CONSOLIDATION QUESTIONNAIRE REPORT

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Objectives

The original objectives of the consolidation questionnaire were:

- Ensuring that data collected for an enterprise was complete and unduplicated.

- Providing a linkage between production and financial data

To meet these objectives require collecting information on the current practices of the businesses in organizaing themselves and in preparing the internal management information

Other Uses

- Estimating GDP For Establishments (to produce industrial and provincial GDP estimates).

- Measuring Rates of Return to Establishments and Industries

- Measuring Interprovincial and international flows of services

The Preparation, Interview, Collection and Analysis Process

Preparation for the process included assembling the pofiles of the businesses, traning of staff in the various surveys that might direct questionnaires to the enteprises and the preparation of an interview package. The CQ project was pusued in two phases. The first phase was undertaken in the fall of 1993. It involved personal interviews with senior officers of the Enterprises selected for the project. A report on this phase was made in December 1993. This report provided some information on the practices of businesses in their Management Information Systems. However, the relative importance of the various data items was not known. Also as part of the first phase a consultation was done for a number of large businesses to determine if they understood the problem and if they had other suggestions to solve the problem.

The second phase involved the collection and analysis of data reported on the CQ by Enterprises that agreed to participate in the test. All responses were received during the months of April and May 1993. A comparison of the CQ data with data reported on the Bureau's annual surveys for 1992 was undertaken. The analytical work was late in starting and only concluded in February 1994.

Surveys In Scope

1. Production establishment surveys (ES)

2. Public and Provate Investment in Canada (Capital Expenditure Surveys - CES)

3. Quarterly Financial Surveys (QFS)

4. Consolidation Questionnaire (CQ)

Production establishment surveys

This is a group of surveys that collect data for establishments which would be used to measure production. the data collected would typically include:

REVENUE
Revenue Detail (Activities/Broad Groupings)
Selected Revenue Detail by Commodity

EXPENSES

Wages and Salaries
Intermediate Inputs
Intermediate Input Detail (Broad Grouping)
Intermediate Input Detail by Commodity

INVENTORIES

In fact collection practices vary considerably from survey to survey.

Industry coverage is not complete, the unit may be other than the establishment and the data items collected may not be complete..

Public and Private Investment in Canada (Capital Expenditure Surveys - CES)

The statistical unit is the establishment for this survey. A Large Company Capital Expenditure Survey has also been undertaken for which the enterprise is the statistical unit. The data collected are capital expenditures - forecast, mid-year and actual versions for each reference year. Structure detail of construction expenditures and at least broad headings of expenditures on machinery and equipment are also collected. This is additional data of the production statistics class but collected through a separate survey.

Quarterly Financial Surveys (QFS)

This is an enterprise based survey which uses concepts based on Generally Accepted Accounting Principles. Both data collected and the statistics produced are based on this concept. The data collected are the balance sheet and income statement for all industries and a number of other data in specific industries. Ouput is also recast into a national accounting framework. It is used in the production accounts of the SNA to provide estimates of corporate profits. This version of the data should be compatible conceptually with the production surveys.

Consolidation Questionnaire (CQ)

The Consolidation Questionnaire is attached. It is a survey about the units of a business and does not necessarily produce any independent outputs. That is it would affect estimates for the production accounts but would not be a new class of data. An example of the questionnaire is attached.

The CQ requests quantitative data on seven financial variables and demonstrates the consolidation of these accounts from the lowest level accounting entities to the highest level Corporate consolidated accounts.

1. Total Operating Revenue
2. Total Operating Expenses
3. Operating Profit
4. Capital Expenditures
5. Closing Inventory
6. Depreciation Expense
7. Amortization of Intangibles and Deferred Charges

The Interviews

The interview process had two purposes - to provide information on the information systems of businesses and to secure agreement to complete the consoldation questionnaire. Seventeen businesses were intervawed of the 19 originally picked. The practices of businesses are summarized below:

Fifteen businesses did complete the questionnaire by April of the following year. .

The interviews were confined to businesses that had recently been through a profiling interview with staff of Statistics Canada. The reasoning being that it would be best to start with a business with which we had a contact and whose structure we understood. Several of the businesses had changed their structure in the period since the profile was prepared or did not agree with the profile that was currently recorded on the Business Register. These changes were sent to the Business Register.

The Large Company Consultation

This consultation was with 7 large businesses that had not been profiled. The meetings wre arranged by the Canadain Instutute of Chartered Accountants (CICA) with senior representatives of large businesses (usually comptrollers or chief accountants). The businesses consulted were given some general background to explain Statistics Canada's problem of ensuring that data were complete and unduplicated and to explain the general economic framework in which the data were used. The objective of the consultation was to see if the problem was understood by the business representatives, difficulties in completing the questionnaire and any other suggestions they might have to meet our needs.

The group understood the problems quite readily. Some would have difficulty completing the questionnaire because they were only responsible for the accounting above a certain level of the business. However, they generally did not see a great difficulty in completing it. Neither could they offer another solution to the problem.

The Survey Comparisons

The comparisons were approached first by comparing the consolidation questionnaire to the QFS. When this comparison was done it was apparent that some corrections of both surveys were necessary. Some correction were made to the consoldiation questionnaire. Comparisons were then made between the the Consolidation Questionnaire and the Establishment Surveys and the Capital Expenditure Survey.

CONSOLIDATION QUESTIONNAIRE AND QFS

The potential sources of difference between the consolidation questionnaire and the QFS are:

- Different unit coverage e.g. foreign activities, joint ventures

- Inconsistent reporting (including differences in accounting methods or accuracy of data)

	QFS	CQ	DIFFERENCE
OPERATING REVENUE			
Simple	11227	8311	2917
Absolute			4941
OPERATING EXPENSES			
Simple	11003	7844	3159
Absolute			4800
OPERATING PROFIT			
Simple	466	225	241
Absolute			·396
CAPITAL EXPENDITURE			
Simple	626	697	71
Absolute			386
CLOSING INVENTORY			
Simple	1137	1007	131
Absolute			396
DEPRECIATION AND AMORTIZATION			
Simple	633	831	199
Absolute			282
AMORTIZATION OF INTANGIBLES			
Simple	69	48	21
Absolute			93

Most of the differences were minor but in two cases the consolidation questionnaire was missing some units that should have been included. Also, in one case the consolidiation questionnaire included businesses outside Canada. In these three cases, the consolidation questionnaire data was changed to what was felt to be the better estimates for comparisons to the ES's.

Production Surveys and the CQ

There are many more potential sources of difference between these two sets of data than between the consolidiation questionnaire and the QFS. The consolidation questionnaire is based on a model in which as complete a set of the seven data items as possible is collected for all units belonging to an enterprise. The ES surveys collect a different set of data which is not necessarily complete. The set of data collected varies by industry. In addition, surveys do not exist for all of the industries e.g. services to mining. The collection of the ES survey questionnaires was stopped at a point early in 1994. It is possible that some additional questionnaires were recieved in Statistics Canada but not passed on to the Consolidation Questionnaire group. In addition,

it is possible that some corrections were made as a result of editing which do not appear on the questionnaires.

Potential sources of difference are:

- Units not covered (different profiles)

- Data items not covered

- Industries not covered

- Inconsistent reporting to surveys

- ES report not recieved (by the CQ group)

The following table requires some explanation. First, the starting point for comparisons is the corrected CQ values as much as possible. First comparisons were made between the combined values on the CQ and the sum of values reported on the establishment surveys (lines 1 to 4). There are also two kinds of differences recorded - a simple difference and an absolute difference. The first is difference of the totals from the CQ and the totals from the ES. The absolute difference is sum of the differences for each unit without regard to sign. The aggregate difference indicates the potential total difference on aggregates. The absolute difference indicates the potential difference in microdata and industrial, and geographical aggregates.

However this difference is somewhat misleading since some of the ES surveys were not recieved by the CQ staff. An estimate was made in order to adjust the difference from this source. The remaining explanations of differences are based on this new difference.

The first quantifiable difference is one that arises because of differences for head office and auxiliary units. In some cases, no questionnaire is sent to the head office. This is shown as lines 8 and 9 in the table. Line 10 illustrates that there are no head offices reported on the ES that are not already included on the CQ. Data may be reported differently on the CQ and the ES for some head offices (line 11 and 12).

There may also be differences for production units. Line 13 is units missing on the CQ. However, there were none of which we were aware. There are also a number of production units not surveyed (line 14 and 15). The industries may be surveyed.

Line 19 incidates the value of amortization which is a conceptual difference between business accounting and economic accouting. Line 18 is a remaining unexplained residual.

CQ/ES COMPARISON TABLE

ITEM			Revenue	Expense	Revenue Expense Residual
			a	b	c
RAW DIFFERENCES WITHOUT REGARD TO SOURCE					
CQ Combination		1	9249191	8149967	1037017
ES Surveys		2	6161056	4403138	1757886
Raw Difference	Simple	3	3088137	3747834	-151262
	Absolute	4	5439451	5612574	1339232
ADJUSTMENT TO DIFFERENCE					
ES Surveys not Obtained or not Received		5	2951915	3058036	-113,855
Difference After Removing Above Units	Simple	6	136222	689798	94688
	Absolute	7	2487536	2554538	1,232,841
SOURCE OF DIFFERENCES					
Head Office and Auxiliary Unit Differences					
Not Surveyed at Establishment Level	Simple	8	56077	187752	-132,065
	Absolute	9	56081	195924	171,809
Unit not Reported on CQ		10	0	0	0
Reporting Differences	Simple	11	-498274	-466966	-93466
	Absolute	12	498274	486032	93,466
Production Units					
Missing on CQ		13	0	0	0
Not Surveyed on ES	Simple	14	1280137	1444422	-159,533
	Absolute	15	1280137	1454140	234,154
Reporting Difference from CQ	Simple	16	157100	986083	-844,519
	Absolute	17	391186	1006861	892,277
Other Reasons					
Unallocated		18	859,379	-578,858	345,879
Amortization		19		-895,915	895,915

Because the consolidation questionnaire is based on a top down approach, it may include data which is not available to the lower levels in the accounting process. However, one could not expect to obtain some of the detailed data that is currently collected on the ES from this level in the accounting structure.

Differences in Reporting and their Implicaitons

There are several different aspects of the comparison.

Head Office and Ancilliary Units Survey Incomplete

First, head office and other ancilliary unitsare not necessarily completely surveyed. In this study, it is apparent that their are large gaps in the data for both revenue and expenses but especially for expense. In some cases, the data for the head office per the production questionnaires is dif

Production Technical Units in Establishment Surveys

For this group of businesses the differences are significant. Some of the differences could be conceptual but others clearly are not. There are significnat differences in reporting. Iappears in at least one case that the es surveys are incorrect because the values of not that likely to be very large at head office.

Non-allocated Revenue and Expense

The CQ shows that businesses do have expenses of the various production units that are not currently collected. These expenses are of two types - direct expenses which are not collected and allocated incirect expenses of head office or ancillary unit expenses that are not allocate to the establishments. The amounts that are not allocated by enterprise are mainly the head office revenues.

Revenue Values

There are differences in revenue values In terms of the raw differences, it is difficult to interpret them. They are partly the result of are. The absolute differences are much larger that the raw differences.

Estimating GDP For Establishments (to produce industrial and provincial GDP estimates).

For establishment based surveys:

Requires allocation of some expenses and rvenues that are not currently allocated in B&T .

As a percentage of revenue or expenses the amounts that would have to be allocated are.

For legal or regulated acitivy based surveys:

Need a geography of technical and ancillary and support units to base allocation on.

Measuring Rates of Return to Establishments and Industries

This also requires allocation of expenses by establishment. the total value allocated as a percentage of operating profit is:

Measuring Interprovincial and international flows of services

Some of the flows of services would have to be estimated because they are not specifically recorded as flows. The amount of flows would be as follws:

Observations:

Content

- Amortization of Intangible expenses is a significant expenses

Management Information and Accounting Practices

- Businesses use different management practices (Managment Information Systems are different)

- Businesses change management practices and MIS's

- Accounting Information is available from different offices

- Businesses do not always understand what we want in our surveys

- "Head office" consists of a number of different expenses and revenues. (see diagram)

- Head office may record expenses that are on behalf of the producing units.

Management Information and Accounting Practices

- Producing units are usually profit centres with a reasonabley homogeneous geography

- Support units may or may not be profit centres but their geography may not be clear.

Process

- We did not always talk to the right people in the businesses

- we should have contacted the businesses sooner to review problems with the consolidation questionnaires

- Some modification to the questionnaire and the instructions would be desirable

Other Uses

Technical

- Complete industry coverage

- Targeting surveys (recording of data items)

- Profling and collection arrangements

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Objectives of the Consolidation Questionnaire

The original objective of the consolidation questionnaire was simple. To provide a means of verifying the completeness and accuracy of the data collected for enterprises.

- Ensuring that data collected for an enterprise was complete and unduplicated.

- Providing a linkage between production and financial data

There are other objectives of Statistics Canada that could be advanced using the consolidation questionnaire or an adaptation of it or where pertinent information resulted from the interviews that were part of the process.

- Estimating GDP For Establishments (to produce industrial and provincial GDP estimates).

- Measuring Rates of Return to Establishments and Industries

- Measuring Interprovincial and international flows of services

- Complete industry coverage

In a sense these last three objectives are related to the objective of linking production and financial data.

Calculating GDP For Establishments (to produce industrial and provincial GDP estimates).

Estimating GDP by industry and province is one of the goals of Business and Trade Statistics field. Estimates of GDP by industry depend on making estimates of intermediate inputs to the industry which are not always available. The estimates of GDP that are currently made on the profits data from IOFD and the survey of service inputs for manufacturing, labour income and depreciation The use of the enterprise as the statistical unit and the SIC-C as the industrial classification has made it more dificult to estimate profits by industry.

Measuring Rates of Return to Establishments and Industries

Rate of return to industries is also a frequently stated need of users that is not currently satisfied. Profits data are available for the enterprise and for the SIC-C wheareas users would like to have profit data for the SIC and for the establishment unit.

Measuring Interprovincial and international flows of services

There is a requirement to measure interprovincial and international flows of services. Some of these services are internal to enterprises. The recording of a flow and the value of the internal flows could be significant.

Current Collection Practices of the Production Surveys

The current collection practices differ by type of data and by industry - so that the problems of meeting these objectives differ. However, the general problems are with the statistical unit, the completeness of data collected, the geographical dimension and the industrial coverage.

Industry	Data Collection Coverage	Industrial Coverage	Geographical Coverage	Statistical Unit
Agriculture	Complete	Incomplete	Complete	Farm or farm family
Fishing and Trapping	No Data	None	n.a.	n.a.
Logging and Forestry	Incomplete Revenue and Expense	Incomplete		Establishment
Mining	Complete Revenue and Expense	Incomplete	Acceptable	Establishment
Manufacturing	Incomplete	Complete	Acceptable	Establishment
Construction	No Data	None	n.a.	n.a.
Transportation and Storage	Incomplete	Incomplete	Incomplete - concepts not clear	
Communication and Other Utility Industries	Incomplete	Incomplete	?	Regulated Activity (Corporations)
Wholesale Trade	Incomplete - Not all inputs are collected	Incomplete - missing agents and brokers	Acceptable	Establishment
Retail Trade	Incomplete - Not all inputs are collected, only retail revenue	Complete	Acceptable	Location
Finance and Insurance	Incomplete	Complete	Unacceptable	Enterprise
Real Estate Operator and Insurance Agents	No data	None	n.a.	n.a.
Business Services	Complete	Incomplete	Unacceptable	Establishment Corporation
Government Services	n.a.	n.a.	n.a.	Organizational Unit, Vote
Education Services	Incomplete	Incomplete	Acceptable	Regulated, Administrative Unit
Health and Social Services				
Accomodation Food and Beverage Services				
Other Service Industries				

Management Information Systems

	General Corporate	Executive	Corporate Head Office	Support/ Service Unit	e (e.g. Regional) Head Office	Operating Unit	Total
Operating Revenues							
Sales to Outsiders							
Internal Transfers - Goods							
Internal Transfers - Services							
Detail by Product and Service							
Operating Expenses							
Direct Expenses							
Depreciation and Amortization							
Other Operating Expenses							
Employee Benefits							
Purchased Materials and Services							
Commodities							
Indirect Expenses							
Allocations from General Corporate							
Allocations from Corporate Head Office							
Allocations from Intermediate Head Off							
Allocations from Support /Service Unit							
Internal Transfers - Service Charges							

☐ Data Available

▨ Data Availability Dependent on MIS

■ Not Available

As the chart indicates. businesses do not necessarily have records in the form that we can use directly. Consequently, we must provide guidance to businesses on how we would like to define the data.

The Translation of Management Information Systems into Production Statistics

In preparing production statistics, we rely, as mentioned, on the internal management records of the business, specifically the records that are used to measure performance of units in terms of cost targets or profits. We rely on these records to provide us with a list of operating units and also to provide most of the values reported to us in questionnaires for production statistics. Producing statistics on the desired framework depends on the existence of this accounting data already classified within a conceptual framework which has much in common with the production statistics concepts.

We have taken as an objective the measurement of GDP by establishment, not by asking that the establishemnt report it directly, but by collecting the necessary data and doing allocations and estimates to estimate GDP. As a kind of shorthand description this is siometimes described as a method to allocate profit. This may not be completely accurate because it implicitly assumed that revenues are correctly reported and the only problem is the reporting of expenses. When it comes to the measurement of profits there are some implicit but usually unstated assumptions about how we would like to allocate profits for production statistics.

The Relationship of Accounting Records and Statements to Production and Financial Statistics for Enterprises

There is a set of data collected as part of the financial survey which goes through a fairly rigorous evaluation. It is probably the most complete and accurate set of data for the enterprise as a whole.

The Financial Statistics questionnaires follow General Accepted Accouting Principles. However, GAAP does not ensure consistent formats in the actual items included in financial information. Reporting depends on the materiality of specific data items for the individual business. Some businesses may prepare regular sub-annual reports based on GAAP in other countries if their parent is in other countries. For these reasons there may be differences in internal reports compared to Statistics Canada questionnaires. However, on balance reporting to the quarterly financial statistics survey is based on information available withing the enterprise for its own purposes using a concept that is familiar to the business.

Respondents must rely on the information used to prepare consolidated financial accounts to complete production surveys questionaires. In the most direct relationship businesses use information from their internal management information systems. In the less direct relationship, they reclassify the underlying information to adapt it to production concepts. There are sometimes alternative definitions of items with similar names e.g. expenses. Furthermore, definitions will not be uniform.

In the consolidation questionnaire, the definitions are adapted from the accounting definitions.