2008	3.1
1967	59064	1903	3.2	2478	4.2
1968	75418	2391	3.2	3106	4.1
1969	83026	2706	3.3	4469	5.4
1970	89116	2535	2.8	5668	6.4
1971	97290	2462	2.5	6393	6.6
1972	108629	2897	2.7	7390	6.8
1973	127372	3815	3.0	8596	6.7
1974	152111	4428	2.9	9392	6.2
1975	171540	3641	2.1	9905	5.8
1976	197924	3602	1.8	12496	6.3
1977	217879	3423	1.6	14225	6.5
1978	241604	4271	1.8	14047	5.8
1979	276096	4821	1.7	16506	6.0
1980	309891	3771	1.2	19100	6.2
1981	355994	3315	0.9	24096	6.8
1982	374442	981	0.3	26270	7.0
1983	405717	209	0.1	25511	6.3
1984	444735	952	0.2	26740	6.0
1985	477988	2622	0.5	29339	6.1
1986	505666	3323	0.7	35991	7.1
1987	551597	7240	1.3	40949	7.4
1988	605906	8018	1.3	49034	8.1
1989	649916	8869	1.4	53857	8.3
1990	667843	5553	0.8	65756	9.8
1991	674388	296	0.0	61661	9.1

10:34:28 AM
04-DEC-1992

TABLE 9. NET GRANTS AS A PERCENTAGE OF GOVERNMENT EXPENDITURES ON GOODS & SERVICES
(\$ millions)

	1	2	3	4	5	6	7	8	9	10	11
	GOVT CURRENT EXPENDITURE G & S	GOVT INVESTMENT	TOTAL EXPEND (1+2)	NET GRANTS PERSONAL & UNINCORP BUSINESS	NET GRANTS INCRP BUSINESS SECTOR	SUB- TOTAL (4+5)	BALANCE (3-6) (OTHER FUNDS)	COL 4 AS % OF GOVT EXP COL 3	COL 5 AS % OF GOVT EXP COL 3	COL 6 AS % OF GOVT EXP COL 3	COL 7 AS % OF GOVT EXP COL 3
1961	6166	1682	7848	849	1398	2247	5601	10.8	17.8	28.6	71.4
1962	6567	1900	8467	820	1493	2313	6154	9.7	17.6	27.3	72.7
1963	6923	1973	8896	958	1597	2555	6341	10.8	18.0	28.7	71.3
1964	7526	1968	9494	1293	1775	3068	6426	13.6	18.7	32.3	67.7
1965	8269	2430	10699	1675	1845	3520	7179	15.7	17.2	32.9	67.1
1966	9643	2842	12485	2008	1844	3852	8633	16.1	14.8	30.9	69.1
1967	11092	2982	14074	2478	1903	4381	9693	17.6	13.5	31.1	68.9
1968	12685	3013	15698	3106	2391	5497	10201	19.8	15.2	35.0	65.0
1969	14186	3061	17247	4469	2706	7175	10072	25.9	15.7	41.6	58.4
1970	16448	3160	19608	5668	2535	8203	11405	28.9	12.9	41.8	58.2
1971	18228	3705	21933	6393	2462	8855	13078	29.1	11.2	40.4	59.6
1972	20136	3968	24104	7390	2897	10287	13817	30.7	12.0	42.7	57.3
1973	22851	4255	27106	8596	3815	12411	14695	31.7	14.1	45.8	54.2
1974	27480	5436	32916	9392	4428	13820	19096	28.5	13.5	42.0	58.0
1975	33266	6274	39540	9905	3641	13546	25994	25.1	9.2	34.3	65.7
1976	38274	6286	44560	12496	3602	16098	28462	28.0	8.1	36.1	63.9
1977	43411	6784	50195	14225	3423	17648	32547	28.3	6.8	35.2	64.8
1978	47386	7141	54527	14047	4271	18318	36209	25.8	7.8	33.6	66.4
1979	52286	7399	59685	16506	4821	21327	38358	27.7	8.1	35.7	64.3
1980	59250	8292	67542	19100	3771	22871	44671	28.3	5.6	33.9	66.1
1981	68792	9242	78034	24096	3315	27411	50623	30.9	4.2	35.1	64.9
1982	78655	10588	89243	26270	981	27251	61992	29.4	1.1	30.5	69.5
1983	84571	10350	94921	25511	209	25720	69201	26.9	0.2	27.1	72.9
1984	89089	11410	100499	26740	952	27692	72807	26.6	0.9	27.6	72.4
1985	95519	12822	108341	29339	2622	31961	76380	27.1	2.4	29.5	70.5
1986	100129	12532	112661	35991	3323	39314	73347	31.9	2.9	34.9	65.1
1987	105836	12848	118684	40949	7240	48189	70495	34.5	6.1	40.6	59.4
1988	114472	13754	128226	49034	8018	57052	71174	38.2	6.3	44.5	55.5
1989	123718	15261	138979	53857	8869	62726	76253	38.8	6.4	45.1	54.9
1990	133781	16748	150529	65756	5553	71309	79220	43.7	3.7	47.4	52.6
1991	140607	16439	157046	61661	296	61957	95089	39.3	0.2	39.5	60.5

TECHNICAL SERIES/CAHIERS TECHNIQUES
INPUT-OUTPUT DIVISION/DIVISION DES ENTRÉES-SORTIES
STATISTICS CANADA/STATISTIQUE CANADA

- (1)
Hoffman et al., "*User's Guide to Statistics Canada Structural Economic Models*", Input-Output Division, Statistics Canada, Revised September 1980.
- (2)
Hoffman et al., "*Guide d'utilisation des modèles économiques et structureaux de Statistique Canada*", Division des entrées-sorties, Statistique Canada, Révision septembre 1980.
- (3)
Durand R. and Rioux R., "*Estimating Final Demand Expenditure at Factor Cost and Net of Tax Price Indices in the Canadian Input-Output Tables*", Paper Presented at the International Round Table on Taxes and the CPI, Ottawa, Input-Output Division, Statistics Canada, March 3, 1987.
- (4)
Siddiqi Y., Murty P.S.K., Dlena J., "*Highlights of the Public Sector Market Study, 1983*", Input-Output Division, Statistics Canada, September 1987.
- (5)
Murty P.S.K., "*Size and Structure of the Public Sector Market, 1983, Sources and Methods*" Input-Output Division, Statistics Canada, September 1987.
- (6)
Durand R., "*The Adding-Up Problem in the Computation of Aggregate Price GDP*", Input-Output Division, Statistics Canada, October, 1987.
- (7)
Durand R. and Markle T., "*Measuring the Variability of Input-Output Structures: A Progress Report*", Input-Output Division, Statistics Canada, December 1987.
- (8)
Durand R. and Markle T., "*On the Variability of Input-Output Structures: A Progress Report on the Constant Price Industrial Input Structures*", Input-Output Division, Statistics Canada, April 1988.
- (9)
Durand R. and Markle T., "*Structural Change in the Canadian Economy: The Supply Side in Current Prices*", Input-Output Division, Statistics Canada, July 1988.
- (10)
Durand R., "*Statistics Canada's Price Model: A Detailed Description of the Structure and Simulation Capacities*", Input-Output Division, Statistics Canada, August 1988.

(11)

Durand R. and Markle T., "*Structural Change In the Canadian Economy: The Supply Side In Constant Prices*", Input-Output Division, Statistics Canada, October 1988.

(12)

Durand R. and Markle T., "*A Diversity Analysis of Structural Change Based on the Canadian Input-Output Tables*", Input-Output Division, Statistics Canada, January 1989.

(13)

Durand R. and Diaz A., "*Input-Output Modelling of Commodity Indirect Taxes for Macroeconomic Analysis*", Input-Output Division, Statistics Canada, January 1989.

(14)

Murty P.S.K., Généreux P.A., Leblanc D., Greenberg M., "*Provincial Sales Tax Commodity Allocation Project, 1984 Sources and Methods*", Input-Output Division, Statistics Canada, January 1989.

(15)

Durand R., "*The Balancing Process of the Regional Input-Output Tables*", Input-Output Division, Statistics Canada, February 1989.

(16)

Siddiqi Y., Murty P.S.K., Dlena J., "*Highlights of the Provincial Sales Tax Commodity Allocation Project, 1984*", Input-Output Division, Statistics Canada, January 1989. Reprinted from Canadian Economic Observer, May 1989.

(17)

Durand R., "*Aggregation Formulas for Multifactor Productivity*", Input-Output Division, Statistics Canada, June 1989.

(18-E)

Mercier P., Durand R. and Diaz A., "*Specification of parameters for the National Input-Output Model*", Input-Output Division, Statistics Canada, December 1991.

(18-F)

Mercier P., Durand R. et Diaz A., "*Spécification des paramètres du modèle d'entrées-sorties nationale*", Division des entrées-sorties, Statistique Canada, Décembre 1991.

(19-E)

Siddiqi Y., Murty P.S.K., "*Commodity Indirect Taxes In the Canadian Input-Output Accounts, 1984*", Input-Output Division, Statistics Canada, July 6, 1989.

(19-F)

Siddiqi Y., Murty P.S.K., "*Impôts Indirects sur les biens et services dans les comptes d'entrées-sorties du Canada, 1984*", Division des entrées-sorties, Statistique Canada, 6 Juillet 1983.

(20)

Siddiqi Y., Murty P.S.K., "*Progress Report # 5: On the Temporal Variability of the Aggregate Input Structure*", Input-Output Division, Statistics Canada, September 1989.

(21)

Siddiqi Y., Murty P.S.K., "*Highlights of Commodity Taxes for 1984*", Input-Output Division, Statistics Canada, Canadian Economic Observer, September 1989.

(22)

Siddiqi Y., Murty P.S.K., "*Commodity Indirect Taxes - An Inventory before the GST*", Input-Output Division, Statistics Canada, Canadian Economic Observer, October 1989.

(23)

Murty P.S.K., Siddiqi Y., "*Government Expenditures on Goods and Services and Transfer Payments In Canada, 1961-1985*", Input-Output Division, Statistics Canada, December 1989.

(24)

Murty P.S.K., Siddiqi Y., "*Government Expenditures on Goods and Services and Transfer Payments In Canada 1961-1985*" - Reprint from Canadian Economic Observer May 1990, Input-Output Division, Statistics Canada.

(25)

Siddiqi Y., Murty P.S.K., "*Commodity Indirect Taxes in the Canadian Input-Output Accounts, 1984-1986*", Input-Output Division, Statistics Canada, February 1990.

(26)

Durand R., "*Growth Accounting and the Quality Adjustment of the Capital Stock*", Input-Output Division, Statistics Canada, February 1990.

(27)

Durand R., Salem M., "*On a Dynamic Productivity Index Number Formula*", Input-Output Division, Statistics Canada, revised version February 1990.

(28)

Diaz A., "*The 1989 Increase In Labour Compensation per Person: Was It caused by wage demands?*", Input-Output Division, Statistics Canada, June 1990.

(29)

Murty P.S.K., "*Federal Goods and Services Tax and the Canadian System of National Accounts*" Input-Output Division, Statistics Canada, October 1990.

(30)

"*Effective tax rates and net price indexes/Les taux de taxe actuels et les indices de prix net*", Feature Article/Etude spéciale, Canadian Economic Observer/L'observateur économique canadien, November 1990/Novembre 1990.

(31)

Salem M., "*Documentation of Capital Input and Capital Cost time series for Multifactor Productivity Measures*", Input-Output Division, Statistics Canada, reviewed and updated by R. Fortin and Y. Sabourin, December 1990.

(32)

Siddiqi Y., Murty P.S.K., "*Federal Sales Tax In the Canadian Input-Output Accounts*", Input-Output Division, Statistics Canada, July 1989, Draft, (Out of Print).

(33)

Murty P.S.K., "*New Paradigm to Analyze Government Transfer Payments with special reference to Canada*", Input-Output Division, Statistics Canada, Draft, January 3, 1991.

(34)

Durand R., "*Productivity Analysis and the Measurement of Gross Output Net of Inter-Industry Sales*", Input-Output Division, Statistics Canada, January 1991.

(35)

Murty P.S.K. and Siddiqi Y., "*A New Paradigm to Analyze Commodity Indirect Taxes and Subsidies, 1986-1989*", Input-Output Division, Statistics Canada, April 5, 1991.

(36)

Généreux P., "*The Input-Output Structure of the Economies of the Yukon and Northwest Territories, 1984*", Input-Output Division, Statistics Canada, May 1991.

(37)

Généreux P., "*La structure par entrées-sorties des économies du Yukon et des territoires du Nord-Ouest, 1984*", Division des entrées-sorties, Statistique Canada, Mai 1991.

(38)

Durand R., "*An Alternative to Double Deflation for Measuring Real Industry Value-Added*", Input-Output Division, Statistics Canada, June 1991.

(39)

Généreux P., "*I/O Tables in constant prices: Revised deflation process and analysis of the machinery and equipment sector*", Input-Output Division, Statistics Canada, September 1984. Reprint July, 1991.

(40)

Murty P.S.K. and Siddiqi Y., "*Government subsidies to Industries/Les subventions gouvernementales accordées aux Industries*", Input-Output Division/Division des entrées-sorties, Statistics Canada/Statistique Canada, Reprint from Canadian Economic Observer/Réimprimé de l'Observateur Economique Canadien, May 1991/Mai 1991.

(41)

Diaz A., "*Alternative Concepts of Output and Productivity*", Input-Output Division, Statistics Canada, Catalogue 15-204, 1989 Issue; July 1991.

(42)

Durand R., "*Aggregation, Integration and Productivity Analysis: An Overall Framework*", Input-Output Division, Statistics Canada, Catalogue 15-204, 1989 Issue; July 1991.

(43)

Diaz A., "*The Statistics Canada Concepts and Measures of Productivity*", Input-Output Division, Statistics Canada, December 6, 1990. (Reprinted October 1991).

(44-E)

Dionne M., "*Measuring Capital Depreciation*", Input-Output Division, Statistics Canada, July, 1991.

(44-F)

Dionne M., "*Mesure de la dépréciation du capital*", Division des entrées-sorties, Statistique Canada, Novembre 1991.

(45)

Murty P.S.K. and Siddiqi Y., "*Scope of Public Grants Economy In Canada*", Input-Output Division, Statistics Canada, December 6, 1991. (Draft).

(46)

Murty P.S.K. et Siddiqi Y., "*Portée de l'économie des subventions publiques au Canada*", Division des entrées-sorties, Statistique Canada, le 6 décembre 1991. (Projet).

(47)

Karnall S.Gill and Larose M., "*Sources and Methods of Estimating Employment by Input-Output Industries for the years 1961 to 1988*", Input-Output Division, Statistics Canada, November 1991.

(48)

Murty P.S.K. and Siddiqi Y., "*Transfer Payments in National Accounts and Grants Economics*", Input-Output Division, Statistics Canada, May 25, 1992.

(49)

"*Interprovincial and International Trade Flows of Goods 1984-1988/Flux du commerce International et Interprovincial des biens 1984-1988*", Input-Output Division/Division des entrées-sorties, Statistics Canada/Statistique Canada, June 1992/ Juin 1992.

(50)

Messinger Hans., "*Canada's Interprovincial Trade Flows of Goods, 1984-88/Flux du commerce Interprovincial des biens au Canada 1984-1988*", Input-Output Division/Division des entrées-sorties, Statistics Canada/Statistique Canada, January 1993/Janvier 1993. Forthcoming/A venir.

(51)

Webber Marianne., "*Estimating Total Annual Hours Worked from the Canadian Labour Force Survey*", Labour and Household Surveys Analysis Division and Input/Output Division, Statistics Canada, April 1983.

(52-E)

"*Statistics Canada's Input-Output Model: General description, Critical Analysis of Partially Closed Version and Alternative Solutions*", Input/Output Division, Statistics Canada, June 1991.

(52-F)

"*Le modèle d'entrées-sorties de Statistique Canada: présentation générale, analyse critique de la version avec fermeture partielle et solutions de rechange*", Division des entrées-sorties, Statistique Canada, Juin 1991.

(53)

Murty, P.S.K., "*A New Approach to Analyze Public Sector Grants: A Case Study of Canada*", Input/Output Division, Statistics Canada, January 1993.

(54)

Murty, P.S.K., "*Scope of the Public Sector Grants in the Canadian Economy Revisited*", Input/Output, Statistics Canada, January 1993.

STATISTICS CANADA LIBRARY
BIBLIOTHÈQUE STATISTIQUE CANADA



1010161235

003

