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## **The law and economics of "consumer only" financed export subsidies - a context for the WTO's Dispute Settlement Panel on Canadian dairy policy**

**Isabelle Schluep, Harry de Gorter**

### **Zusammenfassung**

Der vorliegende Artikel untersucht sogenannte "konsumentenfinanzierte" Exportsubventionen, die durch Preisdiskriminierung und Erlös-"pooling" charakterisiert sind. Sie werden beispielsweise im kanadischen Milchsektor angewandt. Preisdiskriminierung per se stellt unter GATT Recht keine Exportsubvention dar und sollte deshalb Teil eines separaten Übereinkommens über unvollständigen Wettbewerb sein. Konsumentenfinanzierte Exportsubventionen werden auch nicht im Abkommen über die Landwirtschaft erwähnt. Sie sollten jedoch wie herkömmliche "steuerfinanzierte" Exportsubventionen behandelt werden. Dies vor allem, weil die entstehenden Handelsverzerrungen grösser sind als durch steuerfinanzierte Exportsubventionen.

"Produzentenfinanzierte" Exportsubventionen sind im Übereinkommen über die Landwirtschaft erlaubt. Sie sind jedoch erst realisierbar, wenn bereits konsumenten- oder steuerfinanzierte Exportsubventionen bestehen.

Wir schlagen eine allgemeine Definition einer Exportsubvention vor, die für alle Wirtschaftssektoren Gültigkeit hat. Der Befund des Panels im Streitbeilegungsverfahren gegen Kanada's Exportpraktiken für Milchprodukte zeigt, dass eine Klärung des Begriffs Exportsubvention im Übereinkommen über Subventionen und Ausgleichsmassnahmen und im Übereinkommen über die Landwirtschaft dringend nötig ist.

**Schlüsselwörter:** Konsumentenfinanzierte Exportsubventionen, Preisdiskriminierung, Erlös-Pooling, internationale Milchpolitik, Abkommen über die Landwirtschaft

## 1. Introduction

The Agreement on Agriculture of the Uruguay Round imposed limits and reduction commitments on *taxpayer* financed export subsidies only (in terms of both the value of export subsidies and the quantity of exports subsidized). This paper focuses on *consumer only* financed export subsidies in the context of the World Trade Organization (WTO) Dispute Settlement Panel on Canadian dairy policy. We show that these export subsidies circumvent the guidelines established in the Agreement on Agriculture. We will draw implications for dairy policies worldwide and for the next round of General Agreement on Tariffs and Trade (GATT) negotiations slated to begin in 2000. Consumer only financed export subsidies do not involve taxpayer costs, but instead transfer revenue directly from consumers to producers. We also investigate the economics of similar dairy pricing practices adopted by California, the U.S. Federal Order pooling price policy, and the New Zealand Dairy Board (NZDB).

Canada's dairy policy involves border protection, marketing quotas, price discrimination and pooling of revenues. Farmers receive a weighted average price from both domestic and export sales, with domestic sales at a higher price than those in export markets. The United States and New Zealand filed complaints to the WTO, arguing that this system involves an implicit export subsidy that should be subject to the disciplines and limits of the Agreement on Agriculture.<sup>1</sup> Because Canada claims otherwise, a GATT Panel was established to resolve this dispute. We show that it will have direct implications for other countries dairy policies that employ consumer only financed export subsidies too. It is shown that price discrimination and revenue pooling results in a consumer only financed export subsidy. No country so far has notified the WTO of this form of export subsidy. Because the definition of export subsidies in the Agreement on Agriculture, the Agreement on Subsidies and Countervailing Measures (ASCM), and Article XVI in the GATT 1994 (WTO, 1994) is rather vague, and excludes consumer only financed export subsidies, countries may circumvent current export subsidy reduction commitments. The ruling on this WTO Panel will have important implications for dairy policy in

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<sup>1</sup>

Canada - Measures affecting the import of milk and the exportation of dairy products. WT/DS 103 (filed 8 October 1997, complaint by the United States).

Canada - Measures affecting dairy products. WT/DS 113 (filed 29 December 1997, complaint by New Zealand).

Canada and other countries, as well as for other commodities. We provide recommendations on how the GATT text needs to be modified in order to include consumer only financed export subsidies.

Because the Panel centers on the definition of Canada's dairy policy to be a *commercial* versus government or *public* enterprise (WTO, 1999), we show that the GATT 1994 does not have an adequate definition of a state trading enterprise (STE) (ANNAND ET AL., ALSTON ET AL, AND DIXIT ET AL.).<sup>2</sup> If the pricing scheme is deemed a private or commercial entity, then it would not be subject to the reduction commitments on export subsidies made in the Agreement on Agriculture. We elaborate on how price discrimination and revenue pooling practices give a competitive advantage to STEs in the world dairy market, how their behavior differs from commercial firms and what the implications are for the next GATT Round.

## **2. The pure theory of “consumer only” financed export subsidies**

An export subsidy is correctly identified as a subsidy that is contingent upon exports (World Trade Organization). We show that this is not the case for a *consumer only* financed export subsidy. As with other subsidy programs, an export subsidy generates trade distortion and enhances producer incomes. The economic definition of an export subsidy that should be adopted by the GATT is *a policy that introduces a wedge between domestic and world prices that has the dual effect of contracting consumption and escalating production*.

We identify three types of export subsidies: taxpayer, consumer only, and a producer financed export subsidy. Taxpayer financed export subsidies are well known but note that this type of export subsidy not only includes transfers from taxpayers, but also from consumers to producers because a wedge occurs between the domestic and the world price. This means consumers have to pay a higher price for the same product.

This new category of export subsidy we call a consumer only financed export subsidy is not explicitly recognized by the WTO and so is not part of the export subsidy reduction commitments. Indeed, no country has notified the WTO about this “marketing order” type arrangement in

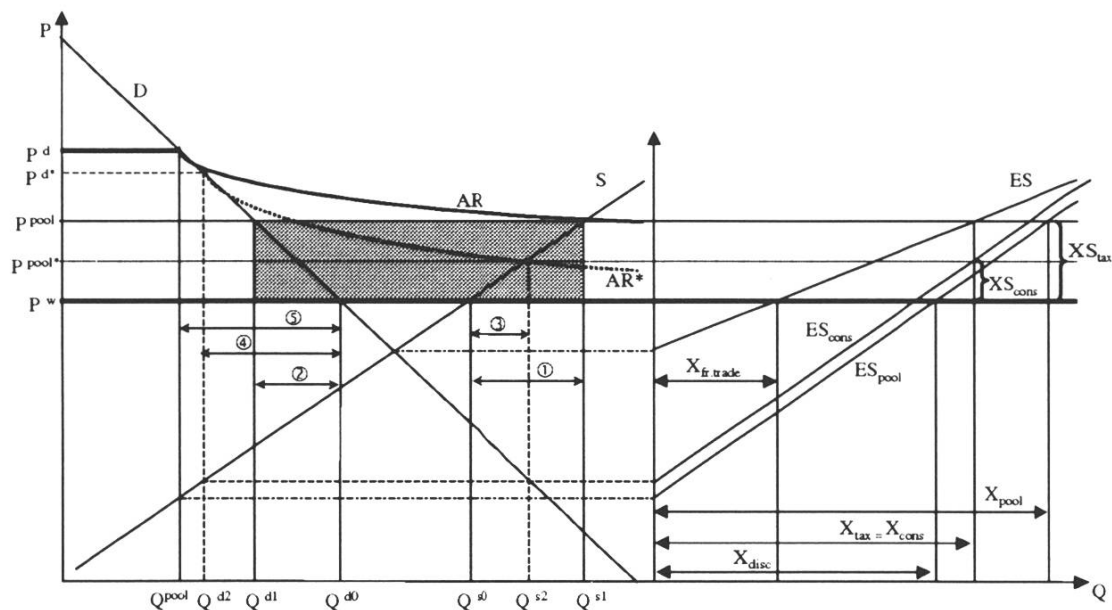
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<sup>2</sup> State Trading Enterprises (STE) are also referred to as single-desk buying or selling agents.

countries like Canada, the United States, or New Zealand. As the name indicates, a consumer only financed export subsidy involves transfers exclusively from consumers to producers. The producer financed export subsidies consist of a levy on either a taxpayer or consumer only financed export.

The prerequisites for a consumer only financed export subsidy are both price discrimination (either across domestic and foreign markets for one product and/or across products in international markets) and pooling of these revenues to producers. The case of price discrimination for one product between domestic and foreign markets for a small country exporter is depicted in Figure 1.

**Figure 1: Taxpayer versus consumer only financed export subsidy  
(single product)**



We consider two situations: price discrimination with and without revenue pooling. The domestic market price is  $P^d$  and world price is  $P^w$ . Price discrimination is either administered directly by government regulation or through market power of a government sanctioned marketing board, which would set the domestic price at a level where profits would be enhanced. With price discrimination, but no revenue



pooling, farmers' produce where the marginal cost  $S$  equals marginal revenue at the world price. Production would be at  $Q^{so}$  that is equal to the level of production under free trade. The excess supply curve  $ES_{pool}$  is generated by the difference between the supply curve  $S$  and the domestic consumption  $Q^{pool}$  that occurs at the domestic price  $P^d$ . Exports with price discrimination only (no pooling) are  $X_{disc}$ . There is no wedge between the domestic and the world price under price discrimination only and so no export subsidy can be identified.

However due to the lower domestic consumption of  $Q^{pool}$  instead of  $Q^{do}$  at the level of free trade, trade distortion exists and is represented by the horizontal distance ⑤.<sup>3</sup> With revenue pooling however, farmers receive a higher price  $P^{pool}$  in equating average revenue  $AR$  to marginal cost  $S$ . Output expands to  $Q^{s1}$  while domestic demand contracts to  $Q^{pool}$  from  $Q^{do}$ . The  $ES_{pool}$  remains the same as under price discrimination only. This results in an increase in exports to  $X_{pool}$  and distorts international trade by the sum of the distances ① plus ⑤. Revenues from domestic sales of the amount  $P^d \cdot Q^{pool}$  are pooled with revenues from sales in the world market of the amount  $(Q^{s1} - Q^{pool}) \cdot P^w$ . The weighted average price  $P^{pool}$  the farmers receives is calculated as:  $\{(Q^{pool} \cdot P^d) + [(Q^{s1} - Q^{pool}) \cdot P^w]\} / Q^{s1}$ . Exports  $X_{disc}$  under price discrimination only are smaller than with additional revenue pooling  $X_{pool}$  but are larger than exports would be under free trade  $X_{fr.trade}$ .

Now let us compare the consumer only with a taxpayer financed export subsidy. When moving from free trade ( $Q^{so}$  and  $Q^{do}$ ) to a policy with a per unit taxpayer financed export subsidy, represented by the vertical distance  $XS_{tax}$ , the same price  $P^{pool}$  to producers as with a consumer only financed export subsidy would be generated. It results in revenue transfers of the area  $(Q^{s1} - Q^{d1}) \cdot XS_{tax}$  from taxpayers to producers and of the area  $(P^{pool} - P^w) \cdot Q^{d1}$  from consumers to producers. The transfer from consumers to producers with price discrimination and revenue pooling is represented by the area  $(P^d - P^w) \cdot Q^{pool}$  which has to be equal to the area  $(P^{pool} - P^w) \cdot Q^{s1}$ , reflecting the producer revenue enhancement due to revenue pooling. The net transfer from consumers to producers would be the area  $(P^{pool} - P^w) \cdot (Q^{s1} - Q^{pool})$ .

The difference between  $S$  and  $D$  is represented by the excess supply curve  $ES$ . The taxpayer financed export subsidy  $XS_{tax}$  introduces a wedge between the domestic and the world price and generates exports

<sup>3</sup>

For the small country, single product case we cannot observe trade distortion as a change in the world market price. Trade distortion is schematically expressed as the difference in volumes traded to the free trade level.

of  $X_{\text{tax}}$ . For the same amount of output  $Q^{s1}$  at  $P^{\text{pool}}$ , the taxpayer financed export subsidy generates fewer exports  $X_{\text{tax}}$  than with price discrimination and revenue pooling ( $X_{\text{pool}}$ ). In other words, the taxpayer financed export subsidy is less trade distorting ① plus ② than the consumer only financed export subsidy which distorts trade by the amount ① plus ⑤.

It follows that the per unit consumer only financed export subsidy that would generate the same trade distortion as the taxpayer financed export subsidy (① plus ②) would be much lower and is depicted by the vertical distance  $XS_{\text{cons}}$ . To show the per unit consumer only financed export subsidy that has the same trade distortion as the taxpayer financed export subsidy, we arbitrarily pick a new pool price  $P^{\text{pool}*}$  which generates the output  $Q^{s2}$ . We can thus calculate the level of domestic consumption of  $Q^{d2}$  at the price  $P^d$  where the trade distortion of ③ plus ④ is exactly the same as ① plus ②. The  $ES_{\text{cons}}$  results from the difference between the supply curve  $S$  and the quantity demanded domestically  $Q^{d2}$  and exports  $X_{\text{cons}}$  occur where  $ES_{\text{cons}}$  equals  $P^{\text{pool}*}$ . We conclude that for the same level of trade distortion, farmers receive lower prices and less income with a consumer only financed export subsidy. Equivalently, there is more trade distortion with consumer only financed export subsidies for a given level of producer welfare or domestic production.

The extent of the trade distortion depends upon the elasticities of supply and demand in the domestic market, the elasticity of excess demand facing a large exporter and the share of production exported. In general, a more elastic supply and demand curve would lead to larger distortions. Table 1 summarizes the impacts of market

*Table 1: Impact of market parameters on relative trade distortion (single product)*

<b>Parameters</b>	<b><i>Taxpayer financed export subsidy</i></b>	<b><i>Consumer only financed export subsidy</i></b>	<b><i>Relative trade distortion for consumer only financed export subsidy</i></b>
<b><i>Elasticity of demand</i></b>	Larger changes in consumption for a given price increase and therefore higher trade distortion. The share of consumer versus taxpayer transfer decreases for a given price increase	Larger changes in consumption for a given price increase. A higher price with a more elastic demand curve generates lower revenues. The net effect is indeterminate but need higher level of price increase to achieve the same pool price, so more trade distortion	Increases
<b><i>Elasticity of supply</i></b>	A larger change in production under a given price increase and therefore a larger trade distortion. The share of taxpayer versus consumer transfer increases for a given price		Unaffected
<b><i>Elasticity of excess demand</i></b>	The world market price drops less and so less trade distortion		Unaffected
<b><i>Share of domestic production exported</i></b>	No effect	Pool price declines and therefore less trade distortion	Decreases

parameters on relative trade distortion. We compare the effects of the elasticity of supply, demand, and excess demand plus the share of domestic production exported for both the taxpayer and the consumer only financed export subsidy. This allows us to derive the relative trade distortion for consumer only financed export subsidies. A more elastic demand curve generates a trade distortion relatively greater for a consumer only financed export subsidy. The elasticity of supply and the elasticity of excess demand affect both policy types equally, and so the



relative trade distortion with a consumer only financed export subsidy is unaffected. The share of domestic production exported influences the pool price under the consumer only financed export subsidy case in that less domestic consumption results in less revenue extracted from consumers and so producers obtain a lower transfer. Consequently, the relative trade distortion of a consumer only financed export subsidy decreases with a larger share of domestic production exported. One can easily show two other cases of a consumer only financed export subsidy where the lowest domestic product price ( $n-1$  or residual product) is either greater than the world price or when it is equal to the world price. Even if the price of the most demand elastic product ( $n-1$  or residual product) is at the world price, we still find a consumer only financed export subsidy. The wedge between the pooled domestic price received by producers and non-residual product consumer prices and the world price can be observed if domestic consumption prices for the residual product (lowest priced product) are equal to or greater than the export price.

### 3. Legal context

Two important legal definitions are critical in the current WTO Dispute Settlement Panel on the Canadian dairy policy: the definition of an export subsidy and of an STE. STEs are important in this case because it matters if an enterprise is considered private *versus* government sanctioned. If the enterprise is deemed private, no reduction commitments on export subsidies are needed. The final Panel report as of March 17, 1999, found that Canada's dairy policy is inconsistent with the provisions on export subsidies in the Agreement on Agriculture and provides for an export subsidy in excess of quantity commitment levels in Canada's Schedule. The Appellate Body of the WTO confirmed the findings of the Panel. Because this was the first Panel after the implementation of the new provisions on export subsidies in the Agreement on Agriculture, the findings and conclusions of the Appellate Body have important implications for many dairy policies in other countries and other product policies (e.g. the Canadian Wheat Board). Of the three types of export subsidies identified in this paper, taxpayer financed export subsidies are well known and covered by the Agreement on Agriculture and the Agreement on Subsidies and Countervailing Measures (ASCM) (and there is language on producer financed export subsidies as well). Consumer only financed export

subsidies do not fit anywhere in the GATT 1994, neither in the Agreement on Agriculture, or the ASCM, nor Article XVI. Under the Agreement on Agriculture, a subsidy is required to be *contingent on export performance* in order to be deemed an export subsidy. Accordingly, in the absence of such an export contingency, the measure in question cannot be identified as an export subsidy under the current provisions in the Agreement on Agriculture. Since the consumer only financed export subsidies under Article 13 of the Agreement on Agriculture do not “..fully conform” to the Agreement on Agriculture, we need to consult the definition in the ASCM. One also finds the contingency argument in the ASCM which implies that the consumer only financed export subsidy is not defined. Annex I of the ASCM (illustrative list of export subsidies) refers to “...any other charge on the public account constituting an export subsidy in the sense of Article XVI of GATT 1994.” Article XVI of the GATT 1994 defines an export subsidy as a “... subsidy on the export of any product other than a primary product which results in the sale of such product for export at a price lower than the comparable price charged for the like product to buyers in the domestic market.” This definition only contains the price discrimination element that we have shown is not sufficient to characterize a consumer only financed export subsidy.

In fact the provision in Article XVI:4 should be removed from the text because the definition of an export subsidy is inconsistent with that provided in this paper. If one defines an export subsidy only on the grounds of price discrimination and that the domestic price has to be higher than the world price then, for example, the Federal Order pooling system in the United States would be exempt because the price for the residual market (or product), milk powder, is equal to the world price. Because the United States pools revenues in the dairy market, production is higher than otherwise, with a wedge introduced between the domestic and the world price. This clearly constitutes an export subsidy as defined in this paper.

The next GATT Round should include a specific definition of a consumer only financed export subsidy in the ASCM so that the definition is binding for all sectors in the economy. It cannot be placed only in the Agreement on Agriculture since this agreement adopts the definition from the ASCM. Article 3 of the ASCM would have to be modified that it also includes not only subsidies *contingent upon export performance* but also *subsidies that have similar consequences*. Article 1e as well as Article 9.1 of the Agreement on Agriculture need to include language on consumer only financed export subsidies.

There is concern that countries can circumvent reduction commitments on export subsidies by means of STEs which are subject to non-discrimination (principle of Most-Favored-Nation)<sup>4</sup> and are obliged "to conduct purchases and sales exclusively in line with commercial considerations and to afford other trading partners adequate opportunity to compete for participation in the sales and purchases (Senti, 1998)." Non-discrimination does not apply to STEs for price-discrimination among international markets, under the condition that the prices charged are for commercial reasons. The definition is rather vague and does not include any checklist (Annand et al., 1998) that would simplify the identification of a STE. Our question is why exclusive rights necessarily lead to unfair trading competition when an STE corrects for market failure such as the absence of futures markets for some commodities (Paddock, 1998)?

Further, we need to distinguish between codes on imperfect competition (which does not exist yet in the GATT) *versus* consumer only financed export subsidies. Imperfect competition by commercial enterprises such as Cargill is of a different nature than that of STEs because the former does not include revenue pooling. Commercial enterprises price discriminate but produce at the marginal cost and so there is no wedge between the domestic and export price. Given our definition, no implicit export subsidy results. It could be possible for an enterprise which also price discriminates among international markets to reduce international demand and so offset the trade distortion caused from price discrimination in the domestic market. STEs on the other hand are able to generate a consumer only or production subsidy as we show later. A checklist needs to be established which includes prohibited practices by STEs. Revenue pooling of course has to be one of them, whereas price discrimination by itself should not be in the context of export subsidies. If there is price discrimination only, then it should be under the rubric of imperfect competition if, such discrimination is predatory in nature.

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<sup>4</sup> All advantages, favors, privileges, immunities etc. which a Member grants to a trading partner are accorded to all parties with which the Member trades.

## **4. Application to dairy policies worldwide**

Canadian policy fits the description of a consumer only financed export subsidy because it involves both price discrimination and revenue pooling. It represents the case where the domestic price is greater than the world price. Canada has no residual product to clear the market, unlike in California (where the domestic > world price) or the U.S. Federal Orders (where the domestic = world price) for the residual product markets. Canada has production quotas that operate similar to the marketing quota system in California (Sumner and Wolfe, 1996). For infra-marginal quantities of milk, revenue is directly allocated to the producer. In the case of Canada, revenues from the domestic market and from with-in quota export sales would be included but not sales of over-quota production.

Production quotas would only truly be restrictive if farmers were able to produce at the world market price. Canada does not produce on the marginal cost curve for residual product markets exported, unlike California and U.S. Federal Orders. The Federal Order pool price system in the United States is very similar to that of Canada in that a consumer only financed export subsidy is in place (as in California). The Federal Order system adopts a classified pricing mechanism that establishes minimum prices for milk according to its end-use class that is similar to the end-use pricing system in Canada.<sup>5</sup> Farmers receive a pool price that is the weighted average of raw milk used by Class I, II, III and III-A<sup>6</sup> processors. Class III-A equals the world market price for the residual market (skim milk powder) and so is “in form” not an export subsidy. However, we can show that “in fact” it operates like a consumer only financed export subsidy. Let us consider two possible cases. If milk powder exports are pooled, output expands and so there is an implicit export subsidy. If milk powder exports are not pooled, all products like cheese have domestic prices greater than world prices, thereby expanding milk output and decreasing domestic consumption of all other milk products. This means there is more raw milk to be converted into milk powder, part of the expanded output of which is exported. Therefore, having milk powder exports out of the pool with

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<sup>5</sup> Canada: Milk is made available to processors at different prices reflecting end-use and market destination.

<sup>6</sup> Class I milk is used for fluid products; Class II for fresh cream and for soft products such as cottage cheese, yogurt and ice cream; Class III for hard storable products such as hard cheese, dry milk powder and butter; Class II-A for non-fat dry milk.



domestic = world price is still an export subsidy because of “product definition”. Hence, pooling of revenues of dairy products other than milk powder with the domestic price greater than the world price affects supplies of milk powder exports. The United States would “in form” not be subsidizing exports but “in fact” would be.

Consumers are equally affected in the United States and Canada because of price discrimination. The Canadian system seems to have a lower total efficiency loss because of the production quota. Therefore, keeping the quota may be a tool to reduce efficiency losses. Unlike most Federal Orders, California does not have a single pool price but has partial pooling (SUMNER AND WOLFE, 1996). Marketing quotas make it possible to allocate some revenues of Class 1 and 2 directly to producers. Sales of the lower price milk classes including exports outside the marketing quotas are pooled. The revenue from milk sales of the different classes is distributed to producers based on each producer's marketing quota and “non-quota” holdings. California has partial pooling and unlike Canada operates on the marginal cost curve. Farmers lose profits if they cannot produce at the world market price and subsidize exports. Also California like the Federal Order would be better off not to pool, because there would be higher profits to farmers. Partial pooling and pooled export subsidies in California allows free riding by Federal Orders while the North East Dairy Compact pools with higher domestic prices and therefore are free riding on other Federal Orders and therefore, on California.

The NZDB is the world's largest exporter of dairy products. The ownership structure of the Board is changing rapidly because of recent mergers between cooperatives that are members of the Board. Two of the member companies produce more than 75 % of the processed milk destined for exports. In case the government abolishes the single selling status of the NZDB then most probably the two cooperatives would fill the gap and take over the business of the NZDB. The current GATT definition of an STE would then no longer apply to this new export body. The definition of an export STE we propose - “any institutional structure (private or government condoned) that encourages/condones taxpayer or consumer only financed export and production subsidies” - would also capture this new “private run” export market organization and therefore would have to be brought in line with GATT commitments.

New Zealand price discriminates across products in international markets, pools revenues including downstream revenues and quota rents accrued from exports to e.g. the United States, what provides for a production subsidy to domestic producers.

## **5. Concluding remarks**

This paper identifies three types of export subsidies. We provide a rigorous definition of a consumer only financed export subsidy and recommend that the GATT text include such subsidies formally. We determine that price discrimination and revenue pooling is required. If price discrimination occurs only, then such actions should come under an imperfect competition code rather than an export subsidy code. Producer financed export subsidies can only exist in tandem with either a taxpayer or a consumer only financed export subsidy.

We find that consumer financed export subsidies are important because they generate more trade distortion than taxpayer financed export subsidies. Furthermore, STEs can generate export subsidies and so must be scrutinized under our definition of export subsidies. No country has explicitly notified the GATT about consumer only financed export subsidies. These policies can circumvent current taxpayer export subsidy limits and reduction commitments of the Agreement on Agriculture. The irony is that the United States (complainant) has consumer only financed export subsidies as well that may be more trade distorting than Canada's. U.S. Federal Orders and California, each in their own ways, have elements of consumer only financed export subsidies like Canada. New Zealand, the other complainant, generates a production subsidy by means of an STE that is not subject to reduction commitments either. Our definition of an export STE and the prohibition of pooling practices would eliminate this kind of implicit production subsidy.

### **Summary**

**This paper explains the economics of “consumer only” financed export subsidies, defined as price discrimination and revenue pooling like the activities of the Canadian dairy sector. We determine that price discrimination alone (currently allowed in the GATT) does not constitute an export subsidy and so should be part of an imperfect competition code in the GATT. Consumer only financed export subsidies, although not officially recognized in member country notifications in the Agreement on Agriculture, should be treated like traditional taxpayer financed export subsidies. This is important because trade distortions are found to be higher than that of taxpayer financed export subsidies. We also find that producer financed export subsidies (currently allowed in the Agreement**



on Agriculture) can only exist if a consumer only or a taxpayer financed export subsidy is in place first.

We therefore propose a generic definition of an "export subsidy" so it can be applied to all sectors. This is particularly relevant on the findings of the WTO's Dispute Settlement Panel on Canada's dairy policy for the export subsidy provisions in the Agreement on Subsidies and Countervailing Measures and the Agreement on Agriculture, and for Article XVII on State Trading Enterprises in the GATT. The irony is that the plaintiffs in this dispute also have consumer only financed export subsidies (United States Federal Order and California pools). Current GATT legalities are either vague or do not exist on dealing with the issues of consumer only financed export subsidies.

**Key words:** Consumer only financed export subsidy, price discrimination, revenue pooling, state trading enterprises, imperfect competition, dairy policies worldwide, Agreement on Agriculture, Agreement on Subsidies and Countervailing Measures

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