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Investigating Canadian Chicken Importers' Preferences Towards TRQ Import Licensing Mechanisms[1]

David Surprenant
Agricultural Economist, Agrculture and Agri-food Canada

Jean-Philippe Gervais
Assistant Professor, CRÉA and Department of Agricultural Economics and Consumer Studies, Laval University

The Issue

The Agreement on Agriculture ratified at the end of the Uruguay Round of WTO negotiations called for the conversion of non-tariff barriers to trade into bound tariffs. This tariffication would have resulted in excessively high tariffs, which would have threatened historic market access levels if not for WTO member countries agreeing to introduce tariff-rate quotas (TRQs). TRQs are two-tier tariffs. Imports below an agreed quota are taxed at a usually low (or zero) in-quota tariff rate while imported commodities in excess of the quota level are taxed at the higher (often prohibitive) over-quota tariff rate. In the process of implementing TRQs, WTO members failed to explicitly regulate TRQ administration procedures. As a result, numerous administration procedures for allocating import licences were developed in many countries.

Importing activities in the Canadian chicken industry have been regulated with a TRQ since 1995. Firms holding the right to import chicken products at the in-quota tariff can potentially enjoy significant rents due to the spread between domestic and world prices. The magnitude of these rents depends upon a number of domestic factors such as market concentration in the processing and retail sectors, production technology, farm output regulation, and so on. This analysis evaluates the preferences of Canadian chicken importers towards TRQ import licensing mechanisms and provides insights about importers' attitudes towards Canadian trade policy in the chicken sector.

Implications and Conclusions

A survey filled out by 112 active Canadian chicken importers revealed that a large majority (65.5 percent) of respondents are generally satisfied with the current TRQ administration methods and do not feel that licence allocation mechanisms need to be revised. A significant proportion (40.5 percent) of those who responded also wish to see market access for foreign chicken products expanded above the current minimum access commitment (MAC) of the TRQ. Market-based licence allocation methods (such as auctions) are supported by only a few firms. Finally, firms operating in the province of Quebec are significantly more satisfied with the current licence administration methods than are firms operating in other provinces. Overall, the survey indicated that importers generally wish to preserve the existing TRQ administration methods although they would prefer to see market access to imports increase in future rounds of negotiations.

Background

Trade of chicken products included on the Canadian Import Control List (ICL)[2] has been regulated by a TRQ since 1995. TRQs are two-tier tariffs. Imports within the minimum access commitment (equivalent to 7.5 percent of the previous year's domestic production) are taxed at a relatively low in-quota tariff (zero percent under NAFTA). Any imports exceeding the specified minimum access commitment are taxed at the over-quota tariff. TRQs theoretically differ from standard import quotas since they do not fix a ceiling on the volume of imports that can enter the country. However, as the over-quota tariff is generally set at a prohibitive level, TRQs *de facto* act as import quotas. Since the world and domestic prices will differ if the minimum access commitment is effective (binding), TRQs potentially create valuable rents to those holding the right to import within the MAC.

The allocation of import licences under the Canadian chicken TRQ is administered using mixed licensing allocation methods. In 2000, traditional importers held 37.2 percent of all import licences. Traditional importers are defined as firms importing chicken products prior to the imposition of import controls in 1979. This category encompasses both chicken processors and retailers. The chicken TRQ is also allocated, in the first instance, to further processors producing chicken products competing with non-controlled imports (products not listed in the ICL, such as TV dinners, soup, etc.).[3] The final allocation is made to members of the food-service sector. The amount allocated to the food-service sector cannot be less than 2.5 million kilograms of import access. The licences within each category are allocated to individual firms on the basis of market share, calculated on the volume of chicken purchased. Any residual part of the TRQ not previously allocated is split 70/30 between chicken processors and chicken distributors.

Figure 1 illustrates the economic implications of a TRQ for a given level of the market, which is assumed to be competitive. Processors' technology exhibits decreasing

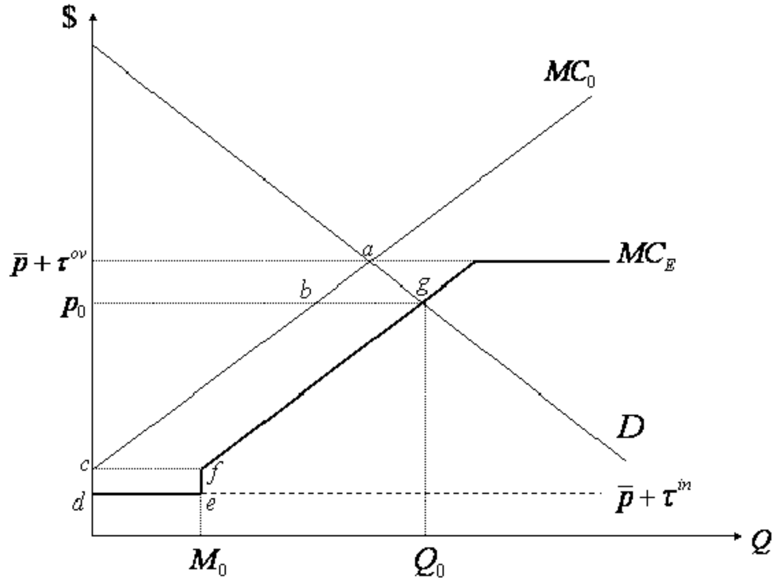

Figure 1 The economic impacts of the Canadian Chicken TRQ.

returns to scale as represented by the industry marginal cost curve, MC_0. This curve can be interpreted as the processors' supply function if one assumes there is perfect competition at that market level and the farm price is held constant throughout. The segment D represents the retail demand for processed chicken products.

Assume that the share of import licences under the MAC held by all processing firms is M_0. Processors can import and resell chicken products directly to retailers.[4] Processing firms have two options. They can process domestic chicken or import processed chicken products. Hence, under the TRQ, the processors' effective marginal cost curve is not exclusively defined by the segment MC_0. Since the world price augmented by the in-quota tariff is below the intercept of the marginal cost curve, processors have an incentive to import chicken products up to the quantity M_0. At that quantity, it is more profitable to process chicken domestically than to import chicken products at the world price augmented by the over-quota tariff $\left(\bar{p}+\tau^{ov}\right)$. The bold lines in figure 1 represent the effective marginal cost function for processors. The equilibrium occurs when this effective marginal cost curve intersects the demand curve of retailers, yielding the domestic retail price p_0. What is the value that processors attach to an import licence? Standard trade policy analysis usually defines import rents as the difference between the world price and the domestic price, multiplied by the total volume of traded goods (Vousden,1990). However, since processors' domestic output is altered following an increase in market access, the surplus derived from domestic production decreases. Define the total net surplus collected by processors under the TRQ as the incremental surplus obtained from holding import permits minus the decrease in domestic surplus. Total net rents equal the difference between the area delimited by *b*, *c*, *d*, *e*, *f* and *g* and the area delimited by $\bar{p}+\tau^{ov}$, *a*, *b* and p_0 in figure 1. The net rents are more likely to be positive the larger the difference between the world price and the marginal cost of producing the first chicken product domestically.

Different import licensing administration procedures are likely to affect the effective marginal cost function of processing firms in different ways. For example, compare two opposing administration procedures such as first-come-first-served and a historical allocation. The former method does not assign property rights to import licences. Each marketing year, firms hurry to the border in order to import as many products as they can under the MAC. Once the quota fills up, the over-quota tariff must be applied to additional imports. Under that procedure, firms with low import-related transaction costs have a competitive advantage over firms located far away from the border or lacking established marketing channels with foreign firms. This type of procedure is likely to create a race to the border if bureaucratic impediments to trade are insignificant (Skully,1999). If import licences are allocated according to some historical criterion, firms own the exclusive right to import a product at the in-quota tariff, and thus have the option to import the product at any moment during the marketing year. Property rights to import licences are unambiguously assigned and firms can spread their importing activities throughout the year. Given that the industry depicted in figure 1 is perfectly competitive and that processing firms are symmetric, different TRQ administration procedures will not impact the distribution of income within the industry. However, Fulton and Tang (1999) show that evidence exists of imperfect competition in the chicken industry. In that case, the positioning of each firm's effective marginal cost function as determined by, among other things, the TRQ import licensing procedure is likely to have significant impacts on the important variables of the industry (prices, production and import rents). Under that condition, firms will not be indifferent towards various import licensing methods.

While the literature on non-tariff trade barriers is voluminous, relatively few studies have documented the implications of allocating import licences under quantitative barriers to trade. Krishna and Tan (1998) show that, independently of who has market power among the potential licence holders and/or foreign/domestic producers, rents can be extracted or dissipated through higher domestic and/or world prices. They show that the (shadow) value of an import licence can be decomposed into three different components. First, there exists a scarcity value attached to the licence in a quota-constrained market. It is a function of the difference between the domestic price and the world price inclusive of the in-quota tariff. Second, if the licence is voluntarily held, the licence price must vary in proportion to the opportunity cost of holding the licence (e.g., the interest rate). Finally, a licence has an option value since it can be used at any time during the quota year; that is, the holder of a licence can either import some units of the good now or defer use of the licence until a future period in the expectation of higher quota-related returns. Gervais and Surprenant (2000) have shown that the type of import licence allocation rule chosen by a government can affect the distribution of profits in an industry by changing the strategic nature of firms' behaviour under imperfect competition.

Skully (1999) documented the existing TRQ allocation methods as notified by WTO members. Roughly speaking, administration methods can be classified into two different categories. The first category encompasses all non-discretionary methods such as auctioning licences, allocating licences on a first-come-first-served basis and licensing on demand. The second category includes more discretionary methods since trade flows are often less flexible and do not respond to exogenous market forces. This category includes licences allocated according to historical criteria and imports administered by state trading enterprises or producer groups. Barichello (2000) surveyed import licence allocation procedures used in Canada and concluded that Canada is "reasonably successful" at keeping the administration of the quota system efficient.

It is well known that non-tariff trade barriers promote rent-seeking behaviour among potential beneficiaries of import licences (Vousden,1990). The import licence allocation schemes described above, combined with the potential existence of market power at the farm level (through the control of domestic production of live chickens) and concentration at the processing and retail levels of the chicken market, justify investigating the preferences of importing firms.[5] The allocation of import licences to domestic firms affects their marginal costs and has the potential to generate significant rents. The magnitude of these rents can be influenced by the method policy makers choose to allocate the right to import. Given that a wide variety of methods can be used to allocate import licences, how do importers perceive the Canadian TRQ policy and import licensing administration methods? To analyze this general question, a number of hypotheses based on the preceding discussion and the simple analysis in figure 1 can be put forward:

1. Some import licence holders should support an allocation based on historical criteria because this approach can best protect existing import rents. Newly established or highly efficient firms may wish to have the current system reformed since change could result in new profit opportunities.
2. Importers have different opinions about how the government should liberalize trade (if at all) in the Canadian chicken market because increases in the current minimum access commitment and/or decreases in the over-quota tariff potentially will have different impacts on profits (rents) for different types of importers.

3. Since import licences are currently allocated to processors and retailers, an importer's position in the chicken supply chain should influence the value it attaches to an import permit (loosely defined as the difference between the local price and the import price) and thus shape its perceptions towards the current allocation system.
4. Finally, preferences towards licence allocation methods can vary across regions due to differences in efficiency and/or concentration at the processing level or due to different market conditions (price-elasticity of demand, etc.).

Data and Methodology

A total of 497 importers located across Canada were sent survey questionnaires during the last quarter of 2000. The objective of the survey was to evaluate their opinions towards Canadian chicken trade policy, especially as it relates to the administration of the TRQ. The 497 importers who were sent questionnaires had each obtained at least one import licence from the Department of Foreign Affairs and International Trade in 2000. The questionnaire included 11 questions and was written in both official languages of Canada. Importers whose businesses were located in Quebec received the French questionnaire while other importers received the English questionnaire. Importers were also presented with the alternative of requesting the survey in the language of their choice. Eleven questionnaires were returned with notification that the importing firms' addresses were incorrect. A total of 112 importers returned usable questionnaires, yielding a participation rate for the survey of 23.1 percent. Included with the questionnaire were a cover letter explaining the purpose of the study and a short introductory statement about the WTO trade negotiations and existing import licensing allocation methods as notified by WTO members. A reminder was sent to all importing firms two weeks after the initial date.

Statistical Analysis

The first part of the analysis uses univariate statistics to describe the most important findings. In the second stage of analysis, the survey answers are compared quantitatively using Chi-square tests to determine if the survey answers to any set of two questions are independent of each other.[6]

The first question in the survey ascertains the categories under which each sampled firm requested an import licence for chicken products for the year 2000. Out of the 112 usable observations for this question, 39.1 percent of the respondents reported that they had requested licences under the allocation for processing firms, 50.9 percent were distributors or food-service establishments and 10 percent had requested import licences under the allocation reserved for traditional importers. Of the 112 respondents,

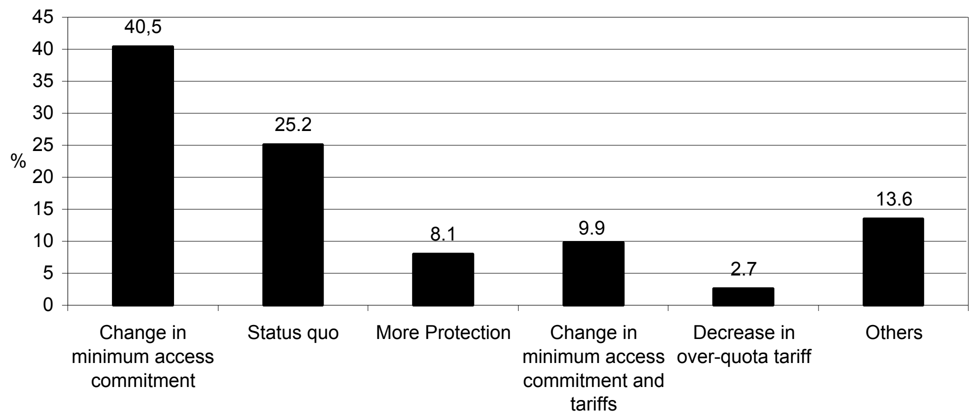

Figure 2 Importers' preferences towards TRQ liberalization scenarios in the Canadian chicken industry.

36.6 percent were from the province of Quebec while the remaining firms operated in other Canadian provinces. The sample is representative of the geographic concentration of the industry since, of all importers listed with Foreign Affairs and International Trade, 40.4 percent are located in Quebec.

The upcoming round of negotiations in agriculture will surely encompass a broad agenda of topics in agri-food trade. A number of TRQ liberalization scenarios will likely be discussed. The second question in the survey was designed to evaluate importers' qualitative judgments of Canadian import policy in the chicken industry. Importers were asked which type of import policy they would support in comparison with the current trade system. Figure 2 shows the preferences of Canadian chicken importers relative to various TRQ liberalization scenarios. Of the importers surveyed, 40.5 percent wish to have the minimum access commitment (MAC) expanded above the current negotiated access of 7.5 percent of the previous year's domestic production. A significant proportion of importers (25.2 percent) support the status quo in terms of access. Alternatively, 8.1 percent of the importers would like Canadian negotiators to argue for a more protectionist position. Liberalization through a simultaneous reduction in the over-quota tariff and an increase in the MAC is supported by 9.9 percent of the importers. Simply reducing over-quota tariffs to stimulate trade liberalization is supported by a meagre 2.7 percent of the importers surveyed. Some firms (13.6 percent) think that market access negotiations should be undertaken through other means.

The next section of the survey directly addresses the administration procedures of the TRQ. Figure 3 shows that a large portion of the importers surveyed (46.4 percent) prefer preserving the current allocation scheme. An administration method strictly based upon historical market shares is the next preferred alternative of importers. A licence-on-demand type of allocation receives 17 percent of all support. Non-discretionary types of allocation, specifically first-come-first-served or an auction, collect levels of support of

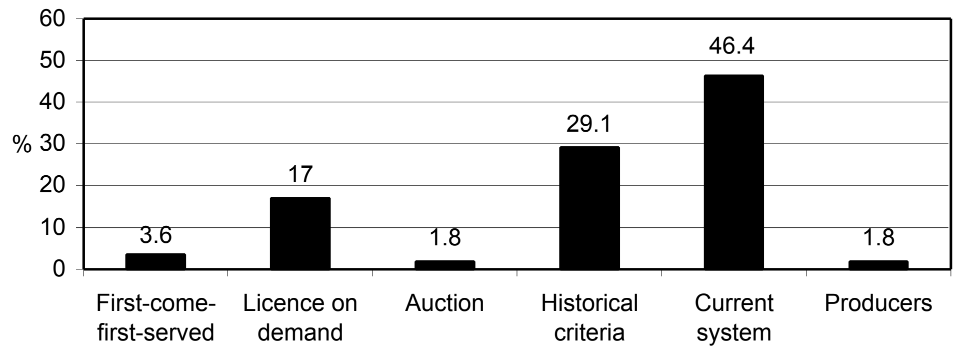

Figure 3 Importers' first preferences for an import licensing administration method in the Canadian chicken industry.

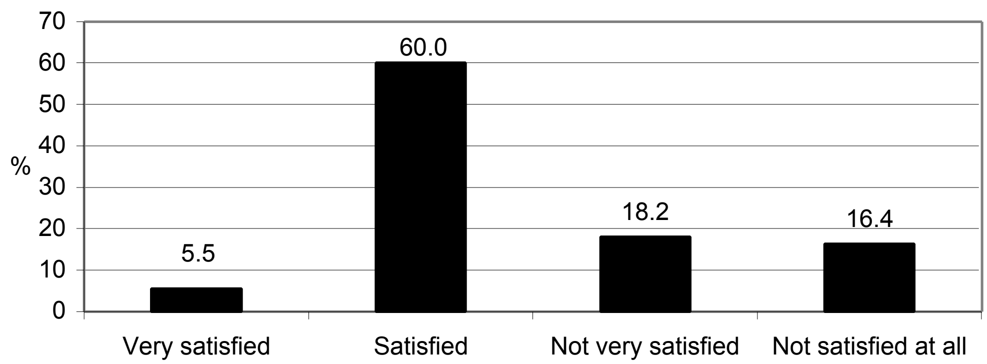

Figure 4 Importers' satisfaction with the current Canadian TRQ for chicken products.

3.6 percent and 1.8 percent respectively. Finally, 1.8 percent of importers wish to have the licences administered by chicken producers' organizations. A centralized import control by a state trading agency is an alternative that is totally rejected by importers.

A further set of questions measures the importers' perceptions towards the current TRQ administration procedures. More than 65 percent are either very satisfied or satisfied with the current Canadian chicken import system (see figure 4). Responses to another question indicated that a majority of importers (51.8 percent) believed that the current system did not facilitate entry by new importing firms into the market for import licences. Regarding the clarity of the Canadian chicken import licensing procedures, a vast majority of importers (80.8 percent) consider them to be clear, very clear or extremely clear (see figure 5).

As argued earlier, quantitative trade restrictions create rents for import licence holders. Firms operating at different levels of the market will generally not face similar

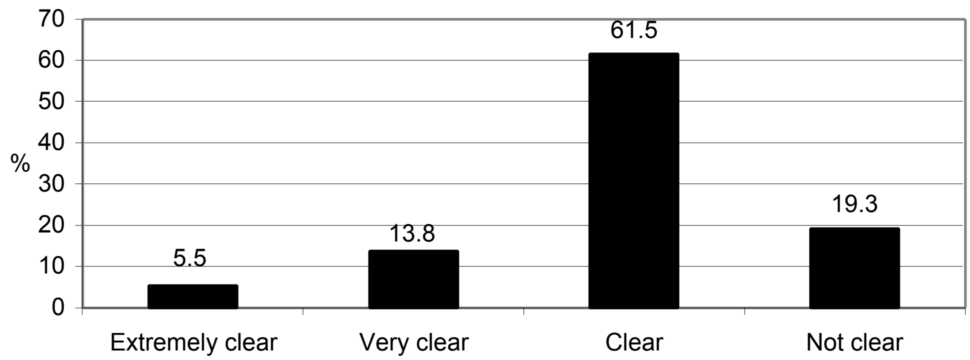

Figure 5 Importers' perceptions of the clarity of the administrtive import licensing procedures of the current Canadian TRQ for chicken products.

import prices and domestic market conditions. Moreover, importers likely specialize in a variety of products for which quality attributes result in different quota rents. Therefore, a large variation should be expected in estimates of the TRQ rent. More than 29 percent of importers estimate that the rent associated with current import restrictions in the Canadian chicken industry is above \$0.50/kg. Approximately one-quarter (24.1 percent) of importers estimate the rent to be within the interval of \$0.25/kg and \$0.50/kg, while 11.1 percent and 9.3 percent of respondents estimate it to be within the intervals of \$0.10/kg to \$0.25/kg and \$0.01/kg to \$0.10/kg, respectively.

It should be noted that more than one-quarter of the respondents declined to answer the specific question dealing with rent estimates; this suggests that rent evaluation is a delicate matter. Using publicly available data, Huff, Meilke and Amedei (2000) computed the quota rents of Canadian chicken importers from 1995 to 1999. They found that the average quota rents over the period were \$0.52/kg. Focusing on the 1999 period yields a lower import quota rent of \$0.34/kg. These results are fairly well aligned with the importers' perceptions reported in the survey.

In the second stage of analysis, pairs of questions in the survey are analyzed to gain further insights about the preferences of Canadian importers. Preferences towards liberalization scenarios are grouped under two variables. The first category includes the importers who reported supporting a more protectionist system than the one currently in place or wishing to preserve the TRQ in its current form. The second category includes importers wanting a more liberalized trading environment in the Canadian chicken industry. Moreover, the various allocation methods are grouped based on the degree of discretion they entail. The first group, termed non-discretionary methods, includes licences allocated according to the first-come-first-served condition, licences allocated on demand and licences auctioned. The second group includes licence allocation methods based upon historical market shares and licences administered by producers' groups. The intent is to test the hypothesis that firms requesting greater market access to foreign chicken products would support market-based licence allocation methods in a greater proportion than firms demanding more protection than what is currently in place. Among importers who support more protectionist policies, 88.9 percent desire to have the import licence allocation made according to some discretionary method. Of those importers who prefer a more liberalized environment, 55.3 percent wish to have the government adopt less discretionary administration methods to allocate import licences. These differences of opinion are statistically significant at the 99 percent confidence level.

It is also interesting to investigate the preferences of importers based on their geographical locations. Importing firms located in Quebec tend to be more protectionist than importers located elsewhere in the country; 85.4 percent of those in Quebec support a protectionist policy while support for a protectionist policy falls to 52.1 percent among firms located elsewhere. Moreover, there exists a significant difference between importers' preferred licence administration procedures, depending on the location of their business. Of the importers located in Quebec, 89.7 percent prefer the licence administration methods classified as discretionary while 70.4 percent of importers located in other provinces prefer discretionary methods. This difference is significant at the 95 percent confidence level. The degree of overall satisfaction with the current TRQ system also differs significantly between importing firms in Quebec and importers located elsewhere. Importing firms located in Quebec are clearly satisfied with the current administration method in a larger proportion than firms located elsewhere (87.5 percent relative to 52.9 percent).

Surprisingly, no statistically significant relationships between the category of importing firm and the reported answers to the questionnaire were identified. This is rather surprising since import licence allocation shares differ according to the firms' sectors of activity. The rents captured by each importing firm should differ across their sector of operations because their valuation of import permits is directly a function of the difference between the domestic price and the world price. Moreover, different TRQ administration procedures can affect the market levels of the industry in different ways depending on the degree of discretion associated with the procedures. This could have led to important differences in the rents importers obtain from the TRQ system. These surmises could not be validated by the survey.[7]

Concluding Remarks

This paper evaluated Canadian chicken importers' preferences towards TRQ import licensing mechanisms. Are there any lessons from the analysis of the survey that can inform attempts to reform the TRQ administration procedures at the WTO? Any quantitative trade restriction is likely to bring forward divergent private interests in an industry. Non-competitive markets will likely produce even more divergent interests across all types of agents in the industry. The focus of the present study was to analyze TRQ administration procedures from the perspective of importers. Canadian firms were found to have substantially different vested interests with regards to Canadian import policy for chicken. TRQ allocation procedures have important welfare effects domestically and research must begin to address the domestic income distribution implications of import licence allocation mechanisms. WTO negotiators should not focus exclusively on analyzing the effects of TRQ administration procedures on the exporting side of the market when addressing TRQ reforms. While such a focus represents a legitimate and important issue, negotiators should not underestimate the impacts that TRQ allocation reforms would have on domestic firms. If negotiators fail to consider domestic issues, domestic lobbies can become important obstacles to TRQ reforms during the next round of multilateral negotiations on agricultural trade. In Canada, a majority of firms want to preserve the status quo in terms of import licence allocation procedures, but specific opinions regarding the TRQ administration procedures vary significantly across geographical regions. The government may be well advised to promote minor reforms to its current allocation system and increased market access to foreign chicken products if it does not want to attract negative feedback from the chicken importers' lobby. Of course, the ultimate political goal will be to find the right balance between the interests of producers, importers and consumers.

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Endnotes

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[2] Chicken products on the ICL include live chickens (all weights), eviscerated (whole or cut-up) chicken (fresh, chilled, and frozen), eviscerated, cooked or processed chicken, and (eviscerated) smoked or dried chicken products.

[3] These imported chicken products are used as inputs in the production of chicken meals and can be counted in the TRQ. The objective of this allocation procedure is to increase the competitiveness of further processors in marketing chicken products not included in the ICL. However, during the period 1995 to 2000, special import permits were delivered to importers producing chicken products not on the ICL and were not taxed at the over-quota tariff and not counted in the TRQ. This explains why the actual quantity of

imported chicken products exceeded the minimum access of the TRQ from 1996 to 2000 (Statistics Canada, 2001) despite over-quota tariffs on chicken imports well in excess of 200 percent.

[4] We omit, for simplicity, any potential processing costs related to import goods. This omission does not alter the main arguments of the analysis.

[5] Information obtained from the Department of Foreign Affairs and International Trade of Canada confirmed that the ten largest importers of chicken products in Canada held 42 percent of the global number of licences available under the TRQ, suggesting that there is a certain concentration in the import licence market. A recent study by Agriculture and Agri-food Canada (1999) revealed also that processing activities in Canada are fairly concentrated. The five largest companies in terms of volume were processing 59 percent of all chicken slaughters while the ten largest firms were processing 81 percent of all Canadian chicken slaughters. Moreover, Fulton and Tang (1999) found significant departure from competitive behavior in the Canadian chicken industry over the period 1965 to 1996.

[6] Consult Freund (1992) for further details on the statistical procedure.

[7] It should be noted that, although the statistical evidence is inconclusive, the survey results do not imply that the different types of firms have similar preferences towards the TRQ allocation procedures.