Agriculture and Agri-Food Canada
Agriculture et Agroalimentaire Canada

Performance *in the* Food Retailing Sector *of the* Agri-Food Chain

Performance Report Series

Vol. 1, No. 1
June 2003

Canada

PERFORMANCE
in the
FOOD RETAILING SECTOR
of the
AGRI-FOOD CHAIN

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June 2003

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Publication 2200/E
ISSN 1707-2735
ISBN 0-662-34226-7
Catalogue A21-53/1-1E-PDF
Project 03-021-r

Aussi disponible en français sous le titre :
« Le rendement du marché dans le secteur de l'alimentation au détail de la chaîne agroalimentaire »

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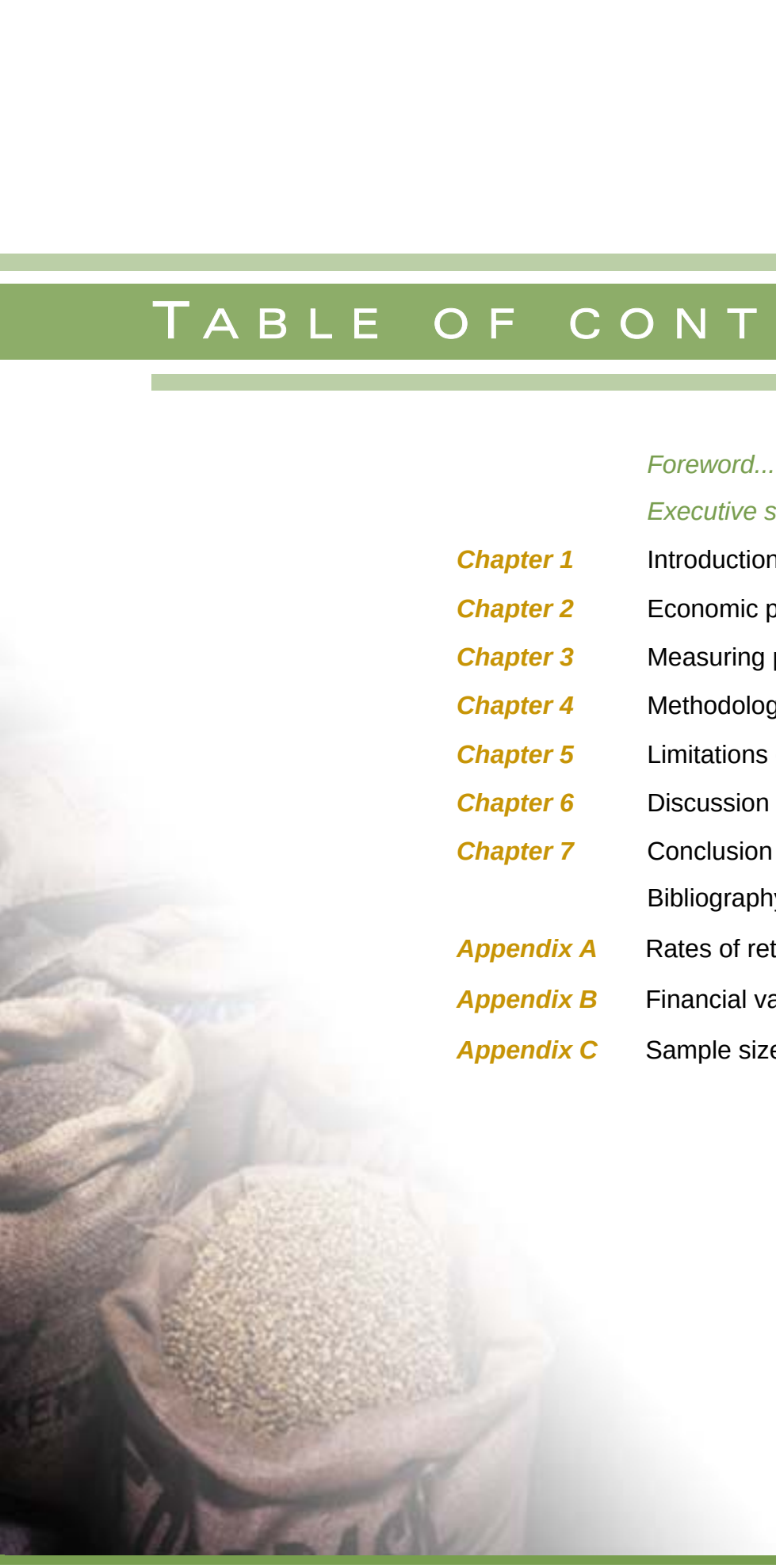

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Foreword

The agri-food chain today is significantly different from that of twenty years ago. Changing consumer demands, knowledge intensive technology, North American integration and globalization have all contributed to the evolution of the different segments of the chain, which include input suppliers, agricultural producers, food processors, and food distributors.

This report is part of Agriculture and Agri-Food Canada (AAFC)'s new Performance Report Series. The purpose of this Series is to create a picture of the competitiveness and profitability of the entire agri-food value chain to support a more informal discussion on changes in the agri-food value chain, and the challenges and opportunities it faces in the future. This information will provide a reference point for determining the preparedness of the agri-food value chain to take maximum advantage of the new Agricultural Policy Framework to build a more profitable future.

To get a full picture of the economic health of the various segments of the agri-food value chain, their economic performance needs to be measured from many different perspectives, including profitability, cost-competitiveness, productivity and innovation. This particular report is one of two that AAFC has undertaken in conjunction with Statistics Canada to assess profitability of Canadian food processing and retailing enterprises relative to non-food processing and retailing enterprises. This study examines the profitability of food retailers. Profitability is measured in terms of the rate of return on long term capital. On average, food retailers are shown to have higher rates of return than their non-food counterparts. This gives evidence that food retailing is a healthy and profitable industry in the Canadian economy.

EXECUTIVE SUMMARY

This paper sets out to measure the performance of the food retailing sector of the Canadian economy for the period 1990 to 1998. The purpose of the study was to provide a baseline for the sector due to the major changes that have taken place after 1998. A second driver was to update information on the sector. A study of this type has not been done since the 1970s.

The paper uses profitability as a measure of performance. The measure was chosen because most firms make business decisions based on their profitability, and profitability provides an indication on the direction of employment, investment, and growth of a sector.

We find that food retailing performed better than both non-food retailers and the general economy over the 1990s. While large retailers performed twice as well as small and medium retailers, the latter categories still performed better than their non-food counterparts over the period.

Chapter 1
Introduction

The decade of the 1990s opened in the middle of a recession that ended in early 1992. The recession was followed by an economic boom fuelled primarily by the high tech. sector. In the midst of this boom, the North American Free Trade Agreement came into force, the Uruguay trade round was concluded and the World Trade Organization was born. They changed both the trade atmosphere and the ability of governments to use certain economic incentives such as subsidies. The food sector was not insulated from these events, despite the fact that food is a necessity and is therefore less sensitive to changes in economic conditions.

In the food retailing sector, there has been a trend of consolidation since the early 1980s, as large enterprises expanded through the purchase of smaller enterprises. However, in the late 1990s, large enterprises started to consolidate. Large retailers claimed that they had been regionally based and they now needed to consolidate to form national chains to compete with department stores such as Wal-Mart, which were expanding into food retailing.[1] Together, Costco and Wal-Mart have secured seven percent of Canadian food sales.[2] So far, Wal-Mart has not moved aggressively into food retailing in Canada as it has in the United States where it is poised to become the largest food retailer.

Concerns are being expressed in political forums, as well as in articles[3] and commentaries in print and on the news, over the increased concentration in the food retailing sector. The main concerns are that increased concentration will result in retailers exercising market power, leading to increased food prices, lower employment and reduced availability and variety of food.

In view of these changes, this paper assesses the performance of the food retailing sector. The paper is comprised of seven chapters. Chapter 2 is a discussion of the link between economic performance and market power. Chapters 3 and 4 discuss measurements of performance and the methodology chosen for this paper. Chapter 5 documents some of the limitations of the study and Chapters 6 and 7 discuss the empirical results and conclusions. The paper ends with a bibliography and three appendices.

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1. *Retailers contend that the focus of food retailing is shifting from national markets to global markets, where chains such as Royal Ahold earn over 90% of their business outside their home country. A recent report in the "Canadian Grocer" [see Diekmeyer, Peter (2001)] notes that some of Canada's regional grocery chains are good targets for acquisition by firms like Royal Ahold.*

2. *See Diekmeyer, Peter (2001).*

3. *See McFarland, Janet (1998) and Waldie, Paul (1998), and McTeague, Dan (1998).*

CHAPTER 2

ECONOMIC PERFORMANCE

In this paper, we used profit as the measure of performance because it can be applied in a wide variety of contexts. For brokers and investors, performance is a guidepost for stock valuation and risk assessment. The higher the profit, the better the stock value. For economists, robust performance may signal that an industry will be increasing employment, earnings and capital assets. In contrast, a declining performance may be reflected in lower productivity, reduced employment, lower capital spending, etc. More importantly, poor performance in the form of low profitability may signal the need of a more detailed look at an industry. For instance, an industry that continually performs poorly, despite a robust economy, invites further investigation to assess why.

Consumers and governments are concerned over increasing concentration to the extent that it may lead to the exercise of market power and a reduction in consumer welfare. Most studies of market power focus on determining the structure of the market. To the extent that a few firms dominate a market, such a structure points to potential market power but not necessarily to the *exercise* of that power. Some authors, such as Cotterill, Ronald W. (2000), argue that if firms are rational and are driven by market forces, then any potential market power will in fact be exercised. As a result, firms in the process of maximizing profits will use whatever power the structure of the market affords them.[4] Other authors, such as Thurow, Lester (1991) and Paul, C. (2000), disagree and argue that if the market is contestable or if mergers are increasing scale efficiencies, concentration can result in increased output and lower prices.[5]

In addition, some authors disagree on the use of profit as an indicator of the exercise of market power. Fisher, F. M. and J. J. McGowan (1983) argue, "…the examination of absolute and relative accounting rates of return to draw conclusions about monopoly profits is a totally misleading enterprise" (p. 91). This argument is based on the fact that financial and administrative data reflect legal constructs rather than economic realities. In response to Fisher, F. M. and J. J. McGowan (1983), Farris, P. W. and K. L. Ailawada (1992) and Messinger, Paul R. and Chakravarthi Narasimhan (1995) point out that profits can be used as a proxy for the *exercise* of market power, based on the logic that the exercise of market power would lead to the existence of increased or super-normal profits over a sustained period of time.

4. *Cotterill, Ronald W. (2000) raises the issue of double-marginalization which reduces consumer welfare considerably. For a response to Cotterill's argument, see Giraud-Heraud, Eric, Louis-Georges Soler and Herve Tanguy (1999).*

5. *For an in-depth assessment of the issues, see Sutton, J. (1991), Shy, Oz (1996) and Rude, James and Murray Fulton (2001).*

This leads to a discussion on the weakness of the linkage between profitability and market power. Profitability is not necessarily the same across economic sectors due to differences in revenue and cost structures. Thus, there is no defined point at which the level of profitability is *too high* and therefore the result of market power.[6] The objective of this paper is to provide a baseline of the profitability in the food retailing sector, which could then be used to gain a better understanding of the sector and to provide a guide to interpreting changes in profitability due to changes in market structure.

6. *Kay, J. A. and C. P. Mayer (1986) argue that profitability in excess of the cost of capital could be considered prima facie evidence of barriers to entry. However, their arguments neglect the fact that higher profitability is the reward to taking on higher risk.*

CHAPTER 3

MEASURING PERFORMANCE

While profit is the measure of performance in this paper, there are several ways to measure profitability and the next step was to identify a method that could be applied to all industries over time. To say that higher *absolute* profits indicate the potential exercise of market power would be incorrect as absolute profits could be expected to increase as a firm's sales increase. Clearly, what is needed is a measure of *profitability* that standardizes for firm size.

There are several conventional methods for measuring profitability and each has its drawbacks. One method assesses the gross margin for each sector of the agri-food chain, as was done recently by the National Farmers Union (2000) in a presentation to the Standing Committee on Agriculture.[7] However, the use of a gross margin measure of profitability may provide inaccurate results. A declining margin tends to be interpreted as indicating declining profitability, even though an increasing volume of sales may be enough to offset this. A firm earning a small profit per unit with massive volumes of sales may have a higher total profit than a firm with a high profit per unit but sales of only a few units. The restaurant industry is an example. A single McDonald's franchise may have a total profit greater than an upscale restaurant despite the fact that the McDonald's franchise may have a gross margin of only a few cents per meal while the upscale restaurant could have a gross margin of several dollars per meal.

Another method for measuring profitability uses the ratio of net income to shareholders' equity. Shareholders, brokers and analysts prefer this measure because it informs people about the return on their investment in a business. The drawback is that the results are heavily influenced by the financial structure of the firm. There are two ways in which financial structure can influence profitability. The first way is where losses influence the denominator, shareholders' equity. A firm that incurs losses will see its equity decrease. When, after a period of losses, the firm has positive net earnings again, the return on equity may be quite high. For example, consider two firms that are identical. The first firm incurs losses for two years but a positive net income in the third year. The second firm shows only positive net earnings. If in the third year they show identical net earnings, the firm that incurred losses for the first two years will show a higher return to equity than the firm that did not incur losses. Thus with this measure, the first firm would appear to be, by far, the more profitable.

7. *See also Hendrickson, Mary et al. (2001).*

The second way to influence the return on shareholders' equity is financial leveraging, which affects the numerator without affecting the denominator. To the extent that earnings exceed interest payments, the return available to shareholders increases without increasing the value of shareholders' equity. In addition, the tax deductibility of interest payments also serves to augment the after-tax rate of return by reducing the tax liability of the business.

A third method for measuring profitability is the return on assets. Similar to the return on shareholders' equity, this measure uses net income in the numerator. The denominator is total assets which includes short-term assets that for retailers can be as high as 75% of the total asset base. In the food retailing sector, short-term assets are comprised mainly by inventory and accounts receivable, which are financed from operating (i.e. short-term) credit. Additionally, because food retailers can vary their inventory with changing economic conditions, inventory could be considered a variable input like labour. Furthermore, a growing number of retailers are starting to sell on a consignment basis, meaning that the retailer does not buy the item and is not responsible for maintaining inventory. With a large portion of the total assets of retailers being short-term in nature, using the return on total assets as the profitability measure would mask the return that the firm generates from its longer-run investment in plant and equipment. One can use the sum of shareholders' equity and long-term debt as a proxy for longer-run investments, assuming that they are used solely to finance plant and equipment.

The approximation of the economic performance used in this paper, which better matches the criteria to measure profitability from capital employed in food retail, is the equation:

$$\textit{Rate of return on long-term capital} = \frac{\textit{operating income}}{\textit{long-term capital}}$$

The use of operating income rather than net income allows one to approximate the economic concept of return on investment. Net income excludes interest payments and taxes paid. For financiers, brokers, banks and investors, net income is preferred as it relates to the monetary value that accrues to shareholders. However, by excluding the taxes paid and interest payments on debt, one is excluding a significant portion of the total economic return on the firm's investment in plant and equipment. Operating income is calculated without deducting either taxes or the interest paid. As mentioned earlier, the return on long-term capital is preferred, as it removes the distortion of short-term assets in the determination of the rate of return.

Chapter 4
Methodology

This paper uses the operating rate of return on long-term capital to compare the performance of the food retailing sector with the non-food retailing sector and the general economy. How the operating rate of return is calculated changes the results substantially. For instance, if one were to calculate the rate of return for each firm individually and to take the average (mean), the results would be quite different than if one were to sum the numerator and denominator separately over all firms and then to perform the calculation.

No single measurement method offers a perfect solution. However in this paper, we chose the latter method. Since the first method uses the mean of the returns calculated for each company, a small firm with an abnormally high or low return can have a sizable impact on the mean. This skewed mean then alters the results and could lead to perverse inferences about the relative performance of the various sectors. By calculating the operating rate of return as the sum of the operating income of all firms divided by the sum of the long-term capital, the rate of return obtained is a more accurate representation of the rate of return on the broad base of assets of the industry or class size.

The data used in this paper are a stratified random sample from the Annual Survey of Financial Statements, a sample survey of corporate tax records (T2) developed by the Industrial Organization and Finance Division (IOFD) of Statistics Canada, and cover the years 1990 through 1998.[8] The various types of business activity are identified using the Standard Classification for Companies and Enterprises 1980 (SIC-C). This classification is different from the more commonly used Standard Industrial Classification for Establishments 1980 (SIC-E). Since many of the firms in the various sectors of the agri-food chain operate more than one establishment, the SIC-C classification was used because the company registered under SIC-C is a legal entity with full financial records. That is to say, the company registered under SIC-C files an income statement for *all* of its establishments.

An important issue with using SIC-C data is that firms are classified based on the *largest* component of their business. It is an imperfect system of classification. Thus, some businesses that are not solely food retailers are included in the sample as such, because they have stated that the largest part of their sales comes from food. As a result, the SIC-C grocery or food retail sample may include such SIC-E establishments as gas stations, land companies and bakeries, to name a few.

8. *1998 is the most recent year for which the data are available.*

Another data issue that needs to be kept in mind is that although the sample is representative of the population and provides estimates of all retailing activity, not all enterprises are included in the data. The data set is derived from a stratified random sample where the strata are defined by size of assets and revenue, by industry. The sample includes all large enterprises (i.e. the large enterprises are always in the sample) but the small and medium-sized firms are randomly selected, with the probability of being included in the sample declining as firm size decreases.

In preparing the data set for use, we excluded the enterprises with zero sales and the enterprises with short-term liabilities exceeding their total liabilities. The logic behind the first exclusion is that retailers sell goods to consumers. Thus, if an enterprise had no sales, the question arises as to how it could be a retailer. The reason for the second exclusion is that short-term liabilities are part of the total liabilities of an enterprise and therefore cannot exceed the total. Even if the enterprise has no long-term liabilities, the short-term liabilities should not exceed the total liabilities. The first exclusion reduced the sample size by about 30% each year. The second exclusion hardly had an impact, reducing the sample size by, at most, two observations in any given year. We made one exception when we prepared the comparative sample for the general economy. Banks and other financial institutions do not have product sales per se, but the financial sector was nonetheless included in the sample.

The last concern with the data set is the demarcation between small, medium and large enterprises. Definitions differ as to where to draw the boundaries between them. Industry Canada defines large enterprises in two ways. The first is by sales, where an enterprise with over $500 million on sales is considered large. The second is by employment, where an enterprise is deemed to be large if it has over 50 employees.

Neither of these definitions appeared satisfactory for this paper. Using "over $500 million in sales" excludes all but the largest retailing enterprises, which poses a problem in that small sample bias may become an issue. But using "over 50 employees" includes too many enterprises because over 40% of the food retailing enterprises would be considered large. In reality, a single large grocery store could have 50 employees, making it a large enterprise under the Industry Canada definition. However, in the structure of the food retailing sector, an enterprise is considered medium when it operates in more than one location. The two definitions of Industry Canada are too broad to capture the actual structure of the market.

The Statistics Canada publication, "Financial and Taxation Statistics for Enterprises"[9] has an alternative definition of size. Small enterprises have annual sales under $5 million, medium-sized enterprises have annual sales between $5 million and $75 million and large enterprises have annual sales over $75 million.

In some large urban markets, a grocer with one store may be able to exceed $5 million in annual sales, which poses a similar problem to the Industry Canada definitions. However, instead of disregarding this definition, we adjusted it slightly to give what we felt was an accurate representation of the available data for food retailing sector.

9. *Statistics Canada Catalogue number 61-219-XPB.*

To avoid including those individual stores in large cities as medium-sized, the sales threshold for medium-sized enterprises was changed from $5 million to $10 million. In addition, since there were only a few observations with sales between $75 million and $100 million, the sales threshold for large enterprises was raised to $100 million. Therefore, for this paper, we have modified the definitions of size. Small enterprises have annual sales under $10 million in sales, medium-sized enterprises have annual sales between $10 and $100 million and large enterprises have annual sales over $100 million.

As a result, the size classifications in this paper may not always be directly comparable with those used in other documents published by Statistics Canada.[10]

10. *The Market and Industry Services Branch (MISB) of AAFC suggested six size classes. While more size classes would allow for a more detailed analysis, using six size classes led to some classes having fewer than ten observations. In a random sample, the results would be prone to a significant small sample bias.*

CHAPTER 5

LIMITATIONS OF THIS PAPER

The scope of this paper is limited because all the financial statistics are based on SIC-C data. Since SIC-C information incorporates all activities of the enterprise, sales, costs and profits from non-food sectors of the business are included. For example, large food retailers are classified to food retail but they may also have integrated wholesaling operations. As a result, the performance of the wholesale segment of their respective businesses is not separated from the retailing segment. There is no doubt that this inclusion will bias the results. However, without knowing the share of the profit from the wholesaling divisions, one cannot determine the size or the direction of the bias.

CHAPTER 6

DISCUSSION OF THE RESULTS

In the discussion of the results, we begin with an overview of the food retailing sector in general and then present our research results with respect to the food retailing sector as a whole and grocery stores specifically. We conclude with a comparison of our results with those from two international studies.

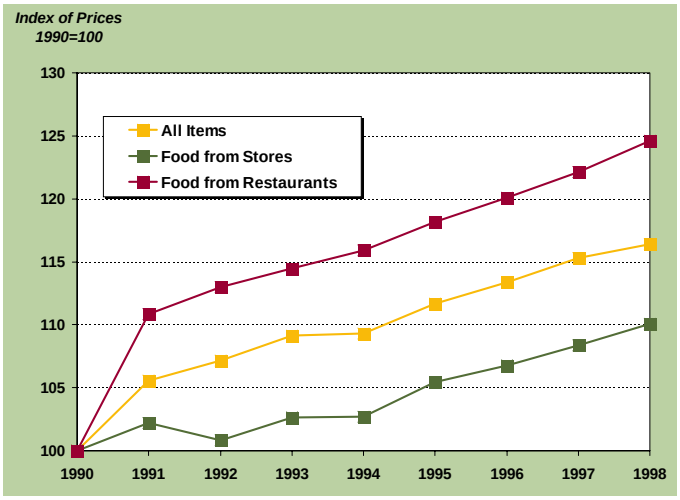
Economic environment of the food retailing sector

Food distribution (retailing and wholesaling) accounts for 2.6% of Canadian Gross Domestic Products (GDP) and food retailing accounts for 1 in 25 jobs. In 1998, Canadians spent just under $59 billion on food bought from stores. Of that total, just over half is accounted for by the 80 supermarket and grocery chains.[11] During the 1990s, the food retailing sector had to adapt to shifts in consumer preferences and competitive trends. On the consumer side, Canada's ever-changing demographics have altered spending patterns. Increasing ethnic diversity is boosting demand for non-traditional foods such as curries, goat milk, goat meat and more variety in fruits and vegetables. In addition, the number of single-parent, single person and dual person households has increased. These households, along with the increased time constraints of two income families, have increased the demand for quality ready-to-eat and pre-packaged individual meals.

In addition to the changing consumer environment, the competitive environment also underwent a change. Over the decade, there was an increase in the number of non-food retailers, such as department stores, pharmacies and gas stations, entering the food market. As a result, the distinctions between them and foodservice and food retailers blurred. This situation was exacerbated by the reduction in the percentage of food dollars spent at retail outlets for consumption at home. In an attempt to keep their customers, the food retailing sector has started to change store formats, to expand the selection of non-food items, to expand the selection of private label items and to invest in in-store food service and ready-to-heat and ready-to-eat home meal replacements. Also, to increase the competitiveness of the entire food chain, the food retailing sector introduced in 1992 the Efficient Consumer Response (ECR) system to minimize the interaction costs between processors, wholesalers and retailers. A key feature of ECR is its responsiveness to consumer preferences measured by current purchasing patterns. Another feature is that it shifts the onus for timely stocking of retail shelves to suppliers.

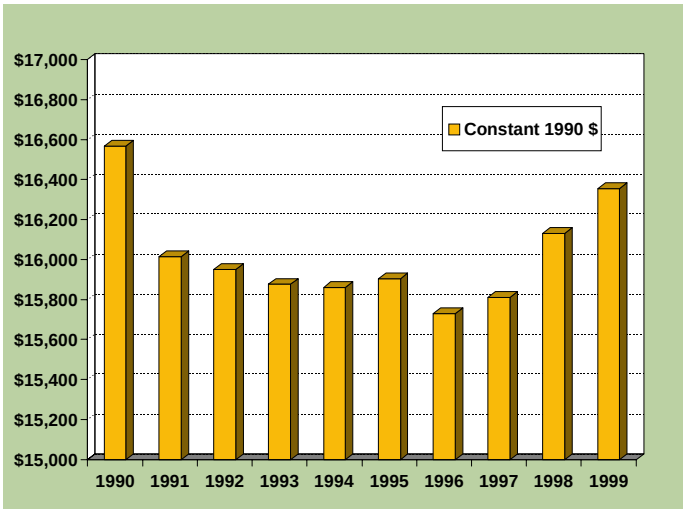
11. *See Statistics Canada (2001).*

Figure 1: Price indices for food and other goods, 1990–1998



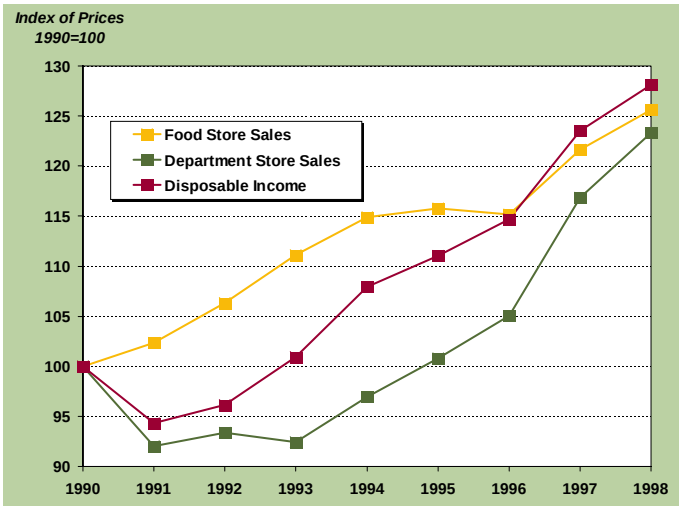
One macroeconomic influence concerns prices. Since 1990, food store prices increased at a slower rate than prices in general. Therefore food has become cheaper relative to other goods over the decade (Figure 1). The introduction in 1991 of the Goods and Services Tax (GST), applicable to food from restaurants but not from food stores, increased the cost of restaurant meals relative to groceries. It thereby provided a benefit to the food retailing sector during the recession.

Figure 2: Real per capita personal disposable income over the 1990s



Another macroeconomic influence was real disposable income, which declined between 1990 to 1996. Even though real income was increasing since 1996, real disposable income in 1998 was still lower than in 1990 (Figure 2). Food to some extent is a necessity, and thus it is expected that consumers will sacrifice spending in other areas in order to maintain a certain level of food consumption. Indeed, consumer spending on food (food stores) remained strong in comparison with non-food retail spending (department stores) and nominal disposable income over the period (Figure 3).

Figure 3: Index of sales and current dollar disposable income per capita



The type of food purchased may change (i.e. consumers may substitute staple foods such as oatmeal and whole chicken for higher priced foods such as packaged breakfast cereals and seasoned, ready-to-cook, boneless, skinless chicken breasts) but the quantity of food purchased may not decline.

Food retailing sector

Overall, the food retailing sector outperformed both the non-food retailing sector and the general economy between 1990 and 1998. Food retailers averaged a return of 12.15% while the average return was 7.33% for the general economy and 6.99% for the non-food retailing sector.[12] The profitability in the food retailing sector was realized despite the fact that the price of food rose more slowly than prices in general since 1990. As a necessary good, one would expect food-related industries to have little fluctuation in profitability. However, the food retailing sector was not wholly insulated from the economic recession of the early 1990s (Figure 4). The food and non-food retailing sectors both suffered a substantial decline in profitability over the same period.

Figure 4: Rate of return for the general economy, the food retailing sector and the non-food retailing sector

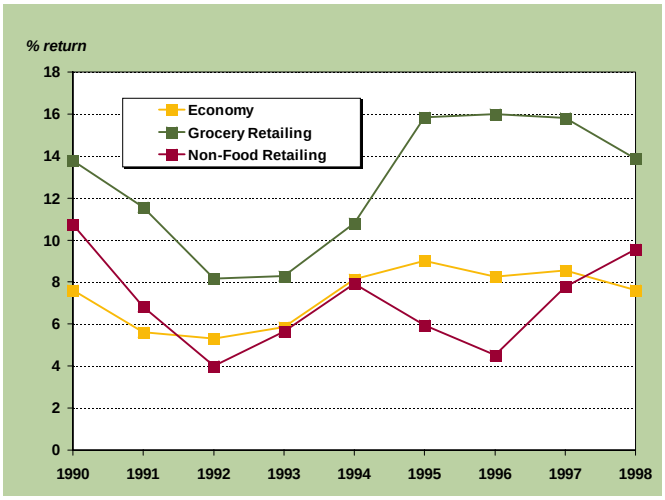
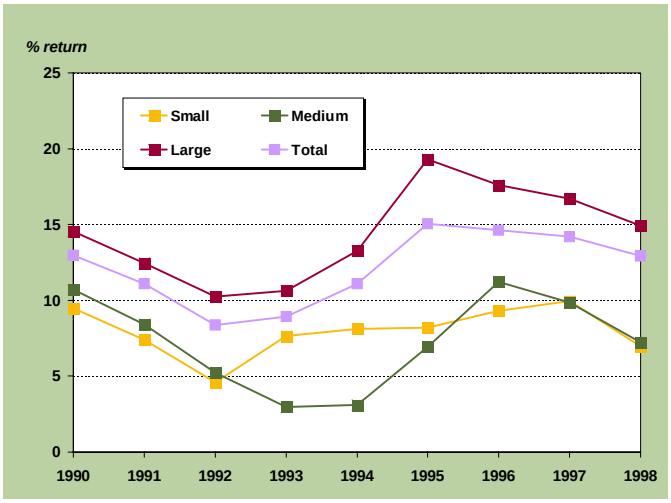


Figure 4 shows the relative performance of the food retailing sector, the non-food retailing industry, and the general economy over the period 1990 to 1998. For each, the level of profitability observed in 1998 was very close to the level observed in 1991. However, the pattern over the period shows considerable variation. The food retailing sector follows the trend of the general economy but after 1994, the gap widens between its performance and the performance of the general economy. The profitability of the non-food retailing sector was highly variable between 1990 and 1998. It may not have followed a normal economic cycle during the period. Some of the largest non-food retailers experienced such difficult times that they eventually closed their operations and liquidated their businesses.

Figure 5: Rate of return in the food retailing sector, by class size



Within the food-retailing sector, the profitability varies considerably by size, as shown in Figure 5. On average, the trend for the food retailing sector is similar to that of the large food retailers. This similarity underscores the fact that large food retailers dominate the food retailing sector. Between 1990 and 1998, the average rate of return on long-term capital was 7.96% for small enterprises, 7.29% for medium and 14.41% for large enterprises.[13] Despite the large gap between the profitability of the large enterprises and the other size classes, the small and medium food retailers still outperformed the general economy. For all

12. *See Appendix A, Table 1: Rate of return by sector (all enterprises).*

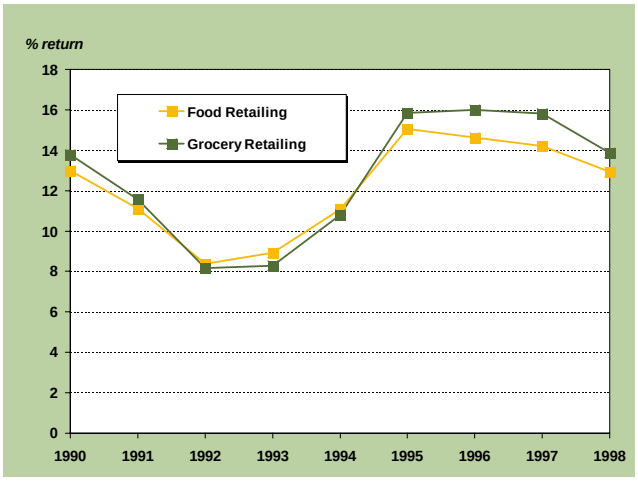
13. *Recall that small enterprises have less than $10 million in sales, medium-sized enterprises have sales between $10 million and $100 million and large enterprises have sales of $100 million or more.*

small enterprises in the general economy, the rate of return was 5.92%, or two percentage points below the rate of return for small food retailers. The average rate of return for all Canadian medium-sized enterprises was 6.44%, almost one percentage point below the return for medium-sized food retailers.[14]

Grocery stores

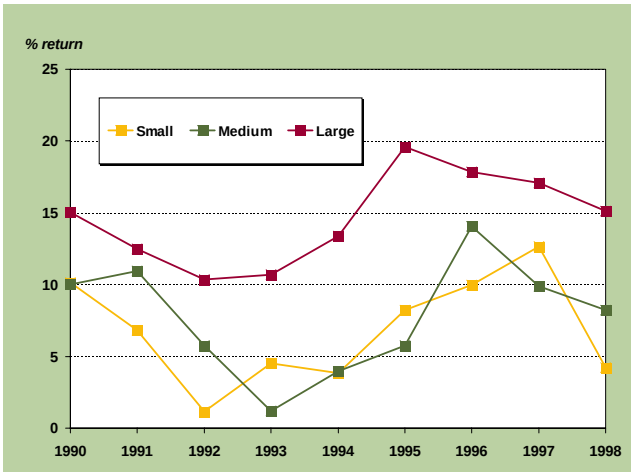
With the concern over increasing consolidation among grocers, we assessed separately the performance of grocery stores as a component of the food retailing sector. Despite being a component, grocery retailing is quite different from food retailing. Grocery retailers carry a wide variety of foodstuffs and general household supplies. Food retailers also include stores that sell only a certain type of food such as health food stores and bakeries and retailers that sell non-household related goods such as gas stations.

Figure 6: Performance in the food retailing sector vs. performance in the grocery retailing sector



The performance of both sectors follows a similar trend (Figure 6). Over the period 1990 to 1998, the average rate of return of 12.68% for grocers was very similar to 12.15% for food retailers. To a large extent, these rates of return reflect the fact that grocery retailing accounts for 92% of retail food sales.

Figure 7: Performance of grocery retailers, by class size



Between 1990 and 1998, the average rate of return for large grocery stores was 14.61%. In comparison, the rate was 7.75% for medium-sized enterprises and 6.82% for small enterprises (Figure 7). The results are about the same as the food retailing sector (see Figure 5) over the period. The one major difference is the performance of small grocers. With a rate of return of 6.82%, they underperformed small food retailers (7.96%).

14. *Small non-food retailers outperformed their food counterparts with an 8.98% return, while medium non-food retailers had an average rate of return of 7.45% over the period 1990 to 1998. For a more detailed comparison, see Appendix A, Tables 2, 3 and 4.*

The performance of small grocers is quite volatile. Part of the reason for this volatility is a consequence of the nature of the business conducted by small food retailers. Small food retailers are mainly convenience and speciality food stores that do not compete directly with the large grocery chains for a share of the market. However, despite the volatility in performance, and the lower rate of return, small grocers still outperformed the general economy average of 5.93% between 1990 and 1998. The performance of medium-sized grocers at 7.75% was about equal to medium-sized food retailers at 7.29% as were large grocers at 14.61% compared with large food retailers at 14.41%.

International comparisons

Two other studies looked at the returns for large retailers. The first, by Burt, Steve and Leigh Sparks (1997), looked at the large chain grocers in France and England. Their results showed that between 1988 and 1993, the average rate of return for the six largest chains was 18.72% in France and 20.62% in England. For Canada, the average rate of return of the six largest chains between 1990 and 1993 was 12.02%. The second study, by the UK Competition Commission (2000), reported an average return of 17.67% for large UK supermarkets between 1993 and 1998. For Canada, the average for the same period was 19.93%. Despite the fact that the numbers are not completely comparable due to differences in accounting and tax laws between the countries,[15] it would seem that Canadian grocers under-performed relative to their foreign counterparts in the early 1990s and outperformed them toward the late 1990s.

15. *The ratios used in this paper and the two comparison studies are almost identical. The major difference is how tax legislation in the different countries govern the treatment of expense items.*

Chapter 7
Conclusion

The grocery retailing sector constitutes a substantial component of the food retailing sector. Both sectors exhibited rates of return (12.68% and 12.15%, respectively) which are much larger than the rates of return for the non-food retailing sector (6.99%) or the general economy (7.33%). The superior performance of the two sectors is largely accounted for by the performance of the large enterprises, which had a rate of return almost double that of small and medium enterprises. In contrast to the food retailers, the large non-food retailers under-performed relative to the small and medium non-food retailers.

The superior profitability of large grocery/food retailers is a bit of a puzzle given that food prices have been rising less rapidly than the price of consumer goods in general. This situation implies that the real price of food has been declining. On the one hand, this declining relative price of food suggests that grocers are not extracting monopoly profits from consumers. On the other hand, if prices are not the underlying reason for increasing profitability within the food retailing sector, then by necessity, decreasing costs must be the driver. Costs can be decreased through increasing efficiencies, better managerial skills or the leverage of market power. Unfortunately, this paper does not explore deeper into the underlying mechanics of the profitability in the food retailing sector, but future research in this area would prove interesting.

Bibliography

Burt, Steve and Leigh Sparks (1997). "Performance in Food Retailing: A Cross-National Consideration and Comparison of Retail Margins." *British Journal of Management*, Volume 8, pp. 133-150.

Cotterill, Ronald W. (2000). "Dynamic Explanations of Industry Structure and Performance." Food Marketing Research, Report No. 53, University of Connecticut.

Diekmeyer, Peter (2001). "Are Canada's Retailers Ripe for the Pickin'?" *Canadian Grocer* (June 2001): 20-25.

Farris, P. W. and K. L. Ailawada (1992). "Retail Power: Monster or Mouse?" *Journal of Retailing*, 64, 4: 351-369.

Fisher, F. M. and J. J. McGowan (1983). "On the misuse of accounting rates of return to infer monopoly profits." *American Economic Review* 1 (March 1983): 82-97.

Giraud-Heraud, Eric, Louis-Georges Soler and Herve Tanguy (1999). "Avoiding double marginalization in agro-food chains." *European Review of Agricultural Economics* 26, 2: 179-198.

Hendrickson, Mary et al. (2001). "Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System." Prepared by the Department of Rural Sociology, University of Minnesota, for the National Farmers Union.

Kay, J. A. and C. P. Mayer (1986). "On the application of accounting rates of return." *The Economic Journal* 96, 1: 199-207.

McFarland, Janet (1998). "Grocers brace for a food fight." *The Globe and Mail*, Saturday, October 31, 1998, pp. B1, B13.

McTeague, Dan (1998). Letter to the Director of Competition. This letter can be accessed on-line at http://www.danmcteague.net/.

Messinger, Paul R. and Chakravarthi Narasimhan (1995). "Has Power Shifted in the Grocery Channel?" *Marketing Science* 14, 2: 189–223.

National Farmers Union (2000). "The Farm Crisis, EU Subsidies and Agri-Business Market Power," Report submitted to the Senate Standing Committee on Agriculture and Forestry, January 2000.

Bibliography

Paul, C. (2000). "Productivity and Efficiency in the US Food System, or, Might Cost Factors Support Increasing Mergers and Concentration?" USDA/ERS website April 2000.

Rude, James and Murray Fulton (2001). "Concentration and Market Power in Canadian Agribusiness." Presentation at the NAFTA Policy Dispute and Information Consortium's 7th Annual Workshop, Tucson, Arizona, February 14-17, 2001.

Shy, Oz (1996). *Industrial Organization: Theory and Applications*. Cambridge: MIT Press, 1996.

Statistics Canada (2000). "Financial and Taxation Statistics for Enterprises." Statistics Canada Cat. No. 61-219-XPB.

Statistics Canada (2001). "Wholesaling and Retailing in Canada." Statistics Canada Cat. No. 63-236-XPB.

Sutton, J. (1991). *Sunk Costs and Market Structure*. Cambridge: MIT Press, 1991.

Thurow, Lester (1991). "Abolish the Antitrust Laws." *Dun's Review* (February 1991): 72–74.

UK Competition Commission (2000). "Supermarkets—A report on the supply of groceries from multiple stores in the United Kingdom." Presented to Parliament by the Secretary of State for Trade and Industry by Command of Her Majesty, October 2000.

Waldie, Paul (1998). "Loblaws gobbles up biggest Quebec grocer." *The Globe and Mail*, October 31, 1998, pp. A1, A8.

Rates of return

Table 1: Rate of return by sector (all enterprises)

Year	Economy	Non-Food Retailing	Food Retailing	Grocery Retailing
1990	7.61	10.76	12.98	13.78
1991	5.63	6.82	11.11	11.57
1992	5.31	4.02	8.39	8.18
1993	5.86	5.65	8.91	8.28
1994	8.12	7.92	11.08	10.81
1995	9.02	5.96	15.07	15.83
1996	8.25	4.52	14.64	16.01
1997	8.55	7.77	14.20	15.82
1998	7.61	9.56	12.93	13.88
Average (1990–1998)	7.33	6.99	12.15	12.68

Table 2: Rate of return by sector (small enterprises)

Year	Economy	Non-Food Retailing	Food Retailing	Grocery Retailing
1990	7.24	12.74	9.47	10.13
1991	6.01	9.49	7.40	6.81
1992	4.58	6.46	4.61	1.13
1993	4.63	7.51	7.66	4.52
1994	5.92	7.76	8.10	3.83
1995	6.76	8.41	8.20	8.21
1996	7.08	8.86	9.29	9.97
1997	3.90	9.56	9.97	12.63
1998	7.05	10.07	6.97	4.20
Average (1990–1998)	5.93	8.98	7.96	6.82

Table 3: Rate of return by sector (medium enterprises)

Year	Economy	Non-Food Retailing	Food Retailing	Grocery Retailing
1990	6.33	8.16	10.72	9.99
1991	4.65	4.38	8.40	10.94
1992	5.40	3.52	5.22	5.74
1993	5.86	9.06	2.96	1.18
1994	7.23	8.03	3.11	3.96
1995	7.59	9.26	6.92	5.76
1996	7.54	4.49	11.22	14.04
1997	7.38	6.71	9.86	9.88
1998	6.02	13.43	7.21	8.23
Average (1990–1998)	6.44	7.44	7.29	7.75

Table 4: Rate of return by sector (large enterprises)

Year	Economy	Non-Food Retailing	Food Retailing	Grocery Retailing
1990	7.87	9.79	14.55	15.04
1991	5.76	4.22	12.46	12.50
1992	5.51	1.37	10.24	10.33
1993	6.35	2.49	10.64	10.69
1994	9.22	8.05	13.26	13.37
1995	10.20	2.77	19.32	19.59
1996	8.93	0.37	17.59	17.84
1997	9.80	6.13	16.72	17.08
1998	8.31	8.43	14.93	15.10
Average (1990–1998)	7.99	4.89	14.41	14.61

FINANCIAL VARIABLES

List of Financial Variables Used	
• Cost of Materials/Supplies	• Salaries, Wages and Benefits
• *Current Liabilities*	• Sales
• Estimation Weight	• SIC-C Code
• Interest on Debt	• Total Assets
• Inventory	• Total Current Assets
• *Operating Income*	• *Total Liabilities*
• Rental Expenses	• *Total Shareholders' Equity*

**The emphasized variables are the ones used in the calculation of the return on long-term capital.*

With regard to the variables, the calculation was conducted as follows:

$$\frac{\textit{Operating Income}}{\textit{Shareholders' Equity} + (\textit{Total Liabilities} - \textit{Current Liabilities})}$$

SAMPLE SIZES

Table 5: Sample size by sector (all enterprises)

Year	Economy	Non-Food Retailing	Food Retailing	Grocery Retailing
1990	36,591	2,239	386	255
1991	39,774	2,609	517	303
1992	40,249	2,652	499	330
1993	40,364	2,674	479	306
1994	44,462	2,680	530	337
1995	45,937	2,690	537	336
1996	41,951	2,387	507	292
1997	37,685	1,877	399	178
1998	29,885	873	231	120