

**BIG BUSINESS and small business:
What Do We Think We Know?**

Prepared for:

Business Council on National Issues

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January 24, 1990**

**BIG BUSINESS and small business:
What Do We Think We Know?****1 THE STARTING POINT**

In the Canadian economy, and most others, there are firms of varying sizes in almost all industries. This alone suggests that there are reasons for the co-existence of firms of quite different sizes, and should suggest some suspicion about claims that a particular size of firm is "better" than other sizes.

It is possible that if any grouping of firms by size is made, that variations of a particular attribute within the groups will be as large or larger than variations of that attribute between the groups. From the statistician's viewpoint, this indicates that the classification by size alone is not useful. A similar finding might be appropriate from a public policy perspective as well.

The state of the research base on firm size and the study of specific attributes with micro-data is not well-developed. Rather, we are left with a number of pieces of a puzzle, without any clear idea of the eventual picture or the number of pieces in the puzzle.

Some firms that are "larger" may also have more of some other attribute, like sales, research and development, or profit. This would be analogous to using height to measure a person's size, and then noting that taller people may weigh more, or have longer legs, or bigger feet. In some cases, there may be a positive correlation between the factors, in other cases, there may be a causal link.

2 DEFINITIONAL ISSUES

What is a "small" business? "Large" business? There are no "right" answers. A simple "rule" might be that small businesses are members of the Canadian Federation of Independent Business (CFIB) and large businesses are members of the Business Council on National Issues (BCNI). Yet the membership roles suggest that many businesses are members of neither.

A common practice is to select some measure of size and to classify businesses through this measure, with two or more classes being defined. For example, small businesses might be those with fewer than 500 employees and large businesses those with more than 500 employees. (This grouping is used by the U.S. Small Business Administration, Office of Advocacy [U.S., 1989, p.18].) An expanded version uses the following definitions:

- o Under 20 employees - very small
- o 20-99 - small
- o 100-499 - medium-sized
- o 500 and over - large.

Before examining other classification schemes another important dimension should be explored. The organizational structure of a business can be thought of as being composed of the following elements:

- o An **establishment** - a single physical location where business is conducted. (Synonyms include plant, place of business, branch, and factory.) The statistical definition is the "smallest unit capable of reporting certain specified input and output data; usually a plant or mill (in manufacturing)". A further requirement appears to be that it have at least one paid employee.
- o An **enterprise** - a business organization consisting of one or more establishments, under the same ownership and control. (Synonyms include parent company, company, firm, and business.)

A small business is likely to have only one or a few establishments. A large enterprise may have a large number of establishments, including some that are "small" in terms of the number of employees at a particular establishment.

Another organizational description is based on the legal status of the enterprise - corporation, partnership, and proprietorships. This framework will often be dictated by the data source - with taxation data usually based on the legal status. There is a tendency for large organizations to be corporations, and most proprietorships tend to be small firms. But there are many small corporations, and some large firms that are not corporations.

In Canada, another important dimension to recognize is that a firm in Canada may be "small" by some criteria, but could be part of a "large" entity with operations in the United States or elsewhere in the world. At the same time, the size of a Canadian firm could be underestimated, if its establishments outside Canada are ignored.

The classification system may also be influenced or determined by the availability of information. In the Statistics Canada longitudinal microdata files of enterprises and establishments, direct measurement of employment is not possible. Rather the payroll information is converted into Average Labour Units or ALUs, by dividing payrolls with average wage rates. Sizing in this framework is done in terms of the number of ALUs.

Because of the sources of data for this database, unincorporated businesses without employees are omitted, although public sector businesses are included. The objective of the Business Register which drives this database is to obtain the universe of employers and paid employment [McMechan,1988].

The size classification system used in these Statistics Canada studies is as follows:

- o Small (0 - 19.9 ALUs)
- o Medium (20 - 99.9 ALUs)
- o Large (100 + ALUs)

3 AN OVERVIEW OF THE CANADIAN NUMBERS

At the broadest level, Statistics Canada (61-231) has estimated the number of economic units operating in 1986 at about 2.4 million units. These are defined in five groups (per cent of total in parentheses):

- Self-employed Salespersons - 39,140 (1.6%)
- Professionals - 167,530 (7.0%)
- Farmers and Fishermen - 300,990 (12.5%)
- Rental Income - 881,610 (36.7%)
- Businesses - 1,013,900 (42.2%)

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Total - 2,403,170 (100%)

Within the business category, various Statistics Canada publications focus on parts of the "universe". **Small Business in Canada, 1984-1986** (61-231) considers those businesses with sales more than \$10,000 and less than \$5,000,000, and estimates this group to consist of 846,786 businesses.

Corporation Financial Statistics - 1986 (61-207), as the name implies, focuses on 581,307 corporations, of which 433,304 are non-financial corporations. This includes large and small corporations, with no detail by size of firm. In a companion publication, **Corporation Taxation Statistics - 1986**, (61-208) there is some information by size distribution using assets as the classification system.

- Assets less than \$1 million - 510,201
- Assets from \$1 to less than \$25 million - 67,110
- Assets \$25 million or more - 3,996

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Total - 581,307

As part of the background material for the GST, the Department of Finance provided a distribution of the number of firms and organizations, by volume of sales, for the year 1991.

Sales of Goods and Services (\$000)	Number of Firms (thousands)	Per cent
less than 30	>750	36.8
30 - 500	1,000	49.0
500 - 2,000	200	9.8
2,000 - 6,000	60	2.9
6,000 +	30	1.5
Total	>2,040	100.0

Further groping for data is possible. However, it becomes clear fairly quickly that there is no consistent dataset for the number of firms, establishments, or economic units. It also seems that there are a number of inactive units, which may raise the number of firms, but not affect the totals for output, employment, or other economic activity.

Perhaps the best hope is to wait for the new business register to become functional, and to encourage them to provide some overview tabulations of organizational "sizes".

For discussion purposes, it might be useful to think about 30,000 "large businesses", about 850,000 small businesses, and over a 1,000,000 other "entities" involved in economic activities, excluding the people who receive only wage income, transfers, or interest income.

4 WHY IS THERE A CONCERN ABOUT SIZE?

One of the interesting questions in economics is the existence of firms of different sizes in the same industry. The theory of the firm usually assumes that there is a production function, with an optimal size of firm dictated by the available technology. The "explanation" of differing firm sizes relies on either the need to disaggregate the industry further to identify homogeneous products, or on a transitional view that observed differences in firm size are likely to disappear over time, with smaller firms growing to be the optimal size, larger firms shrinking, or those not prepared to change being driven out of the industry by competition.

A more satisfying theory is that elaborated by Walter Oi [Oi,1983] in which differential entrepreneurial talents result in a distribution of firm sizes. If the level of the "talent" becomes increasingly rare in a given population, then not only is there a basis for different firm sizes, but also for the "normal" long tail to the distribution of firm sizes, with many small firms and only a few large firms.

Given a stable distribution in an industry by size of firm, then it is natural to ask if economic performance of the firms differs in any observable manner. This is examined in greater detail below. But surely, concern about the size of firms is not based on the needs or interests of economists.

Historically, concern about the size of firms was linked to **POWER**. Daniel Bell noted [Bell, 1976, p.270-71]:

"Size, in the American lexicon, means power, and the bigness of business was perceived as both an economic and political threat to democracy. Economic size was equated with market power, or the ability to control (within limits) the price of products offered for sale. Large-scale assets were equated with undue influence, either in a local community or state, or in the nation itself."

This concern has been replaced by more emphasis on **performance** than size, with performance including growth, increased productivity, higher wages, and more innovation. When "performance" also includes externalities such as pollution, then the "sense of identity between the self-interest of the corporation and the public interest has been replaced by a sense of incongruence." [Bell, 1976, p.272]

It should be noted that size is no longer considered "bad", but rather the concern is about possible adverse social consequences of the performance of the business entities. Only if a difference of adverse externalities can be linked to the size of firm would the size criterion be a guide to public policy.

5 ECONOMIC PERFORMANCE

Does economic performance vary based on size in the following areas? (Investment, exports, job creation, research and development, etc.)

The approach in this section and the following ones will be to make an assertion or quote one made by others. This will be followed by a discussion of the evidence or lack thereof for the statement, qualifications that should be noted, or guides to interpretations of the information.

5.1 Employment

Small firms create all [or most] of the jobs in the economy, and therefore,

This theme has been popularized by David Birch [1979, 1988] and repeated for Canada by a DRIE study [1986] assisted by Birch. The basic pattern for the period from 1976 to 1984 is one of most net employment increases occurring in enterprises with less than twenty employees, followed by large increases in enterprises with 500 or more employees. Absolute declines often occur in firms between 20 and 500 employees, unless the industry is growing rapidly (e.g., services).

In a recent Statistics Canada study, a similar pattern emerged for the period from 1978 through 1984 [McMechan, 1988], although the term "large" now refers to businesses with 100 or more ALUs (see above). When the period is broken into two subperiods, 1978 to 1981 and 1981 to 1984, a rather different pattern emerges. In the earlier period, large firms accounted for over 60 per cent of net employment increases, in line with their share in 1978, whereas in the latter period, the ALUs of small businesses continued to grow quite rapidly, but with absolute declines in the ALUs for medium and large businesses. This should serve as a caution about general conclusions concerning the role of firm size in employment generation.

The perspective can also influence the interpretation. The contributions to employment noted above were based on initial year sizing. If the terminal year, 1984, is used, then small businesses contributed 12 per cent of the total change in ALUs, while the large category accounted for 59 per cent of the total change. This result contrasts with the 82 per cent contribution from small firms and the 13 per cent contribution from large firms, based on initial year size.

Sources of the changes may be associated with variations in output, but can also arise from mergers, acquisitions, spinoffs, or administrative changes in corporations. Further research should help clarify the contribution of the various factors.

5.2 Labour Productivity

The capital-labour ratio is positively related to firm size.
[01,1983]

Productivity levels of large firms are greater than small firms. With higher capital per worker and more modern management practices, the output per employed person is higher for large firms in a given industry than for smaller firms. This productivity difference is reflected in higher real wages for employees of the larger firms.

An examination of the value-added per worker in manufacturing suggests that as the size of the establishment rises, the productivity also increases. In 1986, value-added per worker was about \$40,000 per employee in establishments with less than 20 employees, and up to \$80,000 per employee for establishments with over 1000 employees. Part of the explanation may be differing proportions of part-time employment, but this would not be enough to explain the differences.

5.3 International Trade

Large firms are more likely to participate at a more than proportionate level in international trade, accounting for most exports and imports.

This has been disputed by McFetridge [1977, p.91], who suggests that there is no empirical base for the claim, and some that counters it.

5.4 Investment

Large firms tend to buy new, specialized equipment, and smaller firms often buy and rebuild used capital goods. [01,1983]

5.5 Stability

The variation of employment is less for larger firms than smaller firms; this implies greater stability of employment for the economy as a whole.

5.6 Research And Development

Large firms do relatively more research and development than smaller firms.

The Statistics Canada publication, **Industrial Research and Development Statistics, 1987** contains some information about the amount of R&D spending and the number of "performers" by firm size. But what is missing is the information about those who do not perform R&D. Therefore, it is not possible to measure the relative contribution precisely.

But perhaps before spending resources on establishing the respective roles of different businesses by size, it should be noted that research and development is not a widely spread phenomenon. Quoting the Statistics Canada publication:

"Most industrial R&D in Canada is performed by a small number of firms. Out of 3,498 companies which reported performing R&D in 1987, 25 (or 1%) accounted for half the R&D performed."

It is observed that a larger proportion of the sales of smaller firms is spent on R&D, but this finding is based only on those who report R&D, and would include startup companies as well as firms specializing in performing R&D. No meaningful inferences can be drawn about the population of firms.

The adoption rate of new technologies appears to be linked to firm size, with smaller firms less likely to have adopted the most recent technology [McPetridge, 1988].

5.7 Working Conditions

For employees, an increase in firm size is accompanied by a rise in educational attainment, a higher fraction of employees in salaried supervisory positions, relatively fewer part-time workers, higher wage rates, and more fringe benefits. [O1,1983] This fits the image of the larger corporation being an "above-average" employer. The question remains whether the size allows or requires this performance, or whether the treatment of workers leads to becoming large.

In the Royal Commission on Corporate Concentration Report [1978], they found that:

"Our examination of the relationship between business size and working conditions revealed that there was little if any correlation between the size of the firm and health and safety standards, discrimination, and job satisfaction in the work place. There is some evidence that larger firms pay higher total compensation than smaller firms do. The available data in this area is extremely fragmentary, however, and much more research will be necessary before confident conclusions can be drawn." [p.411]

5.8 Contribution To The Community

In the broad area of **social responsibility**, the Bryce Commission found that the larger the firm the more likely that it was aware of the need for social involvement and more likely to have actually responded to that need [Mactaggart, et al, 1977,p.32-35].

In more tangible form, charitable contributions tend to grow with size of firm. From 1986 corporate taxation data, firms with assets less than \$1 million, contributed \$15.1 million or 0.24 per cent of net taxable income, whereas firms with assets greater than \$25 million contributed \$188.5 million or 0.94 per cent of net taxable income. This may reflect the choice of the owners of smaller firms to contribute through the personal income tax system, rather than at the corporate window.

5.9 Contribution To Human Capital

Large firms are more likely to provide formal training for their employees.

This finding is supported by U.S. research, including a recent chapter in the U.S. Small Business Administration **Small Business in the American Economy** [1988]. The basic finding is that larger firms do more formal training of their employees, more on-premises, and more for those who are more highly educated to begin with. This is in spite of the fact that employees of small firms may be in greater need of training, given the greater proportion of persons with low levels of education hired by small businesses.

5.10 Nursery Role

Large firms train the "entrepreneurs" that start small businesses. This anecdotal observation is based on my experience with founders of high-tech companies, who had a work history of starting with a large firm before they "went on their own". It would be interesting to find out how pervasive this characteristic is and whether those with the large company experience are more successful than those who entered the fray with only small business experience.

In the "family" businesses of restaurants, retail, and farming I suspect that there is little "nursery" effect.

6 PUBLIC POLICY

6.1 Parimutuel Versus Efficiency

Should public policy try to create a level playing field by creating "equally-handicapped" businesses? Or should the emphasis be on efficiency? Alternatively, public policy can concentrate on the treatment of externalities, conditioning private decisions to reflect public or social values.

For some policies the effect of the incentive, if tied to size, may limit the expansion plans of the very firms that are being assisted.

6.2 Policy Questions

As a guideline to policy formation should some "proof" that "small" is "better" than large be required?

Should subsidies, programs, and tax expenditures based on firm size be reviewed? Would other criteria be better? Should the special tax rates for small business be dropped or reduced? (\$2.3 billion in 1986.)

Do we need a Small Business Directorate? FBDB?

Annotated Bibliography

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