Marketing Boards: The Canadian Experience

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I. Introduction

The assigned task for this paper is to provide an overview of the history and development of Canadian marketing boards and to provide an assessment of their current situation. In pursuit of these objectives, a relatively broad definition of marketing boards is adopted. Marketing boards are considered to be legislatively specified compulsory marketing institutions that perform any of the functions of marketing on behalf of the producers of particular agricultural commodities. Thus, as well as bodies whose members or directors are elected by agricultural producers, boards whose members are appointed by governments, such as the Canadian Wheat Board, are included as are some marketing bodies termed agencies, commissions, or authorities. Some 136 of these bodies operated in Canada in 1985 when boards regulated some 56 percent by value of the agricultural products produced and sold in Canada (Sullivan), or about three-quarters of agricultural output if the educational and promotional bodies are included. It is evident that boards continue to be a prominent feature of agricultural policy in Canada.

The development of marketing boards in Canada has many points of similarity to the development of legislatively specified marketing institutions in other countries and yet, because of the different social, political, and legislative environments in which they have developed, there are also many differences in these institutions. Their evolution in Canada reflects the dual jurisdictional authority over agriculture and over marketing that prevails in this country, as well as changing social and political attitudes towards government intervention. In tracing the history of development of these bodies and the history of their legislative basis, four groups of Canadian boards can be identified. These include, first, provincial producer-controlled marketing boards for products that are traded locally as well as across provincial boundaries and in export markets. These are boards for which complementary provincial and federal legislative authority, typically involving general enabling

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legislation, has been developed. Second, there are boards established for products such as fluid milk that earlier were sold only in very localized markets and for which specific provincial legislation alone was required. Third, there are federal boards for commodities sold primarily across provincial boundaries or in export markets. The Canadian Wheat Board is the prime example, although the Canadian Livestock Feed Board could be considered as a somewhat parallel institution, at least in that it is, like the CWB, a Crown corporation that operates under specific federal legislation and applies government policy in the marketing of grain commodities. Finally, the most recent federal marketing boards are the bodies established under federal legislation since 1972 that collaborate with provincial supply-management boards to apply the market-sharing arrangements of a number of national supply-management programs. Although established somewhat earlier as an instrument of national policy for processing milk, the federal institution of the Canadian Dairy Commission could also be included with this group of boards.

Fowke argued that early Canadian government policy towards agriculture, at least until the 1930s, had been molded more by the goals of national policy than by the lobbying efforts of farmers (Fowke, 1947). However, the expectations of society towards the role of government and the nature of government involvement in Canadian economic activities has changed over time, reflecting the necessity for relief activities in the depression of the 1930s, the subordination of domestic economic activity to wartime conditions in the 1940s, and increasing concern with social policy and use of income transfer mechanisms from the 1960s to the 1970s. These features are reflected in agricultural policy and in the evolution of the purpose and activities of many Canadian marketing boards. Despite being long-standing marketing institutions in Canada and in contrast to the marketing boards in some other countries, the use of agricultural marketing boards as an effective means of major income transfers to Canadian farmers mainly dates from the 1960s and 1970s. The recent use of marketing boards as a mechanism of major income transfers to farmers does not apply to all Canadian boards, but is evident for the supply-restricting boards. A major factor in the development of these bodies since the late 1960s was the very high priority placed on supply management to provide agricultural support by two successive Liberal ministers of agriculture. The approach continues to receive support from the subsequent Conservative minister.

II. The Development of Canadian Marketing Boards

There are many similarities between the early development of marketing boards in Canada, those in Australia and New Zealand, and the development of marketing orders in the United States. In Canada, pressures to establish these bodies were evident in the 1920s. An initial price boom followed the first World War but was succeeded by low prices and uncertainty regarding the trend in prices for agricultural goods throughout most of the world. There was long-standing farmer suspicion regarding the fairness of the marketing system that they confronted. The efforts of some farmers' groups to establish producer-controlled marketing institutions were also given focus at this time by the effective advocacy by the U.S. lawyer, Aaron Sapiro, for large-scale cooperatives. The subsequent failure of many marketing cooperatives to satisfy their advocates' high expectations later led to proposals for boards as "compulsory cooperatives".

Government control of the marketing of Canadian wheat applied from 1917 to 1920 when markets were disrupted during the latter years of and just following the first World War. The temporary Canadian Wheat Board, established in 1919 to market the Canadian wheat crop until private markets were re-established, applied advance or initial prices (subject to grade and transportation differentials) with distribution of final sale proceeds as interim or final payments. This Canadian experiment in "price pooling" followed the example of wheat price pooling arrangements that had just been initiated in Queensland and provided the model followed by the three cooperative prairie pools that were subsequently organized in 1923 and 1924. These bodies entered into voluntary contracts with farmers, pooled prices, and coordinated their marketing activities through a central selling organization, a system that continued until 1930. With the onset of the depression, falling market prices plunged the pools into financial crisis that was alleviated by the federal government's agreement to guarantee the advance payment subject to a government-appointed administrator taking over the direction of their central selling agency. Debate over the appropriate organizational structure for Canadian wheat marketing intensified as prices continued to fall. Stabilization activities involving the purchase and sale of stocks were continued by the federally appointed administrator until, after strong lobbying by farmers' organizations, a federal board was re-established in 1935. In a compromise of differing strong opinions on compulsory marketing as versus private marketing

channels, the board was established as a voluntary rather than a compulsory marketing agency (Fowke, 1957). As a matter of wartime expendiency, the board became the compulsory purchaser from farmers in 1943, initially under the War Measures Act, as a means of enforcing wartime price controls. The board's powers were extended to oats and barley in 1949.

The parallel evolution of provincial producer-controlled marketing boards involved an inital attempt to develop these bodies in British Columbia. Provincial legislation was passed in 1927 that led to the establishment of a compulsory marketing committee for vegetables and fruit. Five years later, this was found to infringe upon the jurisdictional authority of the federal government in that it regulated interprovincial trade and the use of levies to equalize returns to producers constituted an indirect tax. Low prices and declining support for cooperatives during the early years of the depression reinforced pressures on the federal government to enact legislation to provide for "orderly marketing". Despite opposition, federal legislation establishing a Dominion Marketing Board was passed by Bennett's Conservative government in 1935, prior to the federal election of that year. This legislation was challenged following the change of government in late 1935. It was subsequently found to infringe on the provincial governments' authority to regulate intraprovincial trade and was repealed in 1937, by which time some 22 marketing programs, mostly in British Columbia and Ontario, had been approved (Poetschke and Mackenzie).

The next step in the development of producer-controlled boards involved passage of legislation by provincial governments enabling establishment of boards to regulate the marketing of agricultural products within their provincial boundaries. Passage of complementary federal legislation was urged by the Canadian Federation of Agriculture in the late 1930s and in 1940, by which time all provinces but Quebec had passed agricultural marketing legislation (Poetschke and Mackenzie). With the outbreak of war and the invokation of the War Measures Act, the federal government assumed extensive powers over the marketing of agricultural products and it was not until 1949 that the federal Agricultural Products Marketing Act was passed, providing that boards established under provincial legislation could be delegated the same type of powers with respect to provincial products sold in interprovincial and export trade as they exercised for products sold in intraprovincial trade. An amendment in 1957 provided that provincial boards could also be authorized to raise funds by levies

on production and use these to equalize prices or for other purposes.

Overview of the early development of government regulation of agricultural marketing indicates that many of the early boards were introduced in reaction to the major economic disruptions of depression and war (particularly the second World War, during which the regulation of agricultural markets was more rapidly undertaken and was more extensive than had been case two-and-a-half decades previously). Once introduced, these programs and their institutions have tended to become entrenched as features of long-standing agricultural policy. These tendencies are particularly evident with Canadian dairy policy and the government agencies and boards that administer this policy. Reflecting the perishable nature of fluid milk, and the localized nature of regulated markets for this product, there was little, if any, jurisdictional conflict over the establishment of the various provincial fluid milk boards. Most of these date from the mid-1930s when they were established under specific provincial legislation. At the federal level, a degree of subsidy support was paid to dairy farmers during the second World War in order to maintain production levels under the system of retail price controls that applied then. Post-war assistance to this sector, initially intended to be transitional, was administered by the Agricultural Prices Support Board and subsequently by the Agricultural Stabilization Board until the establishment of the Canadian Dairy Commission in 1967. The dairy policy that has evolved within this framework uses import limitations to support the sector and combines the long-standing feature of direct subsidy payments on specified marketed quantities of milk with quota restraints on marketings by producers. The milk market sharing program which has been basic to this policy since the early 1970s is embodied in an agreement between the federal and provincial governments and is administered by a committee composed of the Canadian Dairy Commission, the provincial milk boards, and government agencies.

The most recently established group of federal marketing boards dates from the 1972 passage, following extended debate and controversy, of the Farm Products Marketing Agencies Act. Provincial marketing boards controlling the production and sale of eggs, broiler chicken, and turkeys became prevalent during the 1960s. Some of these bodies regulated producers' prices and some of them regulated market supplies by applying production or marketing quotas to producers under their jurisdiction. Some attempted to limit product inflows from other provinces by applying restrictive

licensing or packaging regulations. These procedures, notably by the Quebec Federation of Producers of Consumer Eggs and the Ontario Broiler Chicken Producers Marketing Board, eventually led to a proliferation of retaliatory provincially imposed restrictions on interprovincial sales of chicken and eggs in the early 1970s, with consequent instability in prices between provincial markets (Safarian; Skogstad). The series of chicken-egg price wars reinforced the political pressures for passage of federal legislation to enable national market-sharing programs. This legislation was passed in 1972 and provided for establishment of the National Farm Products Marketing Council to oversee the establishment of national agencies, subject to these being supported by a majority of producers, to administer market-sharing plans involving the coordination of provincial boards' quota programs, and to supervise the agencies. National plans now operate for eggs, turkeys, broiler chickens and, most recently, broiler hatching eggs.

Establishment of national supply-management programs for the various poultry products has enabled producers' prices and revenues to be raised through the limitation of imports that has accompanied these national programs and the limitation of domestic supplies. The supply managing boards have undoubtedly had the most obvious impact on producers and consumers of any of the Canadian marketing boards. Their effects, and some of the controversy that surrounds them, are discussed in later sections of the paper.

III. The Current Experience with Boards

Study of the wide range of Canadian agricultural marketing boards indicates diversity, not only in the composition of these bodies, but also in their powers, and the nature and extent of their activities. In general, the boards have been established in the expectation that they will improve the economic situation of the producers for whom they act, whether by efforts to enhance their price and income levels, by seeking to reduce instability in these prices and incomes, and in some cases, by providing for more equal access to markets or market opportunities. Boards are commonly classified on the basis of their powers and activities. Such a classification for Canadian boards (from Veeman and Loyns) includes:

1. Educational and promotional boards that levy producers' sales and conduct research and

information activities. An example is the Alberta Cattle Commission.

2. Negotiating boards that negotiate producers' prices and conditions of sale. Examples are the British Columbia Grape Marketing Board and the Alberta Vegetable Growers' Marketing Board.
3. Centralized selling boards that generally, but not invariably, take title to the product that they handle and whose major function is to sell this (typically at the first level of exchange) on behalf of producers. Examples are the British Columbia Tree Fruits Marketing Board and the Canadian Wheat Board. Some centralized selling boards do not take title to the goods in question, but their major purpose and activity is to operate a centralized sale mechanism for the product. An example is the Alberta Pork Producers' Marketing Board.
4. Centralized selling boards with power to control supplies are boards with effective monopoly power. Their major function is to limit marketed supplies through applying production or marketing quotas and thus achieve higher prices and sale revenues for commodities for which demand is price-inelastic. Some of these boards also directly regulate producers' prices, typically applying cost-based formulae for this purpose. Examples here include the provincial and national boards for poultry and dairy products.

As well as the wide variability in the powers and activities of Canadian boards, there is also much variation in the procedures established to maintain accountability of these bodies to the public in general (and to the producers that boards regulate or represent). In the case of the provincial producer-controlled marketing boards, the provincial legislation generally provides for establishment of a supervisory marketing council, commission or board which is typically responsible to the provincial minister of agriculture and which oversees the institution and operation of marketing plans and of boards that administer these plans. Some of these bodies also hear appeals regarding decisions of the boards that they oversee, but explicit provision for appeals does not appear to be widespread. Marketing plans are generally only instituted after a favourable vote by producers of the commodity and the members of these boards generally are elected by producers. In practice there appears to be considerable variation in the extent of scrutiny which the supervisory bodies apply to the operations of boards. Some councils appear to "rubber stamp" most decisions of boards while others apply more scrutiny to these. There are also wide differences in openness, that is, in the extent of public

disclosure regarding boards' decisions and actions.

The federally-appointed boards, such as the Canadian Wheat Board, directly report to a minister of the crown. There has been a tendency to appoint producers as members of the Canadian Dairy Commission but this tendency is not apparent in the case of the Canadian Wheat Board. The latter body is advised by a committee of elected producers.

The supervisory body under the National Farm Products Agencies Act is the National Farm Products Marketing Council. Members of the council are appointed by government. Although the legislation charges the Council "to have due regard for the interests of producers and consumers of the regulated product or products", the Act also requires that at least 50 percent of the Council members be producers. Regional representation is also provided. The extent of supervisory powers of the Council and the actual exercise of its authority in this regard have been the subject of criticism. For example, it has been noted that the Council is placed in a conflicting position since it is both a signatory to and supervisor of the federal-provincial agreements embodying the national supply management programs. The Council has itself indicated that it lacks a clear definition of its authority and so has been reluctant to apply to agencies some of the specifications or limitations provided for in the marketing plans. Recommended changes consistent with a more effective supervisory role for this body include strengthening the authority of the Council to effectively supervise the national agencies and their plans, including providing the Council with the power to modify (rather than just approve or disapprove) agencies' "orders and regulations" regarding quota allocations and levies. Other recommended changes would provide Council with power to enforce its standards and guidelines for these quota and levy orders and for the collection and use of cost of production data in pricing (Consumers' Association of Canada).

In view of the variability in the powers, activities, and procedures for accountability of agricultural marketing boards, it is not surprising that there is also much variability in the economic impacts of these bodies. The most generally accepted basis for assessment of economic effects of such programs is to evaluate their impacts on economic efficiency and income distribution. It may also be useful to assess whether the boards achieve their apparent objectives. The boards' major goals and the most frequently used means of attempting to achieve these are outlined in Figure 1. A number of

Figure 1: Major Objectives of Marketing Boards and Frequently Used Means to Pursue their Objectives

	Objectives of Boards	Frequently Used Potential Means to Achieve Objectives
A.	Increase producers' prices and incomes.	1. Demand expansion (differentiating demand and/or developing new uses, or markets) 2. Increased efficiency in market operations 3. Enhanced bargaining power to achieve gains from: a. marketing and servicing sectors; b. consumers; c. government.
B.	Reduce uncertainty and variability in prices.	1. Pooling or averaging prices subject to grade and/or transport cost differentials 2. Stabilizing quantities produced or marketed as a means of stabilizing prices.
C.	Provide more equal access to market opportunities for producers.	1. Price pooling 2. Delivery quotas

boards do attempt to affect consumer preferences and demand in favour of their products, although efforts in this regard vary widely and their success is difficult to judge. Boards' impact on achievement of efficiency in marketing operations is also likely to be variable. It is possible to suggest examples where licensing of assembly yards and regulation of transportation routings may have streamlined and reduced the total costs of transportation from farm gate to processors (as with some hog boards and, perhaps, some milk marketing boards). Nonetheless, marketing boards can contribute to inefficiency, for example, through administrative rigidities or lags in adjustment to market conditions. One source of inefficiency, discussed later, arises from the restrictions on quota transfers applied by some supply-management boards. The clearest examples of contributions by boards to more efficient market operations have arisen when dependable systems of grading and standardization

have enabled boards to introduce and operate mechanisms of transfer of ownership of goods on the basis of grade description thus rendering unnecessary the physical assembly and subsequent dispersion of farm products. The introduction and use of teletype market mechanisms for slaughter hogs by some of the Canadian hog boards provides the most obvious example.

The prospect of appreciable increases in producer prices and revenues being bargained from the marketing and servicing sector is unlikely although the ability of boards to exert a measure of countervailing power when confronted with a monopsony or a highly concentrated oligopsony can provide a safeguard for producers, particularly in an economy with a relatively small market. Overall, effective antitrust or anticombines legislation may provide more effective protection to producers, but in some relatively small markets where regional concentration of processors may be very high (as is the case in some regional areas for segments of the meat processing sector in Canada), the ability of boards to negotiate sales, backed by their ability to divert supplies, may be a useful protection for producers and certainly increases producers' confidence as to the fairness of market outcomes. A favourable example is again provided by some of the hog boards. Evidence of collusion between packing industry buyers in western Canada, resulting in court action, suggests that these boards have pursued a useful countervailing role.

Boards have at times been effective lobbyists for government support to their industry, but in practice, the most obvious substantial price and income benefits to producers have been achieved at the expense of Canadian consumers through the exertion of effective monopoly powers by the supply-management boards for the dairy and poultry sectors. Some of the pros and cons of these actions are discussed in the following section.

In practice, the major objective for most boards relates to their efforts to enhance producers' prices, although reduction of instability is an objective of some boards. The reduction in price variability that has accompanied supply management is claimed as a major benefit by the poultry and dairy boards, but it is evidently not their major objective since the quotas they apply restrict output and entry rather than being used purely to schedule deliveries. Pooling of prices (subject to grade and transport cost differentials) is a long-standing feature of grain marketing by the Canadian Wheat Board. It removes interseasonal variability in producers' prices although it also contributes to the need

for delivery quotas to be applied by this board. Shorter term price pooling is undertaken by some hog boards and delivery scheduling is applied by some fruit and vegetable boards.

IV. A Canadian Debate: The Pros and Cons of the Supply Management Boards

Supply management programs administered by boards have become established institutions of Canadian agricultural policy for the poultry and dairy sectors and have been proposed for other commodities, such as potatoes and hogs. The pros and cons of the supply management boards in particular have been subject to study and much debate. The case for agricultural support through the mechanism of supply-restriction can be made if it is assumed that some form of market intervention to support agricultural incomes is necessary and inevitable. This is seen by referring to Panel A of Figure 2 which provides a simplified partial-equilibrium diagram of the market-level effects of a system of freely tradeable output quotas that restrain market supply to q_m leading to a price of p_m. This can be compared to a system of price support involving achievement of price p_m by purchase and subsequent disposal of quantity $q_s - q_m$, depicted in Panel B. Panel C depicts a program of deficiency payments of $p_m - p_s$ to producers for each unit of output sold. A non-diagrammed alternative that neither involves market manipulation nor ties payment to production levels but would involve lump sum payments to producers based on some measure of need, could also be compared to the three diagrammed alternatives.

In the absence of externalities, assuming that agricultural producers are profit maximizers and that consumer demand for the commodity in question is characterized by low income elasticity and only a small proportion of consumers' expenditures is spent on the commodity, the welfare estimation tools of economic surplus may be used to assess the efficiency impacts shown in Figure 2. Compared to the competitive market outcome of p_c and q_c, the program of transferable output quotas will increase producer surplus by abed - efh and will reduce consumer surplus by abfd. Overall, efficiency costs amount to bfh (assuming that the resources represented by fkjh can be transferred to alternative productive uses). As with supply management, the price support program involves reduced consumption and a reduction in consumer surplus of abfd. In this case, however, a greater transfer to producers (an increase of acfd) is involved and government expenditures of bclj are required. Overall,

the losses are represented by area bfclj. One way of viewing these losses is as the traditional welfare triangle loss in economic efficiency due to exertion of monopoly power (bfh) plus the resource costs involved in producing the non-marketed quantity $q_s - q_m$ (i.e., hclj). Unless these resources would otherwise be unemployed (and even if their cost is partly offset by increased benefits from consumption by other consumers than those represented by demand DD), the costs of the price support program can be expected to exceed that of the supply restriction program. The governmental costs of the program may be partly recouped by sales in other markets, but these disposal operations may tend to have disruptive price consequences that are resented by producers in or exporters to those other markets. There are similar adverse distributional consquences for consumers from both the supply management and price support programs and in both cases the income benefits to producers are greatest for those producers with the largest size of operations.

As with the price support program, the deficiency payment program depicted in Panel C involves an increase in producer surplus of acfd. In this case, however, consumer surplus is increased by dfig and the expenditure by government is acig, resulting in a net social cost of cif. While the distributional consequences for producers are similar to the previous two interventions, the consequences for consumers are beneficial.

Following Hotelling, the net social costs of the "efficiency triangles" in Panels A and C can be approximated (Wallace). This deadweight loss for the supply management program is approximately equal to $(1/2)\ p_c\ q_c\ |\epsilon_d|\ ((p_m-p_c)/p_c)^2\ (1 + |\epsilon_d|/\epsilon_s)$ and the deadweight loss for the deficiency payment program is approximately equal to $(1/2)\ p_c\ q_c\ |\epsilon_s|\ ((p_m-p_c)/p_c)^2\ (1 + \epsilon_s/|\epsilon_d|)$ where p_c and q_c denote the competitive price and quantity, ϵ_d and ϵ_s denote the price elasticity of demand and supply, and $(p_m - p_c)/p_c$ denotes the percentage increase in producers' price under the program. Thus, efficiency losses under the supply management program will tend to increase, the more elastic is demand for the good and these losses will be less, the more elastic is the supply function for the commodity. The opposite conclusions can be expected for the deficiency payment program. Given relatively price inelastic demand for most foods, in practice the expectation is that the deadweight triangle of the supply management program is relatively small; this expectation depends on the assumption of output quotas that are completely and unconditionally transferable with zero or

minimal transactions costs, an assumption that has been made by a number of authors, including Schmitz and Van Kooten and Spriggs, but that generally does not apply in practice in Canada.

The price support and deficiency payment program both involve government payments. In general, public expenditures of $p_m(q_s - q_m)$ to increase producer price to a given price support level, p_m, will be less, the less elastic is both demand and supply whereas, with the deficiency payment program, the expenditure of $(p_m - p_s)q_s$ can generally be expected to be less the more elastic is demand and the less elastic is supply. While all three programs could be administered by boards (or directly by government agencies), the supply management alternative has received more support by Canadian farmers and politicians. No government expenditures are made and thus support is both less obvious and less vulnerable to taxpayers' complaints and governments' efforts to reduce expenditures.

There are several side-effects that are likely to be reasonably similar for the three intervention programs outlined here; all three may tend to provide more stable prices and revenues; they may reduce uncertainty as to future prices and revenues, but they introduce an additional source of uncertainty to producers due to the possibility of program or policy changes. Capitalization of the anticipated benefits of the programs into either quota values or land prices will benefit the first generation of producers at the expense of subsequent producers for whom program benefits are, therefore, greatly reduced. All three programs involve administration costs (although only the price support program will incur costs associated with storage or disposal) and all can be expected to also induce rentseeking or non-productive lobbying activities by producers and their organizations. Summing up, the social costs and some deleterious side-effects of the supply management alternative are likely to be less than providing comparable support through a price support program. While the social costs of the deficiency payment program are not necessarily greater than under supply management, the program is less politically appealing to producers and to many Canadian politicians.

Despite its advantages of minor deleterious impacts on efficiency and less regressive (or even positive) impacts on income distribution, the lack of political support for a non-diagrammed alternative of lump-sum payments to producers based on need rather than output levels leads this to be an unlikely alternative to the existing supply-management programs in Canada. Its lack of appeal to producers arises since it would involve relatively lower support levels to some (generally larger)

producers and transfers would be obvious and therefore vulnerable.

V. Reconsidering the Costs of Supply Management

As discussed above, if the alternative is a price support program, supply management is likely to be a superior alternative. However, compared to a competitive market solution, or to some less restrictive marketing board or government programs, supply management is rightly subject to considerable criticism. Three points will be briefly noted here: the effects on interprovincial trade; the impact of less than fully transferable quota programs; and some other sources of costs of the programs. The tendency with the Canadian supply management programs has been for interprovincial trade in the regulated commodities to be reduced. The allocation of any quota expansion (over-base quota) does provide some relatively limited opportunity for reallocation of quota between provinces, but although comparative advantage is listed as one of many criteria to be taken account of in this process, in practice the deficit provinces have generally tended to become more self-sufficient since the programs have been introduced (Veeman and Veeman). Consequent losses in the advantages of specialization and trade between provinces are not included in the social costs depicted in Panel A of Figure 2. In addition, the impacts on social costs of insulating the domestic industry from the international economy are not explicitly considered in Figure 2.

At the provincial level, restrictions on transferability of quota were extensive in earlier years and are still reasonably widespread. These are intended to limit quota values and affect certain structural features of the industry. However, the effects are to obscure quota values and add to the costs of these programs (Veeman, 1972). In the Prairie provinces, broiler chicken, egg and turkey quotas are not sold as such and are generally only transferred when the physically immovable assets of land and/or buildings are also transferred. Although the programs have changed from time to time, and there are exceptions, negotiated sale transfer of quota applies in British Columbia, Ontario, Quebec, and Atlantic provinces, but in all of these provinces, various restrictions on quota transfer have commonly been applied by the boards. These have included restrictions on intraprovincial relocation of production between of specified control areas, restrictions on the entitlement of those involved in quota transfers to share in any future expansion of over-base quota, limitations on quota

transfers to whole-farm transfers, and restrictions on the ability of those involved in quota purchases to subsequently sell quota within specified periods of time. Restrictions on allowable quota prices aimed at enforcing lower than market-clearing (or even zero) quota price levels have applied in some provinces. In all provinces, there are restrictions on the maximum size of quota that a producer may control. Some of these restrictions increase the transactions costs involved in quota transfers. They also appear to limit the ability of many producers to achieve scale economies or any advantages of locational adjustment. These factors contribute to higher real costs than would otherwise apply. Social costs are also increased when underutilization of existing productive capacity results from restrictions on quota transfers. In terms of the simplified diagram of Figure 3, typically used to illustrate effects of a monopoly, these types of social costs are represented by rectangle B. They are likely to be substantially larger than those represented by the traditional deadweight loss in triangle C (Veeman, 1982a,b). One indication of the effects of the regulatory programs and the transfer restrictions in different provinces is given by firm size. In 1985, the average number of layers per regulated egg producer was 10,535 (CEMA), considerably less than the 30 thousand layers thought to be required for a technically efficient scale of plant, ignoring pecuniary effects (Dawson). Average size varied markedly between provinces, being smallest in those provinces where transfers are most restricted.

Additional sources of social costs of the Canadian supply management programs are the administrative costs of the programs, including those borne by producers, the provincial boards, the national agencies, the overseeing council, and government These include the costs of monitoring and enforcing quota and levy regulations. Additional real costs have been involved in surplus removal, storage and disposal for some supply-managed commodities (eggs and skim milk powder). Rentseeking activities by producers, boards, and other producers' organizations, are also likely to contribute to the costs represented by rectangle B. Other rentseeking activities are likely to be induced by the considerable rents that are associated with the allocation of import licenses arising from the quotas on imports of supply-managed commodities negotiated by the federal government under Article 11 of GATT.

Further distortions from the supply management programs can arise if input rather than output quotas are applied (Alston). Depending on the elasticities of substitution between inputs,

input quotas may lead to distortions in input use, constituting an additional source of loss in economic efficiency. Quotas on eggs (rather than on hens) were originally applied under the national supply management program for eggs, but there has been a subsequent change to hen quotas on the grounds that this is easier to monitor. In contrast, a number of supply management programs for broilers and turkeys were initially specified in terms of the input of floor space. Subsequently, there has been a tendency to shift to quotas specified in terms of weight of output, but some provincial boards continue to apply input restrictions such as requiring minimum floor space allocations and specifying the production cycle time period.

In the debate on benefits and costs of the Canadian supply-management boards, it has been argued by Schmitz and Van Kooten and Spriggs that the reduction of risk and uncertainty that has resulted from these programs may have had substantial effects in reducing the costs of risk-averse producers but no empirical evidence in support of appreciable cost reductions has been presented. The substitution of bureaucratic-induced uncertainty for market uncertainty has been recognized for the supply management boards (Veeman and Loyns) and explored by Lermer and Stanbury. Some evidence on quota values from the Canadian supply management system suggests that the benefits from reduction of market uncertainty may have been more than offset by the added risks and uncertainties and thus added costs to risk-averse producers induced by the possibilities of bureaucratic or legislative change in supply-managed programs. Quota values can be regarded as the present value of the stream of net benefits associated with rights of quota use. Thus,

$$QV = \sum_{t=1}^{n} AB_t/(1 + r)^t$$

where QV depicts quota value, AB_t is the net annual benefit in time period t, r is the discount rate, and n is the anticipated length of time of the program. The riskiness of holding this asset may be incorporated by adding a risk premium to the opportunity cost discount rate, shortening the time horizon, or taking a conservative view of future benefits. Indications of an appreciable risk premium, or that anticipated life of the asset is relatively short, would suggest that producers consider quotas to be relatively risky assets.

A reasonably reliable measure of the net annual benefit of quota use can be obtained for Ontario milk market sharing quota (msq) from the active auction market in that province for "used"

and "unused" msq (OMMB). The benefits of used msq are not available to the quota purchaser in the current period, but will be available in later periods while the benefits of unused msq are currently and subsequently available. Thus the difference between these two quota prices gives a measure of the anticipated net benefit from use of msq quotas for the current period. Averaged over the four years from 1983 to 1986, this measure of AB was 30 cents per litre, while the corresponding measure of QV was 87 cents per litre. Assuming that interest rates and anticipated net annual benefits do not change over time and that an infinite time horizon applies gives an inferred discount rate of 34.5 percent, substantially in excess of the opportunity cost of capital. Alternatively, specifying the opportunity cost of capital at, say, 8 percent over the time period considered and using the estimates of AB and QV noted above gives an estimated asset life of about 3.5 years. The general order of these estimates suggests that producers view the supply management program for industrial milk as a source of risk and uncertainty. Similar assumptions and procedures can be applied to less reliable quota value data reported for Quebec broilers for 1983 (Dawson). QV was reported to be $18 per bird and AB, taken to be the reported quota rental rate, was about $2 per bird. The inferred discount rate of 11 percent may suggest that the risk of quota program change perceived by Quebec broiler producers was appreciably less than for industrial milk producers, but still seems higher than the opportunity cost of capital for these producers.

One final point that should be noted is that a supply management program is more likely to preclude than to encourage export market expansion. An illustration of potential income benefits to producers that may be foregone with these programs is provided by a recent study of the potential effects of supply management on the hog industry by Gilson and St. Louis. Under realistic assumptions of reduced exports, simulations using the FARM model suggest that supply management would substantially reduce cash receipts received by hog producers. This is not surprising, in view of the substantial levels of exports achieved by this efficient and cost-competitive sector.

VI. Conclusions

Marketing boards are long-standing institutions of agricultural policy in Canada, although the use of boards with effective monopoly powers as a means of transferring income to producers is a more recent feature. The functions, powers, and achievements of the Canadian boards vary widely.

Some boards have provided benefits to producers by facilitating price discovery, applying countervailing power in oligopsonistic market situations, stabilizing short-run price variations, and improving producers' confidence in the marketing system with few, if any, deleterious effects on other segments of society. In contrast, the boards with effective monopoly power operating supply management programs have achieved substantial transfers from consumer to producers and these transfers involve appreciable social costs. Improved procedures and mechanisms to increase the responsiveness of this group of boards to the public interest are needed. The issue of high and increasing quota values should be met by reducing the level of regulated prices and increasing marketed supplies rather than restricting quota transfers. Existing restrictions on quota transfers should be reduced. A feasible countervailing force to the power exerted by this group of boards could be achieved by replacing the protective system of import quotas with tariffs and by gradually reducing the extent of tariff protection given to these industries. The important topic of ways to improve the functioning of the Canadian supply management programs is the focus of the following paper.

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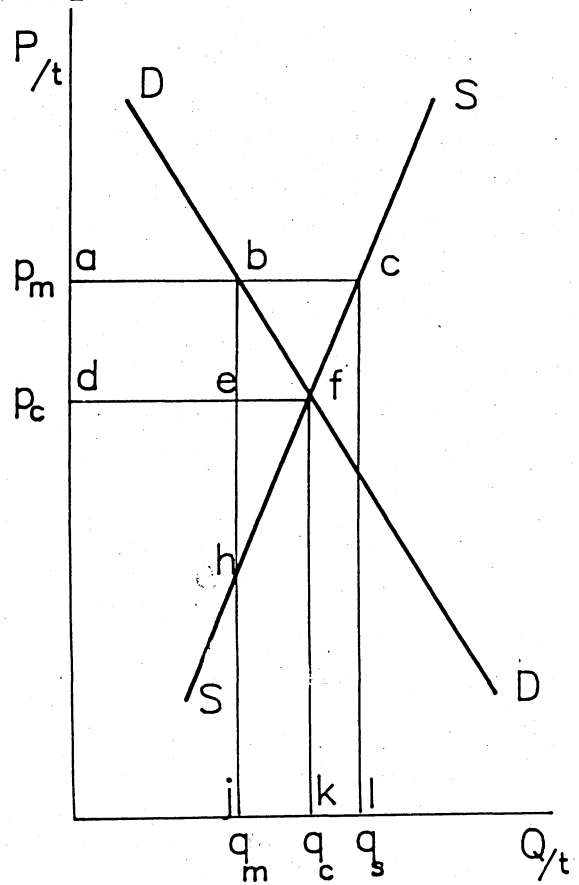
Figure 2: Comparing Supply Management, Price Support, and Deficiency Payment Programs

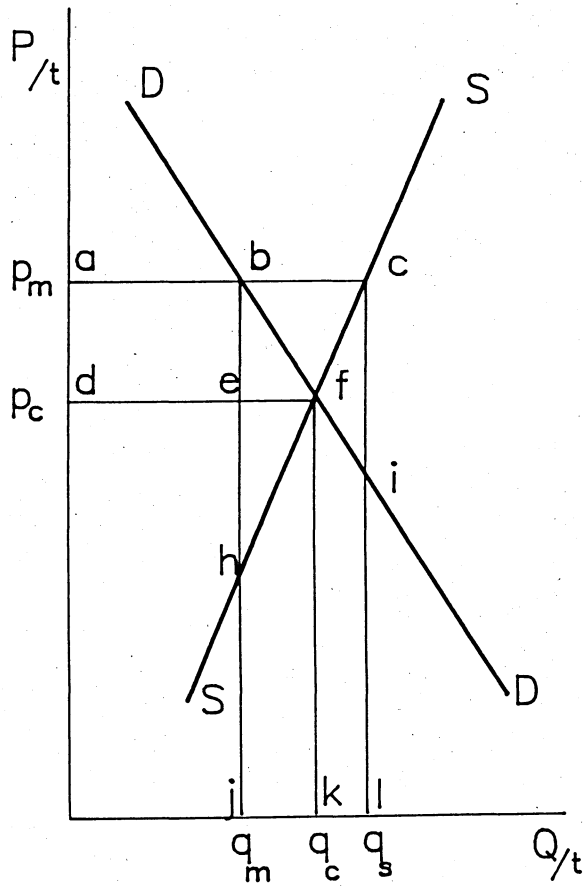
Panel A:

Supply restriction by transferable output quotas



Panel B:

Price support program



Panel C:

Deficiency payment Program

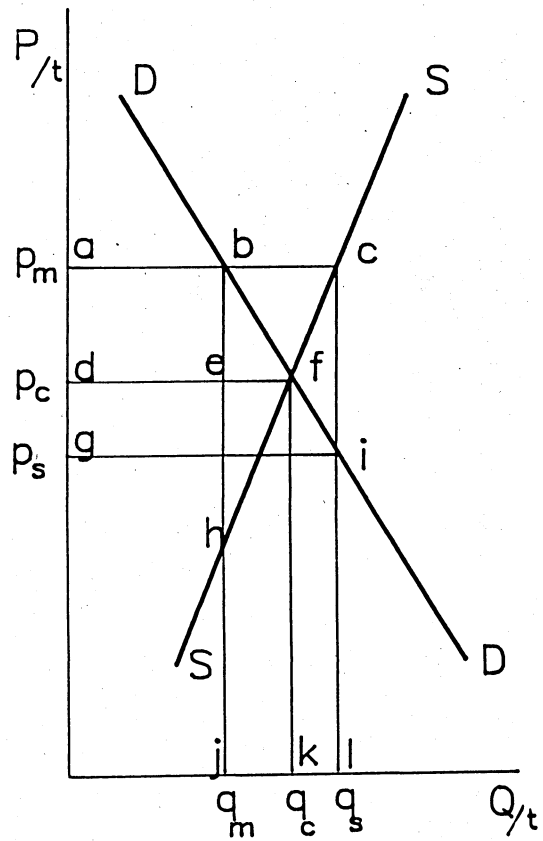


Figure 3: Supply Restriction Effects on Costs