

An hourglass-shaped graphic with a globe inside. The top bulb is dark blue, and the bottom bulb is light blue. The globe is a light blue color with darker blue outlines for continents. The hourglass is centered on the page.

WikiLeaks Document Release

<http://wikileaks.org/wiki/CRS-RL30684>

February 2, 2009

Congressional Research Service

Report RL30684

*The Foreign Sales Corporation (FSC) Tax Benefit for
Exporting: WTO Issues and Economic Analysis*

David L. Brumbaugh, Government and Finance Division

Updated December 11, 2000

Abstract. The reason for the pending legislation that would alter the current tax code's FSC provisions is FSC's difficulties with the WTO. U.S. trading partners in the EU have argued that FSC is an export subsidy in violation of the WTO agreements, and in 1999 a WTO panel supported those claims. This report looks at U.S. tax laws and how they relate to the WTO agreements. It then looks at DISC's problems with the General Agreement on Tariffs and Trade and how FSC was designed to address challenges under GATT. The report then turns to the current WTO dispute and describes H.R. 4986: the proposed replacement for FSC that was passed by the U.S. House of Representatives on September 14, 2000.

WikiLeaks

CRS Report for Congress

Received through the CRS Web

The Foreign Sales Corporation (FSC) Tax Benefit for Exporting: WTO Issues and an Economic Analysis

Updated December 11, 2000

David L. Brumbaugh
Specialist in Public Finance
Government and Finance Division

<http://wikileaks.org/wiki/CRS-RL30684>

The Foreign Sales Corporation (FSC) Tax Benefit for Exporting: WTO Issues and an Economic Analysis

Summary

The U.S. tax code's Foreign Sales Corporation (FSC) provisions permit firms that sell their exports through qualified sales subsidiaries (FSCs) to exempt somewhere between 15% and 30% of their export income from federal tax. The purpose of the provision is to stimulate U.S. exports.

Economic theory suggests that FSC probably does increase U.S. exports by a very small amount. But beyond this, FSC's other economic effects are probably surprising to many non-economists. First, because of the exchange rate adjustments that FSC triggers, it also increases U.S. imports, so that its effect on the U.S. balance of trade – the value of exports minus the value of imports – is probably negligible. CRS estimates based on 1996 data suggest that FSC increases the quantity of exports by a range of 2-tenths of 1% to 4-tenths of 1%; it increases the quantity of imports by a range of 2-tenths of 1% to 3-tenths of 1%. Based on 1996 trade flows, these estimated changes amounted to \$720 million to \$1.23 billion of exports and imports alike. Another economic effect of FSC is perhaps more important – a small transfer of economic welfare from the United States abroad that occurs when part of the tax benefit is passed on to foreign consumers as reduced prices for U.S. goods.

FSC is the statutory descendent of the Domestic International Sales Corporation (DISC) provisions, enacted in 1971; DISC delivered a tax benefit of the same general size as FSC. However, several U.S. trading partners charged that DISC was an export subsidy in violation of the General Agreement on Tariffs and Trade (GATT). FSC was enacted in 1984 as a replacement for DISC that was designed to be GATT-legal. Recently, however, the European Union (EU) has charged that FSC itself contravenes GATT's successor – the World Trade Organization (WTO) agreements – and filed a complaint with the WTO. In October 1999, a WTO panel supported the EU. Under WTO procedures FSC must be brought into WTO compliance by November 2000. Absent compliance, the EU could request compensation from the United States or ask the WTO to authorize retaliatory measures.

In November, 2000, Congress passed (and the President signed) legislation designed to replace FSC with a WTO-compatible export tax benefit. The legislation provides a tax benefit for exports of the same general magnitude as FSC, but its statutory mechanics differ—qualifying exports, for example, need not be sold through a subsidiary corporation, and a matching amount of income from foreign operations would potentially qualify for the tax benefit. The EU has stated it does not believe the new tax benefit to be WTO-compliant. It has asked the WTO to rule on whether the replacement provisions are WTO-compliant, and, if they are not, to authorize retaliatory tariffs. This report will not be updated.

Contents

How FSC Works and its Place in the U.S. Tax System	1
U.S. Treatment of Export Income Without FSC	2
The FSC Provisions	3
FSC and the World Trade Organization	6
DISC: FSC's Antecedent	6
DISC and the General Agreement on Tariffs and Trade	7
FSC and GATT	8
Findings of the WTO Panel	8
Proposed Replacements for FSC	10
H.R. 4986	11
Economic Effects of FSC	13
Size of the FSC Benefit	13
FSC's Impact on Trade and the Economy	14
Other Effects	16
Effects of FSC's Possible Replacement	17
Business Views	18
FSC and Value-Added Tax Rebates	18
Other Arguments	19
Data on FSC Use	19
Appendix	21
Marginal Effective Tax Rates	21
Impact on Exports and Imports	22

List of Tables

Table 1. Marginal Effective Tax Rates for Exporters using FSC	14
Table 2. FSC's Estimated Impact on Exports, Imports, and Economic Welfare	16
Table 3. Selected Internal Revenue Service FSC Data, 1992 and 1996	20

The Foreign Sales Corporation (FSC) Tax Benefit for Exporting: WTO Issues and an Economic Analysis

The reason for the pending legislation that would alter the current tax code's FSC provisions is FSC's difficulties with the WTO. U.S. trading partners in the EU have argued that FSC is an export subsidy in violation of the WTO agreements, and in 1999 a WTO panel supported those claims. Clearly, an understanding of the current legislation's context requires a look at U.S. tax laws and how they relate to the WTO agreements. This report's presentation of the FSC issue begins there: with a brief overview of the U.S. international tax system, the mechanics of FSC's partial tax exemption, and how FSC fits into the overall U.S. tax structure.

FSC was enacted as a replacement for the DISC tax benefit, which itself was challenged as a prohibited export subsidy shortly after its enactment in 1971. The current controversy thus has a long history, and the report continues by looking at DISC's problems with the General Agreement on Tariffs and Trade and how FSC was designed to address challenges under GATT. The discussion then turns to the current WTO dispute and describes H.R. 4986: the proposed replacement for FSC under consideration in Congress.

But FSC is an instrument of economic policy and a full understanding of the current legislative context requires economic analysis. The second part of the report thus uses economic theory to assess FSC's impact on exports, the balance of trade, and U.S. economic performance. According to this analysis, FSC has at most a negligible impact on the balance of trade, increases both exports and imports by extremely small amounts, and – perhaps most importantly – results in a very small transfer of economic welfare from the United States to the foreign consumers who benefit from the reduced U.S. prices that FSC affords.

How FSC Works and its Place in the U.S. Tax System

The complaint against FSC by the EU is based on FSC's place in the U.S. tax system. As explained below in more detail, the WTO agreements define export subsidies, in part, as the forgoing of taxes that are otherwise due. Thus, to understand the FSC/WTO controversy and the forces shaping both FSC and its replacement – to get an idea of taxes “otherwise due” – it is useful to look at the U.S. international tax system and how FSC fits into it.

U.S. Treatment of Export Income Without FSC

First, the overall structure: the United States generally operates a tax system based on residence. That is, it looks to the residence of a corporation or individual in order to determine whether it has jurisdiction to tax the entity in question. In the case of corporations, firms that are chartered in the 50 states or the District of Columbia are subject to U.S. tax on their worldwide income, regardless of whether the income is earned domestically or abroad. If, however, a firm is chartered abroad, the United States only applies its taxes to the foreign corporation's U.S. source income; it does not tax foreign firms on their foreign-source income.

The so-called "deferral" principle complicates this structure. Corporations are legal, not economic entities. Thus, a U.S. firm can operate abroad through a foreign-chartered subsidiary corporation that is not subject to immediate U.S. tax on its foreign-source income. (Again, under the residence principle, foreign corporations are subject only to U.S. tax on their U.S. income.) U.S. taxation of the subsidiary's income is delayed until it is remitted to the U.S. parent corporation as, for example, dividends.

Another complication is the U.S. foreign tax credit, a provision designed to alleviate double-taxation of foreign-source income. U.S. tax law permits firms to credit foreign income taxes they pay against U.S. taxes they would otherwise owe. The credit is limited, however, to those U.S. taxes that would otherwise apply to foreign source (and not domestic) income. As a result of this limit, U.S. taxpayers who have paid foreign taxes on foreign income at relatively high rates may well have an "excess" of foreign tax credits that they cannot use.

With these preliminaries aside, we can now look at export income. First, it is clear that, absent FSC, a U.S. corporation that sells its exports abroad directly is likely to be subject to U.S. tax on its export income—U.S. corporations are generally subject to U.S. tax on their worldwide income. Immediately, however, we note an exception. Firms that have the excess foreign tax credits described in the preceding paragraph can use those credits to shield export income deemed to be from foreign sources from U.S. tax. U.S. rules for "sourcing" income, further, in some cases permit up to half of a firm's export income to be allocated to foreign sources. Accordingly, U.S. corporations in these circumstances can exempt up to half their export income from U.S. tax, even without FSC. Indeed, the magnitude of this benefit (variously called the "export source rule," the "inventory source rule," and the "sales source rule,") is greater than that available from FSC, so that firms that have excess foreign tax credits are likely to structure their operations to use it, instead. However, a firm must have excess foreign tax credits to use the source rule benefit, suggesting that it cannot be used by firms that pay few foreign taxes for one reason or another.¹

¹ For information on the sales source rule, see: U.S. Library of Congress. Congressional Research Service. Tax Benefit for Exports: The Inventory Source Rule. CRS Report 97-414 E, by David L. Brumbaugh. Washington, 1997. 6 P.

What of firms that use neither the source rule nor FSC? Again, if the exports are sold directly by a U.S. corporation, they are subject to full U.S. taxation because of the residence principle. But what if the exports are marketed abroad through a foreign subsidiary? That is, what if a U.S. corporation first manufactures the export products, ships them to a foreign-chartered subsidiary corporation, which then sells them to foreign consumers? As described above, the deferral principle may come into play since foreign corporations are not subject to U.S. tax on foreign-source income. To the extent a firm can allocate profits from its exports to its foreign subsidiary, the profits would not be taxed by the United States until they are remitted to the U.S. parent firm.

But in some cases deferral may be ruled out for exports, even if they are sold through a foreign corporation. The U.S. tax code contains a set of provisions known as Subpart F that identifies certain circumstances in which income earned by foreign subsidiaries is subject to U.S. tax on a current basis in the hands of the subsidiaries' U.S. shareholders. One type of income for which Subpart F potentially restricts deferral is certain sales income from transactions between related corporations—a type of income that could include income from export sales.²

In sum, absent FSC some U.S. export income can use an even larger tax benefit under the source rule, but only if the exporting firm has a surfeit of foreign tax credits. Absent either FSC or the export source rule, export income earned directly by U.S. corporations would be subject to full U.S. taxation. Some export income earned through foreign subsidiaries could benefit from a postponement of U.S. tax under the deferral principle, but in some circumstances deferral would be ruled out under Subpart F. Without FSC, in other words, some, but not all, U.S. export income would be subject to U.S. tax. We next look at how FSC modifies this structure.

The FSC Provisions

In general, exporters use the FSC benefit by selling their products through specially-qualified subsidiary corporations (FSCs). Eligibility for the benefit and the size of the benefit are determined by 4 types of rules: rules for qualifying as a FSC; rules identifying the type of FSC export income that is potentially eligible for the tax benefit; rules dividing income between the FSC and its parent; and rules stipulating the portion of the FSC's eligible export income that is tax-exempt.

First, qualifying as a FSC: FSCs are required to meet certain requirements related to their organization abroad: they must be chartered abroad or in a U.S. possession; must have no more than 25 shareholders; must maintain an office outside the United States where it maintains a permanent set of books; and meet certain other organizational requirements.

Next, qualifying income: even if a firm sells its exports through a qualified FSC, only revenue that qualifies as “foreign trading gross receipts” can generate tax-favored profits. In general, these receipts are required to be from the sale or lease of

² The income in question is “foreign base company sales income,” as defined in section 954(d) of the Internal Revenue Code.

export property. The definition of export property includes most types of U.S. products, but specifically excludes several items, including: most intangible assets such as patents, copyrights, and trademarks; oil and gas; goods whose export is prohibited, property that the President has determined is in short supply, and raw timber. In addition, the tax exemption for income from exports of military property is limited to half the exemption that would otherwise apply.

A FSC is only treated as earning foreign trading gross receipts if it conducts certain management activities or economic processes abroad.³ Examples of management requirements include the FSC maintaining its principal bank account outside the United States, having a board of directors that includes at least one person who is not a U.S. resident, and holding all shareholder meetings outside the United States. “Foreign economic process” requirements are met if a FSC participates in activities such as advertising, arrangement of transportation, transmittal of invoices and receipt of payment, processing of orders, and assumption of credit risk.

Next, allocating qualified income between a FSC and its parent: a firm can use one of three alternative rules to divide net income. The international norm for allocating income between related entities is a method known as “arm’s length pricing,” which divides income between firms using hypothetical prices that would be charged if the firms were actually not related. And the FSC provisions do permit firms to use arm’s length pricing to divide a parent and FSC’s income. But presumably, an independent sales firm operating abroad would be able to appropriate little of the profit from the production of exports in the United States. If it charged market-determined prices, its profit would be based only on the value added by its own sales and ancillary activities, contributed by its own foreign-based factors of production. Presumably, then, little of the profit from U.S. export sales could be attributed to a FSC using arm’s length pricing, and little benefit could be derived from a FSC, notwithstanding the FSC’s tax exemption. The FSC rules, however, provide two alternative “administrative” rules for allocating income.⁴

Under one of the administrative methods, a firm can allocate to its FSC 23% of the combined parent-and-FSC export income. Under the second administrative method, a firm can allocate to the FSC an amount equal to 1.83% of gross export receipts, subject to the limit that no more than 46% of the combined taxable income can be allocated to the FSC. Returning to the rules governing the sales corporations themselves, the part of a FSC’s income that is tax exempt depends on the income

³ These requirements for a foreign presence were adopted in response to an understanding approved by the General Agreement on Tariffs and Trade Council holding that a country need not tax foreign-source income as long as arm’s length pricing is used to allocate income among domestic firms and their foreign subsidiaries. As noted below, H.R. 4986 drops the foreign organization and the foreign management requirements, but retains the foreign economic process rules.

⁴ The Joint Tax Committee’s explanation of the original FSC legislation states that the administrative pricing rules were “intended to approximate arm’s length pricing.” U.S. Congress. Joint Committee on Taxation. General Explanation of the Deficit Reduction Act of 1984. Joint Committee Print, 98th Cong., 2d sess. Washington, U.S. Govt. Print. Off. 1984. p. 1054.

allocation method an exporter elects to use. If a firm uses arm's length pricing, 30% of the FSC's income is exempt from U.S. tax. If it uses either of the two administrative methods, 15/23 of the FSC's income is tax exempt (16/23 if the parent exporter is a non-corporate taxpayer). The interaction of the income allocation rules and these exemption fractions dictate the size of the FSC benefit (see the appendix for details): an exporting firm using FSC can exempt at least 15% of export income from U.S. tax, but no more than 30%.

Having set forth rules for allocating income, the final part of the benefit's statutory mechanics is specification of the part of allocated FSC income that is exempt. If arm's length pricing has been used to allocate income between a parent and its FSC, 30% of foreign trade income is exempt; if either of the two alternative rules have been used, 15/23 of foreign trade income is tax exempt. Note the combination of the rules for allocating income and the fractions of income specified to be tax-exempt produce a particular arithmetic result: a U.S. exporter can use FSC to exempt somewhere between 15% and 30% of export profit from U.S. tax.⁵

From the preceding section's discussion of U.S. export taxation without FSC, it is clear there are still several loose ends. First, even though FSCs are required to be foreign corporations, the United States ordinarily taxes foreign corporations on their U.S.-source income. However, the FSC provisions explicitly provide that a FSC's exempt income is to be treated as foreign-source income, thus placing it beyond the U.S. tax jurisdiction.

Second, Subpart F's restriction on deferral for certain types of sales income would potentially subject some FSC income to current taxation in the hands of the U.S. parent corporation; the FSC provisions exclude FSC income from Subpart F.

Finally, the U.S. tax law permits corporations to deduct at least part of dividends received from other corporations from their taxable income.⁶ Dividends from foreign corporations ordinarily do not qualify for the deduction, raising the possibility that even exempt FSC income could be subject to U.S. tax when the FSC pays dividends to its parent. The FSC provisions, however, provide that U.S. corporations can claim a 100% deduction for dividends from a FSC.

⁵ The result occurs as follows: a firm can always choose to use the 23%-of-combined income rule and exempt 15% of its income from tax ($23\% \times 15/23 = 15\%$). Or, if a firm has a rate of return on sales that is large, it could allocate more than 23% of income to its FSC using the 1.83%-of-gross receipts rule and exempt a percentage greater than 15%. The FSC rules provide, however, that the amount exempted under the gross receipt rule cannot exceed twice the amount exempted under the 23% rule. Thus, under these two rules, the exemption can range from 15% to 30%. Conceivably a firm could also use arm's length pricing to exempt up to 30% of income, but is likely that the exemption under arm's length pricing would be smaller than 15%. Assuming that non-exempt income is subject to the top corporate tax rate of 35%, the exemption range is the equivalent to reducing the tax rate on FSC income to a range of 24.5% (i.e., $[1-30\%] \times 35\%$) to 29.8% (i.e., $[1-15\%] \times 35\%$).

⁶ The purpose of the deduction is to prevent multiple layers of corporate tax income tax.

FSC and the World Trade Organization

DISC: FSC's Antecedent

The current FSC/WTO controversy has its roots in the legislative antecedent of FSC: the U.S. tax code's Domestic International Sales Corporation (DISC) provisions, first enacted in 1971. Like FSC, DISC provided a tax incentive to export, although its design and mechanics were different in certain respects. DISC was enacted as part of the Revenue Act of 1971 (Public Law 92-178). It was thought that a tax incentive for exports was desirable:

- ! to offset the tax code's "deferral" benefit, which posed a tax incentive for U.S. firms serving foreign markets to invest abroad rather in the United States; to offset export tax incentives other countries offered their firms; to provide a stimulus to the U.S. economy.⁷

In some respects, the mechanics of the DISC provisions were a parallel of the "deferral" tax benefit DISC was designed to offset, while applying to exports rather than foreign-source income. Firms availed themselves of the DISC benefit by establishing specially qualified subsidiary corporations (DISCs) that were exempt from U.S. tax and by selling their exports through the subsidiaries. (In reality, DISCs could be little more than paper corporations and still qualify for the tax benefit.) Since the DISCs were tax exempt, firms obtained a tax deferral for income that was retained by the DISC rather than distributed. The size of the benefit was partly dependent on how much export income could be allocated to the tax-exempt DISC, for tax purposes. Like the subsequent FSC provisions, firms could use either arm's length pricing or several alternative "administrative" formulas to allocate income to the DISC, where it was protected from tax.

In contrast to FSC income, DISC income was taxed when distributed to its parent. (Firms receive a dividends-received deduction that applies to FSC income). However, part of the income could be retained by the DISC indefinitely, and the parent could obtain the use of its DISC's funds by means of "producer" loans from the DISC to the parent. Thus, while DISC was technically a tax deferral, it had the same economic effect as a flat exemption such as FSC's. Further, the various statutory parameters of the DISC provisions – the income allocation rules, and requirements for distributions – resulted in a tax benefit of the same magnitude as that of FSC.⁸

⁷ U.S. Congress. Joint Committee on Taxation. General Explanation of the Revenue Act of 1971. Washington, U.S. Govt. Print. Off. 1972. p. 86.

⁸ For a description of the DISC provisions and an economic analysis of their effects, see: U.S. Library of Congress. Congressional Research Service. DISC: Effects, Issues, and Proposed Replacements. CRS Report 83-69 E, by David L. Brumbaugh. Washington, 1983. 28 p.

DISC and the General Agreement on Tariffs and Trade

If DISC was the statutory ancestor of FSC, the WTO's institutional predecessor was the General Agreement on Tariffs and Trade (GATT): a multilateral trade treaty that was designed to reduce or eliminate restrictions on free trade – restrictions such as tariffs, non-tariff barriers to trade, and subsidies. The United States and its major trading partners were signatory to GATT, and in 1972, shortly after DISC's inception, several nations of the EC submitted a complaint to the GATT Council arguing that DISC was an export subsidy and therefore contravened article XVI of the GATT. The United States, however, filed a counter-claim, holding that the “territorial” tax systems of 3 EEC countries – France, the Netherlands, and Belgium – themselves conferred export subsidies. Under a territorial tax system, a nation does not tax the income of its corporations if that income is earned by a corporate branch located abroad. As for DISC, itself, the United States argued that because DISC conferred a mere deferral of tax, rather than an outright exemption, it was not in violation of GATT.⁹ In 1973, the GATT Council convened a panel of experts to study the EEC's complaint.

The GATT panel issued its reports in 1976. It found that elements of both the territorial system and of DISC constituted prohibited export subsidies under GATT. However, the EEC and the United States both objected to the panel's finding, and the debate continued to simmer until 1981. In 1981, a solution was reached (albeit, as it turned out, a temporary one). The GATT council adopted the panel's report together with an Understanding. The Understanding held that countries need not tax income from economic processes that occur outside their borders – territorial tax systems, in other words, do not by themselves contravene GATT. The Understanding also held, however, that arm's length pricing must be used in applying the territorial system to exports.¹⁰

The meaning of the Understanding itself shortly became an item of contention, and during 1982, a debate occurred in the GATT council over how the Understanding applied to DISC. The EEC continued to argue that DISC was an illegal export subsidy. The United States never conceded that DISC was a subsidy, but the issue was becoming more serious and “threatened breakdown of the dispute resolution process.”¹¹ The U.S. Treasury thus proposed what eventually became the 1984 FSC provisions. The provisions were designed to achieve GATT legality by providing an export tax benefit incorporating elements of the territorial tax system countenanced by the 1981 Understanding.

⁹ McGuire, J. Michael. The GATT Panel Report on Domestic International Sales Corporations: Illegal Subsidy Under the GATT. *International Trade Law Journal*. V. 3, Summer, 1978. P. 395.

¹⁰ The key language of the understanding is quoted in the October, 1999, WTO panel report: World Trade Organization. United States – Tax Treatment for Foreign Sales Corporations. Report of the Panel. WT/DS108/R. October 8, 1999. P. 260.

¹¹ U.S. Congress. Joint Committee on Taxation. General Explanation of the Deficit Reduction Act of 1984. Washington, U.S. Govt. Print. Off. 1984. P. 1041.

FSC and GATT

To see how FSC was meant to achieve GATT legality, we return to the 1981 Understanding and the basic FSC mechanics outlined above. The Understanding held that a country need not tax foreign-source income. And as noted above, the United States does not tax the foreign source income of foreign-chartered corporations; it taxes foreign firms only on income “effectively connected” with a U.S. trade or business. The FSC provisions require a FSC to be chartered abroad – hence qualifying as a foreign corporation – and further provide that a portion of a FSC’s income is foreign-source income not effectively connected with a trade or business within the United States. As described above, FSCs are also required by the tax code to conduct certain activities abroad. Hence, the FSC provisions seem to emulate territorial systems by exempting “foreign” income from U.S. tax.

The countries of the EEC were still not fully satisfied of FSC’s GATT-legality. Even before FSC was signed into law, the EEC expressed concerns about certain of the new provision’s design features – for example, whether a country can operate a territorial system that is confined to just exports, and whether the administrative pricing rules can accurately allocate income.¹² Still, the controversy was generally below the surface until November, 1997, when the European Communities – a component of the European Union (EU) – requested consultations about FSC with the United States, thereby taking the prescribed first step in the dispute settlement process established under the new WTO.¹³ The United States and the EU held consultations without reaching a solution, and in July, 1998, the EU took the next step in the WTO-prescribed process by requesting establishment of a panel to examine the issue. The panel was formed and made its findings public on October 8, 1999.¹⁴

Findings of the WTO Panel

Article 3.1(a) of the WTO’s subsidies and countervailing measures (SCM) agreement prohibits subsidies “contingent on export performance.” In turn, article 1.1 of the agreement defines a subsidy to include cases where “government revenue that is otherwise due is foregone or not collected.” Under these provisions, the EU argued that FSC conferred subsidies in two ways: by means of a set of tax exemptions, and

¹² Caplan, Bennett, and Matthew Chametzky. Domestic International Sales Corporations (DISCs) and Foreign Sales Corporations (FSCs): Providers of Economic Incentives for Wholly-Owned Domestic Exporters. *Brooklyn Journal of International Law*. V. 12. No. 1, 1986. P. 14-5.

¹³ For information on the WTO’s dispute settlement process, see: U.S. Library of Congress. Congressional Research Service. *Dispute Settlement in the World Trade Organization: An Overview*. Report RS20088, by Jeanne J. Grimmett. Washington, 1999. 6 p.

If FSC and the WTO replaced DISC and the GATT in the controversy, the European Communities and the European Union replaced the EEC. The European Communities integrated the EEC and several other “communities” into a single organization that became a component of the EU.

¹⁴ For a chronology of the WTO dispute process relating to FSC, see: World Trade Organization. *United States – Tax Treatment for Foreign Sales Corporations*. Report of the Panel. P. 1.

by permitting FSCs to use administrative rules rather than arm's-length pricing to allocate income.

According to the EU, there are three FSC exemptions that result in forgoing of taxes "otherwise due." One is FSC's exemption from the U.S. tax code's subpart F provisions. As described above, subpart F denies the deferral benefit to certain types of income earned by foreign-chartered subsidiaries of U.S. firms. Absent this forgiveness for FSC, the requirement that FSCs be incorporated abroad and their devotion to sales income might place many FSCs within the purview of subpart F and negate the FSC benefit.

While the United States generally does not tax foreign corporations on foreign income, it does apply its taxes to their income that is "effectively connected" with the active conduct of a U.S. trade or business. The FSC provisions explicitly state that part of FSC income is not "effectively connected;" the EC maintained that this was a second exemption. The EC maintained that a third exemption was the availability of the 100% dividends-received deduction applicable to FSC dividend payments; ordinarily, dividend payments received from foreign corporations are not eligible for the deduction.

The United States maintained in its submission to the WTO panel that FSC is not an export subsidy. In doing so, it maintained that because the 1981 Understanding held that a country need not tax foreign economic processes, the FSC exemptions were countenanced by the Understanding. In addition, the United States argued that a footnote (footnote 59) to an illustrative list of subsidies contained in Annex I to the SCM agreement likewise established that foreign economic processes need not be taxed.

The panel's report generally supported the EC's complaint, finding that FSC is indeed an export subsidy in violation of the SCM agreement. According to the panel, the exemptions identified by the EC indeed established forgiveness of taxes that would be "otherwise due." The panel, however, did not pronounce on the applicability of each of the exemptions identified by the EC, finding instead that "Viewed as an integrated whole, the exemptions provided by the FSC scheme represent a systematic effort by the United States to exempt certain types of income which would be taxable in the absence of the FSC scheme."¹⁵

The WTO panel rejected the applicability of the 1981 Understanding to FSC, finding that "it cannot provide guidance in understanding detailed provisions of the SCM Agreement which did not exist at the time the understanding was adopted."¹⁶ The panel also rejected the argument that footnote 59 countenanced FSC, finding "nothing in footnote 59 which would lead us to conclude that a Member that decides that it will tax income arising from foreign economic processes does not forgo

¹⁵ World Trade Organization. United States – Tax Treatment for Foreign Sales Corporations. Report of the Panel. p. 275.

¹⁶ Ibid., p. 271.

revenue ‘otherwise due’ if it decides in a selective manner to exclude certain limited categories of such income from taxation.”¹⁷

As noted above, the EC also complained that FSC violated the WTO’s Agreement on Agriculture. More specifically, the EC maintained that FSC violated commitments made by the United States in the agreement to limit agricultural export subsidies. The panel also supported the EC’s complaint in this regard.¹⁸

The United States filed an appeal with the WTO’s Appellate Body, as permitted under the dispute resolution procedures. The Body’s decision on February 24, 2000 essentially upheld the panel’s findings.

Under the WTO’s dispute procedures, the United States initially had until October 1, 2000 to bring its system into compliance with the WTO rules. Failure to do so might ultimately result in the WTO sanctioning retaliatory measures by the EC against the United States.¹⁹ The United States and EU, however, agreed on an extension of the deadline to November 1.

Proposed Replacements for FSC

On May 2, 2000, U.S. Deputy Secretary of the Treasury Stuart Eizenstat met in London with European Trade Commissioner Pascal Lamy, and presented him with an outline of a proposed replacement for FSC. In general, the proposal would have replaced FSC with a tax benefit for export income of the same magnitude as FSC along with a tax exemption for income from a matching amount of goods produced abroad. It was on this added exemption for foreign-source income that the United States apparently based its argument that the proposal met WTO requirements. As noted above, the WTO panel ruled that FSC was not WTO-compliant because it provides a tax exemption that is contingent on exporting. In making the proposal, the United States maintained:

Specifically, as described above, by its terms, the proposed elective regime would apply both with respect to export foreign sales (involving U.S. manufacturing) and non-export foreign sales (involving foreign manufacturing). Thus, the proposed elective regime would not be export contingent in law.²⁰

¹⁷ Ibid., p. 273.

¹⁸ Ibid., p. 293.

¹⁹ Dispute Settlement in the World Trade Organization: An Overview. P. 5.

²⁰ BNA Daily Tax Report, May 2, 2000. P. L-10.

On May 29 the EU notified the United States that it would not accept the proposal.²¹ The Administration indicated that it would nonetheless work with Congress to enact a proposed replacement by the looming deadline.²²

H.R. 4986

In November, 2000, Congress approved (and the President signed) H.R. 4986, the FSC Repeal and Extraterritorial Income Exclusion Act of 2000. The measure was passed by a wide margin and received bipartisan support. The bill contains the essential elements (with a few differences) of the May proposal. Like the May proposal, the bill replaces the FSC benefit with a tax benefit of similar magnitude. Also like the May proposal (and unlike FSC), H.R. 4986 matches its tax benefit for exporting with a tax benefit for a like amount of income from foreign operations.²³ However, unlike both the May proposal and FSC, H.R. 4986 does not require a firm to sell its exports through a foreign-chartered corporation to qualify for the benefit.

H.R. 4986 begins by exempting “extraterritorial income” from U.S. tax, but continues by defining “extraterritorial income” and a chain of other concepts in a way that confines its exemption to a firm’s U.S. exports and a matching amount of income from foreign operations. The initial link in the chain of definitions is “qualifying foreign trade property,” which is generally products manufactured, produced, grown, or extracted within or outside the United States. Generally, this is the full range of U.S. exports, but the bill explicitly excludes the same items as FSC: certain intangibles, oil and gas, raw timber, prohibited exports, and property in short supply. Unlike FSC, however, military products would apparently qualify for the same benefit as other exports. And unlike the parallel FSC concept of export property, qualifying foreign trade property can be partly manufactured outside the United States. However, not more than 50% of the value of qualified property can be added outside the United States.

The next link in the chain is “foreign trading gross receipts,” which the bill defines as income from the sale or lease of qualifying foreign trade property, and which parallels the FSC concept of gross receipts. As with FSC, a firm would only be treated as earning foreign trading gross receipts if it conducts economic processes abroad. However, FSC’s foreign management requirements (see page 4, above) would be dropped.

The bill next defines “foreign trade income” as taxable income attributable to foreign trading gross receipts. The bill terms a specified part of this foreign trade income “qualifying foreign trade income,” and grants such income a tax exemption. The bill sets qualifying foreign trade income (and thus the exclusion) equal to either 1.2% of foreign trading gross receipts, 15% of foreign trade income, or 30% of the

²¹ Financial Times, May 30, 2000. P. 12.

²² BNA Daily Tax Report, May 31, 2000. P. GG-1.

²³ In contrast to H.R. 4986, however, the May proposal would have only applied to income from manufacturing. H.R. 4986 is also unlike the May proposal (and unlike FSC) in that it does not require firms to set up subsidiary sales corporations to use its tax benefit.

income attributable to the foreign economic processes undertaken under the foreign trading gross receipts requirements. (The rule exempting 30% of income is similar in its effect to the FSC rule that applies to firms that use arm's length pricing.) As with FSC and the May proposal before it, the arithmetic result of these rules is that a firm can exempt somewhere between 15% and 30% of qualified income from U.S. tax.²⁴

As noted above, in contrast to FSC, H.R. 4986 does not require a firm to sell its exports through a foreign-chartered corporation to qualify for the benefit. Since a U.S. corporation could qualify for the exemption directly, the special dividends-received deduction language in the FSC provisions is not necessary. The bill also contains language that a foreign corporation that uses the benefit can elect to be taxed like a U.S. corporation. This mechanism apparently rules out the application of Subpart F, which applies only to income earned by firms that are foreign corporations, for tax purposes.

The path of FSC legislation through Congress took a number of twists and turns. After the House approved H.R. 4986, the Senate Finance Committee approved the FSC-replacement bill on September 19. While the full Senate did not act on H.R. 4986 before the October 1 deadline, the EU agreed to an extension of the deadline to November 1. The Senate Finance version of the FSC replacement was slightly different than that of the House: the Senate bill denied a dividends-received deduction in cases where the tax-favored exports were sold through a subsidiary. On October 26, the House passed a modified version of its FSC provisions containing a compromise with the Senate version of the bill. The compromise was passed as part of a larger bill tax cut and small business bill (H.R. 2614).

However, President Clinton stated that he might veto H.R. 2614 for reasons not related to FSC, and the Senate did not act on H.R. 2614. Instead, on November 1 the Senate passed the FSC-replacement provisions as a stand-alone version of H.R. 4986. The Senate's version of H.R. 4986 was the same as the House-passed FSC provisions in H.R. 2614. They differed, however, from those in the House version of H.R. 4986, which contained the initial House provisions rather than the compromise version that was subsequently passed as part of H.R. 2614. The version of H.R. 4986 passed by the Senate therefore could not be sent to the President without additional House action. The House passed the new stand-alone bill on November 14 and the President signed it into law (P.L. 106-519).

The EU has stated it does not believe the new tax benefit to be WTO-compliant. It has asked the WTO to rule on whether the replacement provisions are WTO-compliant, and, if they are not, to authorize retaliatory tariffs.

²⁴ A firm can always choose to exempt 15% of income from tax. Alternatively, if its return on sales is sufficiently high, it could use the gross receipts method to exempt up to twice that amount from tax. The range of exemption, in other words, is 15%-30%.

Economic Effects of FSC

FSC's ultimate economic effects are probably: very small increases in both exports and imports, little if any change in the balance of trade, and a very small transfer of economic welfare from the United States abroad. We begin our analysis, however, by an assessment of the size of the tax incentive that FSC provides to exporters.

Size of the FSC Benefit

The FSC benefit produces its economic effects by reducing the rate of return before taxes required of investment in the export sector. With FSC, export investments can be undertaken that would otherwise have a return too low to be profitable. FSC thus attracts added investment to the export sector, and FSC's impact on trade and U.S. economic welfare follow as a result.

In looking at these effects, we first gauge the size of FSC's incentive to invest in the export sector. Exactly how much does FSC reduce the rate of return required of investment in the export sector? Tax economists use a particular type of effective tax rate – termed a “marginal” effective tax rate – that measures the incentive effect of taxes on investment. A marginal effective tax rate consists of the percentage by which taxes change the rate of return required of new (“marginal”) investment.

Table 2, below, presents marginal effective tax rates for corporate exporters without a tax benefit, and with the maximum and minimum FSC benefit (i.e., the 15% and 30% exemptions). Effective rates are presented for average FSC users in general, and for average manufacturing and non-manufacturing exporters. The effective tax rates show that the maximum FSC benefit cuts an exporter's tax burden by about one-quarter, or 8.7 percentage points. At minimum, FSC reduces tax burdens by 4 percentage points, or about one-tenth. The tax rates also show that the magnitude of the reduction in the tax burden on investment is relatively even across the different industries. An explanation of how the effective tax rates were calculated is presented in the appendix.

A second way of gauging the size of the FSC benefit is its revenue loss – its cost to the U.S. Treasury in terms of forgone tax collections. According to the most recent estimate by the Joint Committee on Taxation, the cost of FSC in terms of forgone tax revenues is \$2.7 billion for fiscal year 2000.²⁵

²⁵ U.S. Congress. Joint Committee on Taxation. Estimates of Federal Tax Expenditures for Fiscal Years 2000-2004. Washington, U.S. Government Printing Office. 1999. P. 15.

Table 1. Marginal Effective Tax Rates for Exporters using FSC

Product Class	No FSC Benefit	Maximum FSC Benefit	Minimum FSC Benefit
All Products	35.0%	27.3%	31.0%
Non-manufactured Goods	32.0	25.3	28.4
Manufactured Goods	35.4	27.6	31.4
Source: CRS calculations. See the appendix for methodology and assumptions.			

FSC's Impact on Trade and the Economy

Again, the FSC exemption reduces the rate of return required, before taxes, of investment in the export sector, and thus attracts investment to exporting. As a consequence, U.S. exports are probably higher than they would be without FSC. How much higher depends on the extent to which export supply increases in response to the tax benefit – that is, how much of the tax benefit U.S. suppliers pass on to foreign consumers as lower prices – and on how responsive foreign purchasers are to reduced prices for U.S. exports.

Beyond this effect, however, traditional economic analysis indicates that FSC produces a set of effects that are perhaps surprising to non-economists. First, because of theoretical exchange rate adjustments, the FSC-induced increase in exports is diminished, and the value of U.S. imports also are increased; sales of U.S. import-competing industries thus fall. Economic theory indicates that as a result, while FSC increases the overall dollar value of U.S. trade, it does not change the balance of trade – the value of imports minus the value of exports – or reduce the U.S. trade deficit.

The theoretical exchange rate adjustments work as follows: FSC increases foreign purchases of U.S. exports, but to buy the U.S. products, foreigners require more dollars. The increased demand for U.S. dollars drives up the price of the dollar in foreign exchange markets, making U.S. exports more expensive. This partly offsets the effect FSC has in increasing U.S. exports, but also makes imports to the United States cheaper, which causes U.S. imports to increase. The net result is a higher dollar value of both imports and exports, but no change in the overall balance of trade.

This result is perhaps better seen by stepping back from the exchange rate mechanisms and recognizing that when a country runs a trade deficit it is using more goods and services than it produces. To do so, it must necessarily borrow from abroad by importing more foreign investment than it exports. A country's trade deficit, in other words, is mirrored by deficit on capital account. And a country's trade balance changes only if the balance on capital account changes. Thus, if we

assume that FSC does not change the balance on capital account, it cannot change the trade balance.²⁶

Another effect of FSC is on U.S. economic welfare; traditional economic analysis indicates that FSC reduces overall U.S. economic welfare. FSC does so because as it increases U.S. exports, at least part its tax benefit is passed on to foreign consumers in the form of lower prices. This price reduction can be viewed as a transfer of economic welfare from U.S. taxpayers in general to foreign consumers.²⁷

These effects, however, are probably quite small. Table 2, below, presents CRS estimates based on FSC data for 1996 (the most recent available). According to the estimates, the quantity of U.S. exports is between 2-tenths of one percent and 4-tenths of one percent higher than they would be without the provision. (The maximum and minimum figures in the range depend on whether it is assumed firms received a 15% tax exemption from FSC or a 30% exemption.)²⁸ Based on figures for total exports in 1996, this range translates into an increase in the value of U.S. exports ranging from \$720 million to \$1.23 billion. The quantity of imports are an estimated 2-tenths of 1% to 4-tenths of 1% higher than they would be without FSC. The transfer of economic welfare from the United States to foreign consumers is an estimated \$1.18 billion to \$2.14 billion.²⁹ A detailed explanation of the method used in deriving these estimates is contained in the appendix.

²⁶ As discussed for fully below (see page 16), FSC may actually reduce U.S. flows of capital abroad. If so, FSC may have the effect of increasing the U.S. trade deficit.

²⁷ As noted above, FSC increases both imports and exports – the overall level of trade. If FSC were to operate in isolation, this increase in trade would reduce economic welfare in a second way by causing the U.S. economy to inefficiently specialize in the items it exports and under-produce goods that compete with items the country imports. But in view of other trade distortions that work in the opposite direction, it may be premature to conclude that FSC causes an efficiency loss.

²⁸ In its November, 1997, report on FSC, the Treasury Department estimated that in 1992, FSC increased exports by 3-tenths of 1 percent and imports by 2-tenths of 1 percent, thus agreeing with the estimates here in terms of the order of magnitude of FSC's effects. See: U.S. Department of the Treasury. The Operation and Effect of the Foreign Sales Corporation Legislation. July 1, 1992 to June 30, 1993. Washington, 1997. P. 15..

²⁹ At 1999 trade levels, the percentages work out to an \$830 million to \$1.42 billion increase in exports as well as imports, and a \$770 million to \$1.15 billion transfer of welfare abroad.

Table 2. FSC's Estimated Impact on Exports, Imports, and Economic Welfare

	Percent Change in the Quantity of Exports and Imports		Change in Dollar Amount (Based on the volume of 1996 trade flows; in billions)	
	15% Tax Exemption	30% Tax Exemption	15% Tax Exemption	30% Tax Exemption
U.S. Exports	0.24%	0.42%	\$0.72	\$1.23
U.S. Imports	0.17	0.29		
Shift of Economic Welfare from U.S. Abroad (As percent of exports)	0.08	0.13	\$0.66	\$1.15
Source: CRS estimates. See the appendix for details.				

Other Effects

The estimates above are simplified in that they do not take into account several other likely effects, including changes in capital flows between the United States and abroad, and changes in economic efficiency. It is doubtful, however, that consideration of these factors would change the qualitative results of the analysis or appreciably alter the quantitative results.

FSC may well reduce the flow of U.S. capital abroad, for the following reason: exports, by definition, can only be produced in the United States. It follows that a provision such as FSC that provides a tax benefit to export investment encourages U.S. firms to invest in the United States rather than abroad. And given that exports serve foreign markets it is possible that, if not for FSC, many FSC-using firms would operate abroad.

If it is the case, however, that FSC reduces the flow of capital abroad, the effect of the change would be to reduce U.S. exports and increase imports: the reduced demand by U.S. investors for foreign assets denominated in foreign currencies would drive up the price of the dollar in currency markets, making U.S. exports more expensive and imports cheaper. The magnitude of the change in investment flows, however, is likely quite small.

Another effect is that of FSC on economic efficiency. As described above, FSC increases the level of both U.S. imports and exports – in short, it increases the level at which the United States trades with the rest of the world. Taken alone, this effect would reduce the efficiency of the U.S. economy; FSC would be encouraging the United States to “over trade” – to over specialize in the production of the goods that

it exports. In isolation, this effect would add to FSC's reduction in economic welfare that stems from the transfer of the tax benefit to foreign consumers. But FSC does not, in fact, operate in isolation. It might be argued that FSC's increase in the overall level of trade mitigates a shrinkage in trade that results from what tariffs and non-tariff barriers are in place. It also might be argued, however, that the added taxes that are imposed to make up for FSC's revenue loss cause economic distortions and inefficiencies that make the net improvement in efficiency – if any – quite small.³⁰

Effects of FSC's Possible Replacement

As noted above, under H.R. 4986 firms could use FSC to exempt somewhere between 15% and 30% of export income from tax. For most exports, therefore, the benefit under the bill would be the same as under FSC. In the case of military sales, however, the maximum benefit would increase because the proposal does not contain FSC's language limiting the benefit for military property to 50% of the exemption.

Perhaps a more important difference in the effect of H.R. 4986 would stem from its extension to a certain amount of foreign-produced goods. A thorough analysis of the provision would require a full-blown discussion of the economics of investing abroad, and is beyond the scope of this report.

However, a few preliminary observations can still be made. First, regardless of how low H.R. 4986 might reduce U.S. tax on foreign-source income, where high foreign taxes apply they would at least neutralize any added U.S. incentive to invest in high-tax foreign countries. Second, as described above in the discussion of the U.S. tax structure (see page 2), U.S. tax on income earned by foreign-chartered subsidiaries is generally not subject to U.S. tax until it is repatriated to the United States parent firm as dividends; foreign-source income receives a deferral of U.S. tax as long as it is reinvested abroad. The deferral principle thus poses an incentive for U.S. firms to invest abroad in countries with low tax rates. In the case of investment originating in the United States (as opposed to reinvestment of foreign-source earnings) the magnitude of deferral's benefit and incentive to invest abroad is greater, the longer the income from the investment is expected to be reinvested abroad. For investment whose stay abroad is expected to be short, H.R. 4896 may increase the tax incentive to invest abroad beyond that posed by deferral.³¹

As described above (see page 17), changes in capital flows may induce changes in the trade balance. If H.R. 4896 does, indeed, increase U.S. investment abroad, it may have the additional effect of reducing the U.S. trade deficit.

³⁰ Calculations using rough estimates of the amount of capital in the export sector suggest that even if all FSC's efficiency changes produce welfare gains, those gains would be negligible – substantially less than \$1 billion per year.

³¹ Hartman has pointed out that for funds that are already abroad, the incentive to invest abroad does not depend on taxes that apply upon repatriation, and only on the tax rate on domestic investment versus foreign investment. The proposal would therefore apparently not affect the incentives faced by funds originating abroad.

The Joint Committee on Taxation has estimated that H.R. 4986 would reduce U.S. tax revenue by \$1.5 billion over 5 years.³² This revenue loss is in addition to the revenue that would be lost by retaining the FSC program.

Business Views

Support for FSC can be found in the business community. A possible reason for the divergence in business views from those of economists may be perspectives: economic analysis looks at the impact of FSC from the perspective of the economy as a whole, taking into account its full range of effects and adjustments in all markets. Supporters of the provision, however, are frequently businessmen whose exporting firms would likely face declining sales, profits, and employment if FSC were to be eliminated. For economists, there is no denying that FSC boosts employment and increases incomes in certain sectors of the economy, and that its repeal would cause short-term dislocation in those sectors. But FSC also results in contraction of other parts – for example, firms that compete with imports – and transfers economic welfare to foreign consumers.

The business community also generally supports H.R. 4986. The National Association of Manufacturers, for example, has endorsed the bill.³³

FSC and Value-Added Tax Rebates

FSC has occasionally been defended on the grounds that it counters subsidies provided to foreign producers by their own governments. A purported subsidy that is sometimes cited is the practice among European (and other) countries of rebating the value added taxes (VATs) that would otherwise apply to export sales. The rebates work as follows: under a VAT, tax is generally applied at each stage of production, to the value-added by that particular stage. When a firm in a VAT-imposing country makes an export sale, it receives a rebate of all the VAT that has been paid with respect to the good at every level of production. At the same time, when a VAT-imposing country imports an item, it generally applies its VAT to the full value of the import.

Economists have long held that such “border adjustments” do not distort trade and are in fact necessary if exported goods are to be part of the same relative price structure as other goods in the importing country.³⁴ A parallel might be drawn with sales taxes imposed by U.S. states, that apply to goods imported from other states but not to goods exported to other states. Like the border adjustments with VATs, these adjustments do not distort trade.

³² U.S. Congress. Joint Committee on Taxation. Estimated Revenue Effects of H.R. 4986. JCX-88-00. Washington, July 27, 2000.

³³ BNA Daily Tax Report, August 24, 2000. P. G-1.

³⁴ Krugman, Paul, and Martin Feldstein. International Trade Effects of Value-Added Taxation. Working Paper 3163. Cambridge, MA, 1989. National Bureau of Economic Research. 26 p.

Other Arguments

In recent decades, some economists (sometimes referred to as “new trade theorists”) have applied models of market imperfections to international trade and have concluded that in some cases, government intervention in trade might improve a country’s economic welfare. For example, in markets where only a few firms compete for profits, a “strategic trade policy” such as an export subsidy might shift profits from a foreign firm to a domestic one. Or, external economies such as knowledge spillovers might recommend a subsidy for the industry in which the economies occur. These policy prescriptions, however, have been met with considerable skepticism among trade economists for a variety of reasons. First, the theory that supports strategic trade is not robust – for it to work requires a variety of special assumptions. Second, a more appropriate way to address external economies that within a country’s own borders may be to apply a subsidy in the domestic economy rather than the international one. Third, as an empirical matter, cases where export subsidies can improve economic performance may well be quite limited. And finally, groups that can benefit from a subsidy may co-opt a subsidy that is initially well-targeted so that its aim ultimately fails.³⁵ Perhaps more importantly for FSC, even if developments in trade theory were to support export subsidies in certain circumstances, they likely do not support a broadly available benefit such as FSC as a structural and permanent part of the tax code.

Data on FSC Use

The most recent Internal Revenue Service FSC data are from 1992 and 1996. (Data for the intervening years have not been published.) Table 3, below, presents a selection of these data for FSCs and their parent firms, categorized by the principal product class into which the firms’ exports fall. The left part of the table shows gross export receipts of FSCs and their parents; the right part of the table shows income exempt from tax under the FSC provisions. In each case, the numbers are averaged for 1992 and 1996, and in each case the product classes within non-manufacturing and manufacturing, respectively, are arranged in order of size.

It is clear from the table that most FSC exports are manufactured products: manufactured products account for 87% of FSC-related gross export receipts and 87.5% of income exempted from tax under the FSC provisions. Within manufacturing, use of FSC appears to be concentrated within just a few product classes. The four largest product classes are: electrical machinery (including electronics components, radios, and televisions), non-electrical machinery (including engines and turbines and computers), transportation equipment (including autos and aircraft), and chemicals (including plastics and drugs). Together, these four categories account for about two-thirds of both FSC-related gross receipts and tax-exempt FSC income.

³⁵ For surveys of the literature on new trade theory, see: Baldwin, Robert E. Are Economists’ Traditional Trade Policy Views Still Valid? *Journal of Economic Literature*. V. 30. June, 1992. Pp. 804-29; Bhagwati, Jagdish. Free Trade: Old and New Challenges. *The Economic Journal*. V. 104. March, 1994. Pp. 231-46; and Krugman, Paul. Does the New Trade Theory Require a New Trade Policy? *World Economy*. V. 15. July, 1992. Pp. 423-41.

Table 3. Selected Internal Revenue Service FSC Data, 1992 and 1996

(Dollar Amounts in millions)

Product Class	Average Gross Receipts, 1992 and 1996	% of Total Receipts of all Product Classes	Product Class	Average Tax Exempt Income, 1992 and 1996	Percent of Total Tax Exempt Income, all Product Classes
All Products	\$219,077.8	100%	All Products	\$6,277.3	100%
Non-Manufactured Products	26,499.3	12.1	Non-Manufactured Products	758.7	12.1
Non-Agricultural Non-Manufactured Products	13,668.5	6.2	Non-Agricultural Products Non-Manufactured	553.0	8.8
Agricultural Products	12,830.8	5.9	Agricultural Products	205.8	3.3
Manufactured Products	191,383.9	87.4	Manufactured Products	5,491	87.5
Non-Electrical Machinery	41,024.3	18.7	Electrical Machinery	1,176.2	18.7
Transportation Equipment	35,028.7	16.0	Non-Electrical Machinery	1,100.4	17.5
Electrical Machinery	32,393.0	14.8	Chemicals	1,008.4	16.1
Chemicals	30,618.7	14.0	Transportation Equipment	791.2	12.6
Manuf. Products Not Included Elsewhere ^{a/}	24,410.8	11.1	Manuf. Products Not Included Elsewhere ^{a/}	739.5	11.8
Food & Kindred Products	11,603.8	5.3	Instruments	351.2	5.6
Instruments	10,528.0	4.8	Tobacco	269.8	4.3
Tobacco	7,171.9	3.3	Food & Kindred Products	220.3	3.5
Paper & Allied Products	5,903.3	2.7	Paper & Allied Products	115.2	1.8
Fabricated Metal	3,757.8	1.7	Fabricated Metal Products	88.4	1.4
Primary Metal Products	2,755.4	1.3	Lumber	84.0	1.3
Lumber	2,366.4	1.1	Primary Metal Products	51.4	1.0
Not Allocable	1,193.7	0.5	Not Allocable	27.3	0.4
^{a/} Includes: Rubber, textile mill products, stone, printing & publishing, furniture & fixtures, leather, apparel, petroleum refining, and misc. manufacturing. Except for "misc.manufacturing," each of these individual category accounted for less than 1% of gross receipts. Sources for raw data: U.S. Internal Revenue Service. <i>Statistics of Income (SOI) Bulletin</i> . Summer, 1997. p. 114-31; and <i>Statistics of Income (SOI) Bulletin</i> . Spring, 2000. P. 87-122.					

Appendix

Marginal Effective Tax Rates

In general, marginal effective tax rates for FSC were calculated using the well-known Hall-Jorgenson formula for the rental cost of capital and aggregated using Jane Gravelle's CRS capital stock model and data on FSC use, by product class.

The starting point for the calculation is formulation of an exporter's discount rate, which is the rate of return its stockholders and creditors require, after corporate taxes but before their own individual income taxes. The discount rate is a weighted average of that for debt and equity, as follows.

$$(1) \quad r = f \{i(1 - a^* u) - p^*\} + (1 - f)E$$

where r is the real aftertax discount rate, f is the share of investment financed with debt, i is the nominal interest rate, a^* is the portion of export income subject to tax (i.e., not exempted by the FSC provisions), u is the statutory corporate tax rate, p^* is the inflation rate, and E is the real return to equity. Values for the parameters were selected based on their observed long-run values and follow those used in the CRS capital stock model: f is set at .33, i is .11, a is either 1, .85, or .7. depending on the portion of FSC income that is assumed to be exempt, u is .35, p is .05, and E is .07. The following discount rates result from these parameters:

- ! No FSC exemption: .0538;
- ! FSC 15% exemption: .0558;
- ! FSC 30% exemption: .0577.

The Hall-Jorgenson rental cost expression is modified to incorporate FSC, as follows:

$$(2) \quad q = \int_0^{\infty} (1 - a^* u) c q e^{-(r+d)t} dt + a^* u z q \quad ;$$

where q is the acquisition cost of a depreciable asset, c is the rental cost of capital, d is the economic depreciation rate, and z is the present value of depreciation deductions claimed over the life of the asset. The expression states that firms will invest up to the point where the rate of return of a marginal investment is expected to produce a stream of revenue and tax deductions over its lifetime whose present value is equal to the asset's acquisition cost.

The rental cost is interpreted as the rate of return required of a marginal investment under this condition. Solving (2) for the rental cost produces:

$$(3) \quad c = \frac{(r + d)(1 - a^* u z)}{(1 - a^* u)}$$

Subtracting the economic depreciation rate from the rental cost produces the pretax rate of return, net of depreciation, that firms require of a marginal investment. The marginal effective tax is defined as the percentage increase taxes cause in a marginal investment's required rate of return, or, more precisely, the difference between the required pretax and the discount rate, divided by the pretax return:

$$(4) \quad u^* = \frac{(r^* - r)}{r^*},$$

where u^* is the marginal effective tax rate and r^* is the required pretax return.

The aggregate effective tax rates in table 1 of the text were calculated by first obtaining industry-by-industry pretax returns from the CRS capital stock model, then by weighting each industry's pretax return by its corresponding product's share of FSC gross receipts, as reported in the Spring, 2000 *Statistics of Income Bulletin*. The capital stock model integrates pretax returns for investment in inventory with returns for equipment and structures.

Impact on Exports and Imports

The impact of FSC on exports and imports was calculated by specifying the following equations:

$$(5) \quad X = X^n(p, e) + X^f(pa, e)$$

$$(6) \quad p(X^n + X^f) - \frac{M}{e} = 0$$

$$(7) \quad M = M(e)$$

X^n is U.S. non-FSC exports, X^f is FSC exports, p is the price of U.S. exports (in dollars), a is the subsidy from FSC, e is the exchange rate (in dollars/foreign currency), and M is U.S. imports. In our calculations, it was assumed that the entire FSC tax subsidy is passed on to foreign consumers as lower prices, so that:

$$\frac{dp}{da} = -1.$$

Equation (5) states that U.S. exports are a function of price and the exchange rates; equation (6) is the balance of payments constraint that specifies that the value of exports must equal the value of imports, and equation (7) states that U.S. imports are a function of the exchange rate. The model's partial derivatives are assumed to have the following signs:

$$\frac{dX}{dp} < 0, \frac{dX}{de} < 0, \frac{dX}{da} > 0, \frac{dM}{de} > 0.$$

Supply elasticities are assumed to be infinite, so all elasticities produced by solving the equations are interpreted as demand elasticities.

Solving the three equations simultaneously produces the following results:

$$(8) \quad \frac{dX}{X} = \frac{s^M s^X}{1 - s^X - s^M} \left(\frac{X^f}{X^{f+n}} \right)$$

$$(9) \quad \frac{dM}{M} = \frac{s^M s^X - s^M}{1 - s^X - s^M} \left(\frac{X^f}{X^{f+n}} \right),$$

where s^M is the elasticity of demand for imports and s^X is the elasticity of demand for exports. The equations are formulas for the percentage change in exports and imports for a 1-percent exogenous change in the price of exports. The percent change in the value of exports (and imports) is:

$$(10) \quad \frac{d(pX)}{pX} = \frac{dX}{X} - 1.$$

The change in welfare is the change in the quantity of net exports, expressed as a percentage of exports:

$$(11) \quad \frac{dX - dM}{dX}$$

Values for the share of exports sold by FSCs were calculated on a product-by-product basis based on unpublished IRS FSC data for 1996 in the Spring, 2000, issue of the *Statistics of Income Bulletin*. Export data by industry are at the International Trade Administration's web site: <http://www.ita.doc.gov/td/industry/otea/usfth/aggregate/H198t26.txt>. Demand elasticity values are taken from the Treasury Department's 1997 FSC report (p. 30).

The change in the price of exports was calculated based on the following the formula in 1986 CRS report by Jane Gravelle.³⁶

³⁶ U.S. Library of Congress. Congressional Research Service. Corporate Tax Reform and International Competitiveness. CRS Report 86-42E, by Jane G. Gravelle. Washington, 1986. P. 18.

$$(12) dP = (c^* - c) \frac{K}{VA}$$

where P is the price of a particular export good, c^* is the rental cost of capital with FSC and c is the rental cost without it. K is the stock of capital used in production of the good, and VA is the value added to the output by the particular industry. Equation (12) states that the change in price induced by FSC is equal to the change in the rental cost of capital times the ratio of capital to value-added.

The change in the rental cost under FSC was calculated on an industry-by-industry basis using the CRS capital stock model, as described above. Values were calculated assuming first a 15% exemption under FSC, then a 30% exemption.

Figures for value added on an industry basis were taken from Bureau of Economic Analysis (BEA) numbers published in the November, 1998 *Survey of Current Business* (p. 34). Values for fixed, private, nonresidential capital by industry were taken from figures published in the *Survey of Current Business* of September, 1998. The capital figures were inflated to include land and inventories based on estimates in: Jane Gravelle, *The Economic Effects of Taxing Capital Income*: Cambridge MA, MIT Press, 1994, p. 300. The figures were also each inflated by 11% to reflect an estimate of the share of intangible assets in the capital stock published in: Don Fullerton and Andrew B. Lyon, Tax Neutrality and Intangible Capital, in Lawrence Summers, ed., *Tax Policy and the Economy*, Vol. 2: Cambridge MA, National Bureau of Economic Research, 1988, p. 73.

The price changes calculated using the formulas in (8) through (10) were applied to the formulas in equations (4) through (6) on a product-by-product basis. They were aggregated based on each product's share of total U.S. exports, again using the International Trade Administration data cited above.