

Working Paper

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I. Introduction

Over the past fifteen years, countries around the world have embraced global markets. This has required a concomitant increase in commitments to policies to promote effective global competition. Within this context, many have questioned the long-standing practice of providing exemptions from national antitrust laws so that firms can cooperate in their export activities. Nine countries have eliminated such exemptions over the last decade (Levenstein and Suslow 2005, Table 3). This paper contributes to this discussion by providing an empirical analysis of the largest extant “export cartel” exemption policy, that offered by the United States’ Export Trading Company Act (1982).¹

The U.S. Congress passed the Export Trading Company Act (ETC Act) in 1982 in response to concern that American firms were at a disadvantage in international markets, especially relative to Japanese firms that were encouraged to cooperate by government agencies such as the Ministry of International Trade and Industry. At the time of the passage of the ETC Act, the United States already had legislation that offered exporters an antitrust exemption under the 1918 Webb-Pomerene Export Trade Act (WP Act). Like the WP Act, the ETC Act provides a limited immunity from U.S. antitrust laws to firms that engage in joint in export activities, while joint activity that affects the U.S. domestic market is still prohibited. Neither the ETC Act nor the WP Act provides any protection from foreign antitrust prosecution. While the WP Act remains law, the number of WP associations has fallen from thirty-nine in 1982 to only seven in 2005.² In contrast, 198 ETC exemption certificates were granted between the issuance of the first certificate on October 26, 1983 and May of 2006. Figures 1 and 2 show the cumulative number of ETCs from 1983 to 2004 (our

¹ We use the term “export cartel” for convenience to indicate a group of firms granted permission to engage in the types of activities known to cartels, such as fixing prices. This it is not meant to imply that all such export cartels or export associations are able to exercise market power.

² Victor (1992), p. 573, reports that “[b]y 1982, the year that the Foreign Trade Antitrust Improvements Act...and Export Trading Company Act...were enacted, only thirty-nine registered Webb associations existed...” As of May 2005 (the most recent data), only seven WP Associations remain: American Cotton Exporters Association, American Natural Soda Ash Corporation, American European Soda Ash Shipping Association, California Dried Fruit Export Association, Overseas Distribution Solutions, Paperboard Export Association of the United States, and Phosphate Chemicals Export Association. See <http://www.ftc.gov/os/statutes/webbpomerene/index.htm>.

sample period), and the number of ETCs granted each year, respectively. There are currently 78 active ETCs.³

There are two distinct issues raised by the controversy regarding export exemptions. First, do these exemptions actually lead to increases in the value of exports? Second, if they do increase exports, is this an increase in “mutually beneficial trade” or is it simply a transfer from the importing countries’ consumers to the exporting countries’ producers through the exercise of market power (as well as potentially creating a deadweight loss to society at large)? In other words, do these export exemptions facilitate the creation of “hard-core” cartels that have the ability to fix prices or allocate markets?⁴ Or, as has been argued, do they allow members to share the fixed costs of marketing, transportation, and finance necessary to participate in international markets, thereby increasing competition in international markets and giving global consumers more choices?⁵ Or, as others have concluded, do they have little or no impact at all?⁶

Small firms, especially in countries that have only a small share of the global market, are unlikely to be able to use export exemptions to exercise market power. Even export associations that are able to exercise market power may also share the fixed costs of exporting. As was argued by the U.S. representative at a meeting of the WTO’s Working Group on the Interaction between Trade and Competition Policy:⁷

...so-called “export cartels”... typically were conceived as mechanisms for domestic entities that lacked the resources to engage in effective export activity acting individually. As such, they often had pro-competitive effects in that they added additional players to the relevant markets and might bring innovation or lower prices. Moreover, they were not secret and therefore did not bear the hallmarks of what was traditionally considered to be a hardcore cartel.

³ Email correspondence with Jeffrey Anspacher, Director, Export Trading Company Affairs, U.S. Department of Commerce, May 26, 2006. ETCs can be revoked by the Department of Commerce or voluntarily relinquished by the companies involved, as explained in detail below.

⁴ The Organization for Economic Cooperation and Development (OECD) introduced the terminology “hard core cartels” in a 1998 report to refer to private cooperative agreements to set prices or allocate markets. OECD (1998), p. 3.

⁵ See, for example, Dick (1992), p. 90-91.

⁶ See, for example, Waller (1997).

⁷ WORLD TRADE ORG., REP. OF THE WORKING GROUP ON THE INTERACTION BETWEEN TRADE AND COMPETITION POLICY, W.T.O. Doc. WT/WGTCP/M21 (May 26, 2003) par. 37, p. 15.

The empirical task, then, is to provide an answer to a somewhat more nuanced version of the question posed above: do these exemptions increase exports, and if so, when and by whom?

Although many countries offer exemptions for export activity, either explicitly—such as Australia and Canada—or implicitly—as is the case for almost all members of the European Union—we focus in this article on the economic effects of ETCs granted by U.S. law.⁸ We do this for the simple reason that the U.S. is the only country for which we have been able to find data amenable to statistical analysis.⁹ In order to conduct even a relatively aggregate-level study of the effect on exports of granting exemptions for joint export activity, one needs to know the products produced by firms granted these exemptions. This information is publicly available in the U.S. for most ETCs in the *Federal Register*, where all ETC applications are published, as required by law.¹⁰ The U.S. experience is unique in many ways, and the results presented here may not be applicable to firms in smaller or less-developed countries. Still, as the only empirical analysis of the economic effects of contemporary export cartel exemptions, it provides useful statistical grounding for policy discussions.

We first survey the legal status of exemptions for export activity around the world and present the limited evidence that exists on the use of these exemptions by exporting firms. We then discuss the specific nature of the exemptions provided by the ETC Act (since they differ in several ways from the older WP Act). Then, in providing descriptive statistics on the 195 ETCs granted from 1983 through 2004, we attempt to give an accurate picture of the types of firms that apply for these certificates and the nature of the restrictions placed upon them by the Department of Commerce, which administers the ETC Act, and the Department of Justice, which reviews all applications. Regression analysis is used to analyze whether industries in which ETCs have been granted have higher growth in exports.

⁸ See Levenstein and Suslow (2005) for a discussion of the status of antitrust exemptions for exporters throughout the world, and the associated notification requirements.

⁹ See Levenstein and Suslow (2005), pp. 795-96 for a discussion of data available on export associations from competition agencies in other countries.

¹⁰ After the application is published in the *Federal Register*, there is a waiting period of ninety days during which the public is invited to comment.

We find that the real value of exports in manufacturing industry sectors with export cartel exemptions is higher than in comparable manufacturing industry sectors without an exemption. But this result is driven exclusively by the selection process among industries which elect to obtain ETC exemptions. Analysis of the impact of receiving an ETC exemption on exports, *controlling for the growth rate of exports in the industry*, shows that on average ETCs do not increase exports. In some estimates, the real value of exports actually falls after receiving an ETC. There are two possible explanations for this. One is that firms choose to obtain an ETC exemption when they are concerned that exports in the sector are going to fall. Receiving an ETC thus precedes this fall in exports, but does not cause it. The second possible explanation is that industries with ETCs can in fact exercise market power and the decline in the real value of exports reflects a strategic reduction in the quantity of goods exported. Given the predominance of ETCs in relatively unconcentrated industries we believe the former explanation is more plausible.

II. Global Trends in Export Exemptions

Of the fifty-five countries for which we have obtained information, seventeen provide explicit exemptions similar to those provided by the U.S. ETC Act (Levenstein and Suslow 2005, p. 800). Six of these countries require prior review (Australia, Israel, New Zealand, South Africa, Taiwan, and the U.S.), while others simply require notification and will review the nature of the cooperative export activities only if a question is raised about possible anti-competitive effects. As in the U.S., where trade associations can apply for an ETC, exemptions are sometimes provided to associations or groups of firms. In some countries, such as Australia and Israel, exemptions are provided for specific transactions, rather than the blanket exemptions granted for an indefinite period of time to U.S. ETCs.

Thirty-five countries have no explicit exemptions (e.g., Argentina, Belgium, Netherlands, Portugal, and Spain), but instead restrict their competition legislation to the domestic market, with no mention of behavior affecting foreign markets.¹¹ In doing so, these countries limit the scope of their antitrust law, and grant export exemptions by negative implication. The

¹¹ Levenstein and Suslow (2005), p. 805 (stated as “Most countries in our sample (64%), including almost all members of the EU, have implicit exemptions).

European Union is an example of this form of implicit exemption: firm behavior that lessens competition in foreign markets is simply not mentioned in the competition laws, while domestic price-fixing is explicitly prohibited.

In nine of the thirty-five countries that restrict their laws to the domestic market, this implicit exemption is a recent phenomenon. For example, Germany, Japan, and South Korea all had explicit exemptions until the late 1990s.¹² One drawback to this trend toward implicit exemption is that there is no reporting requirement covering cooperative activity for export, and therefore no oversight or information about the extent of any such activity.

Given this global patchwork of explicit and implicit exemptions, with some countries requiring notification and others not, it is impossible to determine how prevalent joint export activity is today. Historically, when explicit exemptions requiring notification were more common, the numbers were relatively high. For example, in 1972, Germany issued 227 export association exemptions and Japan issued 175.¹³ These years were typical until the mid- to late-1990s, when Germany and Japan began to work toward changing their laws; by 2000 both countries had eliminated such exemptions. In the U.S., however, we have had a consistent export exemption (or immunity) provision since 1982. We turn now to an overview of how the Export Trade Certificate of Review program functions.

III. The U.S. Export Trading Company Act of 1982

A. Implementation of ETC Act

Firms interested in obtaining an antitrust exemption for cooperative export activities from the United States must apply to the U.S. Department of Commerce for exemption under the ETC Act.¹⁴ In addition to the public notification in the *Federal Register*, the application is reviewed by the Department of Justice to ensure that there will be no anti-competitive

¹² Levenstein and Suslow (2005), pp. 806-811.

¹³ See Levenstein and Suslow (2005), Table 1.

¹⁴ Almost all ETCs apply to and receive their certification from the Department of Commerce. As discussed further below, a very small number of ETCs have been formed by financial institutions who have received certification from the Board of Governors of the Federal Reserve System.

spillover to the domestic market.¹⁵ If approved, an “Export Trade Certificate of Review” is issued. The firm or of group of firms receiving a Certificate is known as an ETC. This pre-certification review differs from the procedure for WP Associations, which simply registered themselves.¹⁶ In return for this additional scrutiny, an ETC Act exemption provides enhanced protection beyond that offered by the WP Act, including the following:¹⁷ (1) it shifts the burden of proof for a domestic antitrust claim to the complaining party; (2) it limits any civil damages awarded to single rather than the triple damages allowed by U.S. law; (3) it allows financial institutions to participate as members of an ETC; (4) it allows exporters of services as well as goods to receive exemptions; (5) it allows a single individual or firm to receive an exemption, rather than restricting it to associations of firms; (6) it allows ETCs to be engaged in domestic and foreign economic activity, rather than restricted exclusively to export trade; and (6) it is enforced and promoted by the Department of Commerce, rather than the Federal Trade Commission. In comparison to the implicit exemptions favored by numerous countries, as discussed above, the ETC Act provides stronger protection should the firms’ joint export actions adversely affect competition in the domestic market.

An ETC exemption is granted for an indefinite period of time, provided that the ETC files an annual report with the Department of Commerce. From 1983 to 2004, 195 ETCs were granted. Figure 1 shows that a large number of ETCs were granted immediately after the passage of the ETC Act, followed by a tapering off of applications. Forty-two ETCs have been revoked over the years for failure to file an annual report and seventy-eight have been voluntarily relinquished, leaving seventy-eight ETCs still in existence in 2006.¹⁸ Although

¹⁵ “The Secretary of Commerce may not issue a certificate until the Attorney General agrees that [certain] standards are met. The Secretary must publish notice of the application in the *Federal Register* and must act within ninety days of receiving the application.” Waller (1997), p. 9-46. These standards cover whether there might be a restraint of trade within the U.S. and/or whether granting the export trade certificate might “constitute unfair methods of competition” against competitors who are not part of the ETC but also export from the United States.

¹⁶ Nye (1993), p. 310.

¹⁷ See Lacy (1987), p. 177-186, for a more comprehensive summary of the differences between the WP Act and the ETC Act.

¹⁸ Note that thirty-seven ETCs have been revoked from 1983 to 2004, which is our sample period, but an additional five were revoked in 2006. The figure of 78 ETCs still in existence comes from an e-mail correspondence with Jeffrey Anspacher, Director, Export Trading Company Affairs, U.S. Department of Commerce, May 26, 2006.

the authority exists to revoke an ETC for violation of its terms (other than not filing an annual report), this has never occurred.

The ETC Certificate delimits the scope of the exemption provided to the ETC and its members. The Certificate specifies the geographic region where joint export activity is permitted, the products covered by the Certificate, and the nature of activities in which the ETC is permitted to engage. In some cases, these specifications are very general and permissive (e.g. “all parts of the world, except the United States” and “all products”), but in other cases they are very specific (e.g., exports are limited to “Japan” or “fresh cultivated blueberries”). An example illustrates the general nature of ETCs and the kinds of activities in which they are given permission to engage. The ETC granted to the U.S. Textile Export Company (TEXPORT) in August 1995 had the following features (among others):

- 13 members
- Products: “Broadwoven fabric, cotton (SIC 2211); Broadwoven fabric, man-made fiber (SIC 2221); Broadwoven fabric, wool (SIC 2231); Narrow woven fabric and other small wares (SIC 2258); Finishers of broadwoven fabric of cotton (SIC 2261); Finishers of broadwoven fabrics of man-made fiber (SIC 2262); Nonwoven fabrics (SIC 2297).”
- Export market: “The export markets include all parts of the world except the United States (the fifty states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands.)”
- Export Trade Activities and Methods of Operation: “Solicit orders from foreign customers”; “Arrange for transportation of merchandise sold from Members’ plants and warehouses, etc. to customers’ premises”; arrange for financing and customs clearance; conduct market research; quote prices to potential customers from Members’ price lists.

- Allowed information exchange including the following, among other provisions: Members may exchange and discuss information “that is already generally available to the trade or public”; “Information about sales or marketing efforts in Export Markets, pricing in Export Markets; projected demand in Export Markets”; “Information about export prices, quality, quantity; source, and delivery dates of Products available from Members for export”; “Information about joint bidding, selling, or servicing arrangements in Export Markets and allocation of sales resulting therefrom among the Members.”
- Terms and Conditions of Certificate include the following, among other provisions: neither TEXPORT nor any Member shall disclose any information “that is about its or any other Member’s costs, production, capacity, inventories, domestic prices, domestic sales, domestic orders, terms of domestic marketing or sale, or U.S. business plans, strategies, or methods, unless (i) such information is already generally available to the trade or public; or (ii) the information disclosed is a necessary term or condition (e.g., price, time required to fill an order, etc.) of an actual or potential bona fide sale and the disclosure is limited to the prospective purchasing Member.”

This example illustrates many of the “boilerplate” specifications that appear in almost all Certificates, but there is quite a bit of variety across Certificates as well. For example, most, but not all, Certificates list individual members and individual products. Most Certificates allow members to fix prices, but some do not. Most ETCs are allowed to coordinate their export activities in all parts of the world except the U.S., but others specifically exclude Canada and Mexico or specifically include the Middle East and Africa. We will discuss more detailed features of the ETCs below.

B. Antitrust Challenges to ETCs

Only one ETC has been challenged in U.S. courts, but the challenge failed on appeal in 1987.¹⁹ Internationally, there have been several challenges to Webb-Pomerene associations,

¹⁹ The Chlor/Alkali Producers International ETC was granted in January 1985 and challenged by Horizons International in 1986. Four chemical companies formed the ETC: B.F. Goodrich Company, Kaiser Aluminum

but none (to our knowledge) to ETCs.²⁰ The most famous Webb-Pomerene challenge by a foreign authority was the 1988 *Wood Pulp* decision by the European Court of Justice.²¹ The members of the Wood Pulp WP Association argued that the European Union had no jurisdiction and that the antitrust exemption granted them by the United States implied that their activities were also legal under EU law. Both of these arguments were rejected.²² The American Natural Soda Ash Corporation (“ANSAC”), a WP association formed in 1983, has also fought legal battles with antitrust authorities in the European Union, India, South Africa, and Venezuela.²³ ANSAC’s reformulation as the American-European Soda Ash Shipping Association (“AESASA”) satisfied the European Commission’s exemption requirements, but ANSAC has generally been unsuccessful in convincing any competition authority that the efficiency benefits of the association outweigh the potential for exercising market power.

More recently, there has been a broad investigation by the Irish Competition Authority of the few lingering WP associations.²⁴ When the investigation began in 2003, there were eleven WP associations, but now only seven remain. Several of the associations singled out for special concern by the Irish authority have disbanded in the intervening years “or have given commitments to the EU or the Irish authorities that they are not involved in cartel activities in the relevant area.”²⁵

and Chemical, Occidental Chemical Corporation, and Vulcan Materials Company. Their ETC covered the export of caustic soda and chlorine. The certificate also stated that this ETC may “refuse to quote prices for, or to market or sell, caustic soda and chlorine to its or its members’ competitors in the Export Markets.” Horizons, a broker of caustic soda on international markets, sued the Departments of Commerce and Justice in 1986. It won initially, but then lost on appeal. (See Lacy 1987, p. 193)

²⁰ This is confirmed in testimony by John J. Sullivan, U.S. Department of Commerce, before the Antitrust Modernization Committee in public hearings on “Statutory Immunities and Exemptions” held on December 1, 2005. He states that “there has never been a successful antitrust challenge to export conduct covered by a Certificate of Review either in the United States or, to the best of our knowledge, anywhere else in the world.” (p. 8). The transcript of this hearing is available at: http://www.amc.gov/commission_hearings.htm.

²¹ See *Åhlström v. Commission*, 1988 European Court Reports 5193. Domestically, there have been occasional challenges and investigations of Webb-Pomerene associations, some by the Federal Trade Commission and some by the Department of Justice, primarily in the 1940s and 1950s. See Waller (1997), pp. 9-31 to 9-33.

²² For a brief summary of the case and the issues involved, see Sugden (2002), pp. 22-23.

²³ See Bhattacharjea (2004), pp. 340-47.

²⁴ Keena (2005).

²⁵ Keena (2005), p. 16.

IV. Previous Research on the Economic Impact of U.S. Export Exemptions

Most prior research on the impact of the antitrust exemptions offered to exporters by the U.S. government, including analyses of both the Webb-Pomerene Act and the Export Trading Company Act, has concluded that these exemptions had little impact on either competition or trade. Only a small number of exemptions have been issued, and, it is often argued, they have done little either to promote exports or impede competition in international markets. Several government reviews over the course of the twentieth century questioned the effectiveness of the WP Act.²⁶ The first comprehensive review was undertaken in 1929, concluding, “While extravagant expectations of some erstwhile proponents have not been realized, the harmful consequences feared by its opponents have also failed to come true.”²⁷ Later reports were significantly harsher in tone, but they had similar qualitative conclusions, as reported in a 1967 study by the Federal Trade Commission (FTC):²⁸

The full expectations of the Webb Act’s proponents have not been realized over the half century since its passage. The hope that with antitrust exemption hundreds of associations would be formed to serve as joint selling agents for small firm exports remains but a vision. During the period 1918-65, a total of 176 associations were properly registered with the Federal Trade Commission; of these, only 130 ever functioned in a way to assist U.S. exports...

The FTC found that approximately one-third of all registered associations functioned for five years or less, and that WP-assisted exports were at most 2.4 percent of total U.S. exports.²⁹ The difficulty in measuring whether an export association actually functions “to assist U.S. exports” is of great significance, both for assessing the effects on the WP Act and the ETC Act. A 1978 FTC study focused on this problem, stating at the outset of their report that “[i]nadequate data has shown up as a glaring deficiency of most assessments of the Webb-Pomerene Act.”³⁰ The authors of the 1978 FTC study used a survey designed to

²⁶ Federal Trade Commission (1967, 1978). Earlier government reviews were done in 1929 and 1946, and independent reviews were conducted as well (see Federal Trade Commission, 1967, pp. 8, 11-12 for references).

²⁷ Federal Trade Commission (1967), p. 8.

²⁸ Federal Trade Commission (1967), p. 23

²⁹ Federal Trade Commission (1967), pp. 24, 36.

³⁰ Federal Trade Commission (1978), p. 2.

carefully account for exports that were *directly assisted* by Webb-Pomerene exemptions from antitrust laws. Their goal was to distinguish these exports from those where an association of firms was not required (that is, exports made by an individual firm, acting independently, even though that firm happened to be a part of a WP association). The FTC found that “assisted exports” were only 1.5 percent of total U.S. exports in 1976.³¹ With such a limited embrace by businesses, it is difficult to imagine that the benefits of the WP Act outweighed the administrative costs and the potential risk of anti-competitive spillovers to the domestic economy.

Empirical research by Andrew Dick (1992, 1996) provides the only rigorous statistical analysis of the impact of WP associations. Between 1920 and 1965, Webb-Pomerene price-fixing agreements appear to be “more common where the industry had a large export market share, buyers were un-concentrated, and entry was slow.”³² Overall, his judgment is that the primary purpose of WP Associations was to facilitate the marketing of exports, with only a small minority exercising market power. Half of the associations had no significant impact on the quantity or price of exports.³³

Economic analysis of the ETC Act – as opposed to legal research and commentary – is sparse. This is partly for the same reason that there is limited research on the WP Act: inadequate data. Although ETCs must file annual reports with the Department of Commerce in order to maintain their exemption, these reports are confidential and exempt from the Freedom of Information Act. Two early articles on the ETC Act’s effectiveness came from insiders: James Lacy, former director of Office of Export Trading Company Affairs, and William Nye, an economist at the Antitrust Division of the Department of Justice. Lacy (1987) estimated that, as of the end of 1986, total export sales by fifty-four active ETCs were \$305.5 million.³⁴ He claims that the ETC Act had succeeded in increasing exports, but he acknowledges the difficulty in estimating the value of exports truly facilitated by the ETC Act.

³¹ Federal Trade Commission (1978), p. 15.

³² Dick (1996), p. 214

³³ Dick (1992), p. 93.

³⁴ Lacy (1987), p. 181.

Nye (1993) uses a 1983-87 sample covering sixty-three ETCs. He reports that in 1986, ETC exports were \$265 million, or “one-tenth of one percent of U.S. merchandise exports in 1986.”³⁵ Nye, who was able to survey the confidential annual report data filed by ETCs, draws several interesting conclusions. First, he finds that 14 of the 63 ETCs in his sample were certified to set price abroad.³⁶ Of these 14 ETCs, there were 9 that had more than one member firm, and thus may have “had some intent of exercising market power overseas.”³⁷ Also, he finds that in at least one-third of his sample ETC member firms exported independently of the ETC.³⁸ He speculates that economies of scale in exporting can not therefore be the most important motive for ETC formation. He concludes that protection from vertical antitrust suits appears to be the primary motivation³⁹. It is interesting to note, however, that Nye finds a skewed distribution in ETC exports. Drawing on the confidential annual reports of individual ETCs, he determines that seventeen of the “active” ETCs reported no exports at all. More notably, the largest four ETCs accounted for 78 percent of all ETC exports and the largest nine ETCs accounted for 93 percent of all ETC exports.⁴⁰

Several years further into the implementation of the ETC Act, Spencer Weber Waller (1992, 1997) analyzed the limited publicly available data on ETCs and came to a very different conclusion from that reached by Nye and Lacy. He characterizes the response of the business community to the ETC program as “mediocre,” arguing that the following factors all contributed to a lack of interest in the exemption offered by the ETC Act: the dramatic appreciation of the dollar in the 1980s, the fear of disclosing confidential business information in the certification process, and the lack of precedent in interpreting the promised antitrust immunity.⁴¹ Although Congress anticipated that over 20,000 firms would take advantage of the ETC exemption, Waller cites data indicating that until trade associations were recruited by the Department of Commerce to form ETCs, the number of participating firms was very small. In 1987 only 307 firms were members of an ETC; in the early 1990s, that number

³⁵ Nye (1993), p. 311.

³⁶ Nye (1993), p. 314.

³⁷ Nye (1993), p. 314.

³⁸ Nye (1993), p. 315

³⁹ Nye (1993), pp. 316-317.

⁴⁰ Nye (1993), p. 311. Jeffrey Anspacher, Director, Export Trading Company Affairs, U.S. Department of Commerce, states that this is still approximately true today, although the percentage of exports accounted for by the top four ETCs is not quite as large as it was in the late 1980s. (Phone conversation, June 5, 2006.)

⁴¹ Waller (1992), pp. 246-47.

grew to 4,200 with the addition of numerous trade associations.⁴² By 2006, the number of companies participating in the 78 extant ETCs had fallen to 3000.⁴³

Waller's conclusions about the impact of the ETC Act parallel those of Dick (1996). Waller is not concerned that the ETC program *creates* market power or barriers to entry. The ETC Act "[permits] an industry, as a matter of U.S. law, to collusively exploit such market power abroad if it already exists. The history of the Webb-Pomerene Act suggests that few export associations will have sufficient global market power to exploit foreign markets."⁴⁴ However, his analysis suggests that the majority of ETCs are not horizontal associations; they are either vertical associations or simply downstream distributors.⁴⁵ Thus he concludes that the impact of the ETC Act is negligible, both in encouraging exports and in facilitating the exercise of market power.

V. ETC Sample and Characteristics

A. The Sample

We have assembled a data set of 195 ETCs – all those created from when the first certificate was granted in 1983 through the end of 2004. The data draw on information published in the *Federal Register* when the ETC is issued. The mean number of members in an ETC is seventeen, but the median is only five.⁴⁶ The large difference in the mean and median arises because of three ETCs that had between 120 and 320 members. The modal number of members is one: roughly 20 percent of ETCs have only one member. This comports with Waller's evaluation of ETCs, which concluded that "the majority of the ETCs have been export intermediaries, export facilitators, or export service providers that do not even function as horizontal agreements between competitors, let alone function as export cartels. These types of ETCs typically seek certification to enter exclusive or nonexclusive

⁴² See Waller (1992), p. 247 for the "20,000 firms" forecast from Congress and the "4,200" figure for the number of ETC members. See Waller (1997), pp. 9-54 and 9-55 for the discussion of trade associations and the "307 firms" figure.

⁴³ Testimony by John J. Sullivan, U.S. Department of Commerce, before the Antitrust Modernization Committee in public hearings on "Statutory Immunities and Exemptions" held on December 1, 2005, p. 10.

⁴⁴ Waller (1992), p. 251.

⁴⁵ *Id.*, pp. 251-252.

⁴⁶ This estimate is based on only half the ETCs: 93 ETC certificates do not state the number of members in the association. We also exclude the National Tooling & Machining Association ETC from our calculation of the mean. It is an extreme outlier with thousands of members.

vertical arrangements to represent or sell one or more of its customers' products in export markets."⁴⁷

ETCs are typically granted for the export of specific products. We would like to know the quantity of these goods exported by ETCs, and ideally we would like to compare the amounts exported to what the member firms would have exported absent the ETC exemption. Because we do not have access to the confidential export information reported by the ETCs – let alone to counterfactual information regarding their exports without the ETC – we instead examine changes in the actual value of exports from the United States in the product categories in which ETCs are permitted to export. Specifically, we collect data on exports organized into 6-digit NAICS categories (the North American Industrial Classification System). As an example of the level of disaggregation of a 6-digit NAICS product category, consider the ETC granted in 1983 to International Trailer Sales, Inc. The products covered in this ETC are “commercial trailers for construction, heavy equipment and other hauling, truck tractors, and parts and supplies therefor.” The 2-digit NAICS category that these products fall in would be “Manufacturing”; the three digit category is “Machinery Manufacturing”; the four-digit category is “Agriculture, Construction, and Mining Machinery Manufacturing”; and the 6-digit category that we assign is 333120, which is “Construction Machinery Manufacturing.”

Of the 195 ETCs granted from 1983-2004, we were able to link 106 ETCs to specific manufacturing NAICS categories. There are several reasons for the drop in sample size. Some export certificates do not restrict the products that the ETC can export: for example, NYVZ Import and Export, Inc. is permitted to export “all products” and Hammerl-Davis International, Inc. has permission to export “all industrial and consumer products.” Other ETCs are “restricted” to such a vast array of products that it is meaningless to code them. For example, the International Development Institute may export “Goods . . . In the areas of: (a) Agriculture; (b) Agribusiness; (c) Construction and mining; (d) Consumer products; (e) Education; (f) Energy; (g) Fiber processing; (h) Fishing; (i) Food processing; (j) Food storage and handling; (k) Forestry and lumber; (l) Office furniture, equipment, and supplies; (m) Health and medicine; (n) Household durables; (o) Housing; (p) Sanitation; and (q) Transportation.” In some cases, ETCs have permission to export services for which we do not

⁴⁷ Waller (1992), pp. 251-52.

have export data (e.g., Intex’s certificate covers “consulting engineering service” and Marine Midland Trade’s certificate covers “all services”). We also eliminate from our sample ETCs that exclusively export agricultural products because it was not possible to obtain many of the other relevant variables necessary for analysis. In particular, we do not have industry-specific exchange rates for agriculture, nor do we have a measure of market concentration consistent with the manufacturing data.

Many ETCs have permission to export products that fall into multiple NAICS codes; that is, they export more than one type of product. Conversely, several NAICS categories have more than one ETC operating in them. Table 1 shows the sectoral distribution of all 195 ETCs: a quarter of ETCs export agricultural products and almost 90% export manufacturing goods. A very small number are engaged in publishing, mining, and construction. A more detailed breakdown is given in Table 2, showing the distribution of ETCs among manufacturing NAICS categories. There are 106 ETCs for which we were able to identify specific products, exporting in 90 different NAICS categories. One quarter of all 6-digit NAICS manufacturing categories included an ETC in at least one year. The industries in which ETCs most frequently appear are tobacco, lumber, electronic equipment, food, chemicals, and textiles.

Despite the innovation in the ETC Act expanding the WP Act exemption to cover services and finance, there are very few such ETCs. Bank-owned ETCs are permitted under the ETC Act, governed by special rules, and bank holding companies can apply to their Federal Reserve Bank for an ETC.⁴⁸ ETCs issued by the Federal Reserve are not published in the *Federal Register* (the source of our data), and therefore we do not include them in our sample. In Nye’s survey of 78 applications for an ETC before May 1987, he found that “a number of” bank ETCs had registered with the Federal Reserve, but “only one has thus far sought the antitrust protection of an Export Certificate of Review.”⁴⁹ A 1993 event study, examining the initial wealth effects of bank ETC formations, compiled a sample of only fifteen banks that

⁴⁸ “Title II of the 1982 Act amended the Bank Holding Company Act of 1950 to permit bank holding companies, bankers’ banks and Edge Act corporations to participate in organizing ETCs and to acquire shares of an ETC...” (Nye 1993, p. 321).

⁴⁹ Nye (1993), p. 310.

announced their intentions to form ETCs for the years 1982-1991.⁵⁰ The situation has not changed substantially in the intervening years. As of April 2005, there were at most three bank-owned ETCs in the country.⁵¹

B. Selected ETC Characteristics

1. Price Fixing

Of central interest to evaluating the impact of ETCs are the dual issues of whether ETCs are legally permitted to fix prices, and whether ETCs have the necessary market power to take advantage of this exemption in a manner that harms consumers. The latter question is incorporated into our empirical analysis below. Here we examine more closely what “fixing prices” means in the context of an Export Trade Certificate of Review.

The vast majority of all Certificates – 141 out of 195 – explicitly allow the ETC members to fix prices. Among ETCs included in our regression sample, 80 out of 106 are granted the right to set prices. Certificates are extraordinarily detailed in specifying the conditions under which firms in an export association may fix prices. We treat all of the following language as providing the ETC with explicit permission to fix prices:

- “may negotiate and agree on the terms ... including ... the price to be bid”
- “may enter into agreements... that contain price... restrictions”
- permitted to “discuss method for setting export prices”

In some cases the permission to set prices is qualified. For example, one certificate provides that the ETC may “[e]stablish export prices ...with each Member being *free to deviate* from such prices by whatever amount it sees fit” (emphasis added).⁵² Waller (1992) analyzes the type of price-fixing each ETC is permitted. He finds that slightly more than half

⁵⁰ Kryzanowski and Ursel (1993, p. 379) find that “[a]nnouncements of ETC formations by U.S. banks caused significant (negative) stock price reaction with no evidence of risk increases. These results suggest that the market believed that involvement of U.S. banks in ETCs would not be value-enhancing.”

⁵¹ Phone communication with Bank Applications at the Federal Reserve Bank of New York, April 2005. Federal Reserve data indicate that there are currently two reporting organizations that are ETCs. However, there is a third organization, still in existence, which was previously considered an ETC, but apparently no longer operates as one.

⁵² ETC granted to “Construction Industry Manufacturers Association,” announced in the *Federal Register* on June 12, 1989.

of the ETCs through 1990 sought certification for “the full range of price setting, production restriction, and policing powers normally associated with cartel behavior” (p. 252). We count all of the categories listed above (including the ETCs that are “free to deviate” from ETC-set prices) as a form of price fixing. Using these criteria, a little over a quarter of all ETCs do not have permission to fix prices. In some cases, the Certificate makes no mention of price fixing. In others, the language is sufficiently restrictive that we deem it *not* to provide permission to fix prices. Examples of this more restrictive language include:

- “may...[c]ontact individual suppliers to elicit information relating to sales of products and services in the Export Markets, including price, volume, and estimated delivery schedules.”⁵³
- “Provide to suppliers on an individual basis information on specific solicitation (including price...)”⁵⁴
- “Invite suppliers to provide independent price quotations”⁵⁵
- “collect information on the Export Markets to assist Members in determining the market price”⁵⁶

In almost all cases, explicit permission to fix price is accompanied by an explicit restriction on sharing of information on costs or other restrictions that are designed to limit anti-competitive spillovers in the domestic market.

2. Prior experience with Webb-Pomerene Associations

It is possible that an ETC might be more successful if some or all of its member firms had prior experience participating in Webb-Pomerene Associations. In order to test this hypothesis, we have matched the member firms in WP associations from the 1930s to 2004 with the names of ETC member firms. There is a very small overlap: only 12 of the 195 ETCs over the sample period previously participated in 10 WP associations, and only 8 of the 106 ETCs in the regression sample were previously members of 7 WP associations. In one

⁵³ ETC granted to “Michael Mace d/b/a Mutual Trade Services,” announced in the *Federal Register* on April 6, 1988.

⁵⁴ ETC granted to “Global Marketing Associates, Inc.,” announced in the *Federal Register* on August 29, 1988.

⁵⁵ ETC granted to “Sun International Trading, Ltd.,” announced in the *Federal Register* on June 7, 1989.

⁵⁶ ETC granted to “Northwest Blueberries USA, Inc.,” announced in the *Federal Register* on Nov. 9, 1993.

such case, the Corn Refiners Association was granted an ETC in December 2002, with members including such firms as A.E. Staley Manufacturing Company, Archer Daniels Midland Company, Cargill, Inc., Corn Products International, Inc., and National Starch and Chemical Company. ADM and A.E. Staley were members of a WP association registered in 1958, known as the “Vegetable Oil Export Corporation”; Cargill was a member of the WP “Tri-State Export Corporation” registered in 1960 and continuing into the early 1990s. We discuss the relationship between prior experience with Webb-Pomerene Associations and the ability to exercise market power (or not) in our results section below, but this example does highlight the fact that ETC exemptions are not used exclusively by small firms needing to cooperate to overcome the hurdles of participating in international markets.

VI. Economic Impact of the ETC Act

A. Empirical Specification

We expect a country’s exports to be a function of global economic activity and relative prices (reflected in exchange rates).⁵⁷ We estimate the determinants of the real value of U.S. manufacturing exports, disaggregated to the 6-digit NAICS level, from 1978 to 2004. We begin the sample in 1978 in order to control for trends in exports prior to the passage of the ETC Act and the granting of the first ETC exemptions.

We include in these estimates a dummy variable indicating whether an ETC had permission to export in the 6-digit NAICS product group. If an ETC allows firms to overcome fixed costs associated with exporting, permitting joint activity among firms in the sector should increase exports, all else equal. If, on the other hand, ETCs facilitate the exercise of market power in foreign markets, receiving an ETC has an ambiguous impact on the value of total exports. In this case we would expect the quantity of exports to fall and the price to rise. To the extent that our measure of the *real* value of exports controls for changes in price – because the nominal value of exports has been adjusted by an overall export price index – we would expect the total value of exports to fall in industries where the ETC can

⁵⁷ For a survey of the theory of foreign trade, as well as an extensive survey of the empirical work and econometric issues, see Goldstein and Khan (1985) and Bayoumi (1999).

exercise monopoly power.⁵⁸ However, our price index is much more aggregate than are the products affected by ETCs; any increases in prices of specific ETC products are likely to be masked by the large number of other products in the price index. Thus, the effect on the *total value* of exports depends on the elasticity of demand. If ETCs operate in industries with elastic demand, or are effective enough to raise price to the elastic region of demand, then we would expect to see declines in total revenue. If ETCs operate in industries with inelastic demand or are unable to raise the price to close to the monopoly level, then the total value of ETC exports would increase even though the quantity of exports had fallen.

We follow the standard trade literature in our specification of the demand for U.S. exports (Krugman and Baldwin 1987, Sawyer and Sprinkle 1996, Bahmani-Oskooee and Ardalani 2006). We posit an export demand function in which the value of real exports in each NAICS product group in each year is a function of non-US GDP and an industry-specific exchange rate index. A measure of industry concentration is included to capture differences in the degree of price setting ability by the firms granted an ETC. While ideally we would like to include global industry concentration, data limitations force us to use as a proxy concentration in the U.S. market as measured by the industry (6-digit NAICS) Herfindahl Hirschman Index of industry concentration (HHI). In order to capture the impact of the ETC exemption and the potential variation in the impact of this exemption in different industries, we include two additional variables: a dummy variable indicating whether an ETC Certificate has been granted for the industry, and an interaction term between this dummy variable and the HHI.

The Federal Register reports the years in which each ETC is granted, and, if applicable, the year in which it is revoked. The average duration of revoked ETCs is seven years. The Federal Register does not report when or if a given ETC is voluntarily relinquished. Using information provided by the Department of Commerce we have calculated that 42% of ETCs have been relinquished. The average duration of voluntarily relinquished ETCs is eight years. In our empirical specification below we consider a NAICS to have an “active” ETC in the first seven years after an ETC Certificate was issued. Because we expect an ETC to have its greatest impact in the first few years after the ETC has been issued, in some specifications we

⁵⁸ See Data Appendix for description of export data and the export price index used to deflate the export data.

allow the impact of the ETC to diminish over time. In other specifications, we examine differences in differences, using industry fixed effects to control for industry-specific trends in exports that are distinguishable from the specific impact of receiving an ETC exemption.

We begin by estimating the following equation for the determination of export growth:

$$\begin{aligned} \text{Ln Exports} = & \beta_1 + \beta_2 \text{Ln(Non-US GDP)} + \beta_3 \text{Ln(Exchange Rate)} + \beta_4 \text{ETC} + \beta_5 \text{HHI} \\ & + \beta_6 \text{ETC*HHI} + \beta_7 \text{Industry} \end{aligned}$$

where⁵⁹:

- Exports: Real value of exports in millions of 2000 U.S. dollars
- Non-US GDP: Global GDP, excluding the United States, in billions of 2000 U.S. dollars
- ETC: Dummy variable indicating whether an ETC was granted in a given industry (defined using 6-digit NAICS codes) at some point in the last seven years.
- HHI: Herfindahl-Hirschman Index of industry concentration, by NAICS codes; 1987 value for pre-1992 observations and 1997 value for later observations
- Exchange Rate: Industry specific exchange rate index (industries defined at the 3-digit NAICS)⁶⁰
- Industry: 3-digit NAICS industry dummies

We estimate this equation using both OLS and a fixed-effects estimator on a panel of all U.S. manufacturing exports from 1978 to 2004. Descriptive statistics are reported in Table 3. We use a NAICS-level fixed-effects estimator to control for unexplained cross-sectional variation in export trends. There are 325 unique NAICS included in the regression sample. Aggregating across years, 235 of the 325 unique NAICS never contain an ETC.

⁵⁹ See Data Appendix for detailed variable definitions and data sources.

⁶⁰ The exchange rate index, including the most up-to-date revisions, was generously provided by Linda Goldberg of the Federal Reserve Bank of New York. See Data Appendix for details.

B. Empirical Results

Our estimates of the demand for U.S. exports are generally similar to those of previous estimates. We find that increases in foreign GDP significantly increase demand for U.S. exports. We estimate the elasticity of demand for exports as a function of non-US GDP as 2.03, somewhat smaller than found by Krugman and Baldwin (1987) and Bahmani-Oskooee and Ardalani (2006), and somewhat larger than Bahmani-Oskooee (1991). Our estimates of the sensitivity of U.S. manufacturing exports to changes in the value of the dollar are also comparable to those in the literature. We find that exports are essentially unit elastic with respect to fluctuations in our exchange rate index.

Our OLS estimates suggest that the receipt of an ETC exemption significantly increases industry exports (Table 4). The coefficient of 0.69 on our ETC dummy implies a doubling of exports associated with having an ETC exemption. The 95% confidence interval suggests that industry exports are between 63 and 144 percent higher in each of the seven years after receiving an ETC exemption than in other industries and years. Concentration itself has a positive but negligible effect on exports. The benefit gained from an ETC exemption seems to be the same regardless of industry concentration as implied by the insignificant coefficient on the ETC-HHI interaction variable.

These results are reversed in the fixed effects (FE) estimates, reported in Table 5. This approach controls for idiosyncratic trends in export growth at the level of individual 6-digit NAICS. Once we have controlled for trend growth at this more disaggregated level, the ETC dummy variable has a statistically significant *negative* impact on exports. The -0.10 coefficient implies a reduction of exports by 10%. The GDP and exchange rate coefficients are unchanged in the FE estimates. HHI switches sign, suggesting that exports fall as concentration increases, but the size is still extremely small. The interaction term, estimating the differential impact of ETCs in industries of different concentration, is still insignificant.

There are several possible explanations of this result. First, exports may be growing more quickly in industries with ETCs for reasons entirely unrelated to having an ETC. We speculated that export growth might actually lead an industry to choose to get an ETC, but

this does not appear to be the case. Regression estimates attempting to predict which industries would obtain ETCs as a function of prior export growth displayed entirely insignificant results. This also indicates that the ETC exemption is not being used disproportionately by those industries that the U.S. Congress had in mind in adopting the ETC legislation, namely those in which exports were declining as a result of increased competition from cooperating foreign firms. It is likely, however, that the positive association found in the OLS results does reflect the choice by industry participants to get an ETC: it is industries with firms that want to increase exports that get an ETC.

Second, as is clear from this discussion, receipt of an ETC exemption is not exogenous, but is a decision of members of the industry. We were unable to control for this endogeneity using standard methods because there is no obvious instrument for ETCs. However, it is not clear how this endogeneity biases our results or might explain the difference in the results of OLS and FE estimation, if in fact export growth is not the driving factor in ETC selection. One possibility is that firms get an ETC because they are concerned that exports will fall, or not grow as fast, in the future, but that the receipt of the ETC exemption does not stem the decline.

Third, it is possible that the receipt of an ETC exemption allows member firms to exert market power and strategically decrease exports. We think this is unlikely because most ETCs are in industries that are not concentrated even within the United States. Figure 3 shows the distribution of ETCs by HHI. The vast majority are in industries with an HHI below 1800, the U.S. Justice Department's cutoff for concern regarding market power.⁶¹ This point is even more emphatic once we control for differences in exports across industries. Figure 4 confirms that industry exports from NAICS with ETCs are predominantly in unconcentrated industries. If ETCs were exercising market power to reduce exports, we would expect to see exports decline most in those markets that are most likely to have market power, namely those that are highly concentrated. The ETC-HHI interaction term, however, is statistically insignificant in every specification.

⁶¹ U.S. Department of Justice and Federal Trade Commission, 1992 Horizontal Merger Guidelines (1992), with 1997 revisions, available at http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html.

We examine the “market power” hypothesis more carefully with the inclusion of a dummy variable indicating whether the ETC was given the authority to fix prices. In the OLS regression (Table 6, column 1), this variable, which is highly collinear with simply having an ETC, is negative but statistically insignificant. In the FE specification (Table 6, column 2), the significance of having an ETC disappears; the “price fixing dummy” is picking up all of the negative effect previously picked up by the ETC dummy. Thus it appears that any negative effect on exports is restricted to those with the authority to fix prices.

In some specifications, we also include a variable controlling for prior Webb Pomerene experience. In the OLS estimates, this variable was not significant. In the FE estimates, however, the WP variable was associated with higher exports. It is surprising to find any statistically significant effect, given the small number of ETCs with prior WP experience. We suspect that the association with higher exports reflects the longer history of engaging in export activities in these industries.

Export data disaggregated to the level we use in this study may be plagued by measurement problems. To make sure that measurement problems were not driving our results, we re-estimated all of our regressions eliminating outliers. We did this both by eliminating observations with error terms greater than three standard deviations and by eliminating observations where exports increased or decreased by more than three standard deviations greater than the average growth rate. This procedure eliminated approximately one half of one percent of all our observations. Both the OLS and the FE estimates results were robust to the elimination of outliers.⁶²

In order to better understand why receiving an ETC is associated with a decline in exports, we estimated (both OLS and FE) regressions in which the ETC dummy was replaced by seven separate dummy variables: ETC_t indicates that an ETC exemption had been received t years previously. This allows us to distinguish between the immediate and longer run impact of the ETC. The OLS results (Table 7, column 1) continue to show a positive impact on exports from receiving an ETC exemption, and the size of that impact is fairly stable over time. When

⁶² A different type of measurement problem could arise because of changes in the industry classification codes over time. The export data are organized by Standard Industrial Classification (SIC) codes until 1988 and by NAICS from 1989 on. To test for measurement problems generated by mismatched export product categories, we included a dummy variable for the switch from SIC to NAICS. The dummy variable was not significant.

we look at the fixed effects results (Table 7, column 2), the coefficients on the ETC dummies are negative, as in the single dummy estimate, but they are not statistically significant. This reinforces our view that ETCs do not *cause* exports to fall. In most industries with ETCs, there is not sufficient concentration to suspect a strategic reduction in exports. In other industries, where the choice to ask for an ETC exemption reflects a desire to increase exports it is inconceivable that the ETC has *negative* impact on exports. The ETC is not binding on participants; in fact, over half of ETCs are voluntarily relinquished after a period of time.

Of course, it is possible that different results might be obtained if one looked at the exports of the ETC and its member firms, rather than those of the industry as a whole (which we are forced to do because of data limitations). A complete analysis of the impact – positive and negative – of the ETC Act would require access to information that Congress has chosen to prohibit.

There is nothing in the analysis that we present here that lends support to the notion that ETCs increase exports above what they would be absent an antitrust exemption. It seems unlikely, given their prevalence in unconcentrated industries, that ETCs exercise much, if any, market power – either inside or outside the U.S. market. Thus our results are consistent with earlier, more qualitative studies of ETC Act and WP Act antitrust exemptions. As discussed above, most of these studies concluded that the aggregate economic impact of these exemptions was small, both in their intended purpose of assisting U.S. industry and in promoting the exercise of market power.

An important caveat to this research is that our analysis only examines U.S. ETCs. It does not necessarily follow that our analysis can be extended to other countries, particularly ones with less developed infrastructure for facilitating exports. In such cases, export exemptions for industries with substantial numbers of firms, especially small firms with little history of export activity, may well be justified. However, exemptions for industries that are dominated by one or two firms may simply allow the larger firms to retain their position of dominance rather than encourage exports by smaller firms.

Our analysis also excludes ETCs that were granted permission to export “all products,” and the regressions cover manufacturing only (excluding agriculture). It is possible that those ETCs with permission to export “all products” are somehow different. Without more data, it

is impossible to know. It is also possible that the results for agricultural associations would differ as well, but our guess is that they would not. Some of the agricultural ETCs are regional associations of many small agricultural units (e.g., Oregon blueberry exporters). These ETCs are unlikely to be able to exercise market power in global markets and may well benefit from coordinating among themselves so that they are less dependent on intermediaries for accessing foreign markets. On the other hand, some ETC members are very large agricultural exporters, and these ETCs may be able to exercise market power.

VII. Concluding Remarks

Antitrust exemptions for exports appear to be associated with a small decline in the real value of industry exports. We suspect, but do not have the data to show, that this association reflects something about who chooses to get an ETC. Anecdotal evidence suggests that there are cases where ETCs facilitate an increase in industry exports.⁶³ But while the size of this increase may be very noticeable to individual member producers, it appears to be swamped by other factors in determining aggregate sectoral trends in exports. Our results are consistent with a small contraction of exports resulting from collusive activity among ETC members. However, the low levels of concentration, even within the United States, in most sectors with ETCs suggest that this is not the correct explanation of our finding.

The inability to distinguish between these competing explanations of our findings illustrates the importance of collecting and making available for analysis more data about the activity of firms granted such exemptions. Without international data, it is also difficult to determine whether the analysis presented here is applicable to other countries. For the United States, we would encourage the U.S. Department of Commerce's Export Trading Company Affairs office to publish aggregate data on ETC-facilitated exports on annual basis, to the full extent consistent with the ETC Act. We would also urge Congress to amend the law to permit analysis while protecting individual firm confidentiality. For all countries that provide explicit exemptions we urge the collection and dissemination of data that would permit a full analysis of the impact of these exemptions. Those countries that exempt export cartels from

⁶³ For example there is the case of the Virginia Apple Growers Association, an ETC formed by four small apple companies, which went from zero exports to exports of \$700,000. (Phone conversation with Jeffrey Anspacher, Director, Export Trading Company Affairs, U.S. Department of Commerce June 5, 2006; a brief press release on the Virginia Apple Growers Association is available at <http://www.ita.doc.gov/TD/OETCA/Apples.html>.)

their competition laws by negative implication, as in the case of the European Union, because they restrict application of their laws to activities which affect the domestic market, have abdicated any responsibility to assure that their domestic firms abide by rules of fair competition in the global market. Such blanket exemptions also relieve the government from monitoring and collecting data on joint export activities. Much more transparency could be achieved without revealing confidential, proprietary information. Countries that wish to continue to provide these exemptions, which are otherwise contrary to the spirit of encouraging freer competition, have an obligation to provide researchers and policy analysts with the data necessary to evaluate these policies.

References

- Bahmani-Oskooee, Mohsen and Zohre Ardalani. "Exchange Rate Sensitivity of U.S. Trade Flows: Evidence from Industry Data." *Southern Economic Journal*, vol. 72, no. 3 (2006), pp. 542-559.
- Bahmani-Oskooee, Mohsen. "On the Effects of U.S. Federal Deficits on Its Trade Flows." *Journal of Post-Keynesian Economics*, vol. 14, no. 1 (1991), pp. 72-82.
- Bayoumi, Tamim. "Estimating Trade Equations from Aggregate Bilateral Data," International Monetary Fund Working Paper WP/99/74 (1999).
- Bhattacharjea, Aditya. "Export Cartels – A Developing Country Perspective," *Journal of World Trade*, vol. 38, no. 2 (2004), pp. 331-359.
- Dick, Andrew R. "Are Export Cartels Efficiency-Enhancing or Monopoly-Promoting? Evidence from the Webb-Pomerene Experience," *Research in Law and Economics*, vol. 15 (1992), pp. 89 – 127.
- , "Identifying Contracts, Combinations and Conspiracies in Restraint of Trade," *Managerial and Decision Economics*, vol. 17, no. 2 (1996), pp. 203-216.
- Federal Trade Commission. "Webb-Pomerene Associations: A 50-Year Review," Staff Report to the Federal Trade Commission, 1967.
- , "Webb-Pomerene Associations: Ten Years Later," Staff Report to the Federal Trade Commission, 1978.
- Goldstein, Morris and Mohsin S. Khan. "Income and Price Effects in Foreign Trade," in *Handbook of International Economics*, vol. II (1985), R.W. Jones and Peter B. Kenen, eds., Elsevier Science Publishers B.V., pp. 1041-1105.
- Keena, Colm. "Competition Body Investigates U.S. Group over Possible Cartel Activity," *Irish Times* (March 19, 2005), p. 16.
- Krugman, Paul R. and Richard E. Baldwin. "The Persistence of the U.S. Trade Deficit." *Brookings Papers on Economic Activity*, no. 1 (1987), pp. 1-43.
- Kryzanowski, Lawrence and Nancy D. Ursel. "Market Reaction to the Formation of Export Trading Companies by American Banks," *Journal of International Business Studies*, (1993), pp. 373-381.
- Lacy, James V. "The Effect of the Export Trading Company Act of 1982 on U.S. Export Trade," *Stanford Journal of International Law*, vol. 23 (1987), pp. 177-202.
- Levenstein, Margaret C. and Valerie Y. Suslow. "The Changing International Status of Export Cartel Exemptions," *American University International Law Review*, vol. 20, no. 3 (2005), pp. 785-828.
- Nye, William W. "An Economic Profile of Export Trading Companies," *Antitrust Bulletin*, vol. 38, no. 2 (Summer 1993), pp. 1309-1325.
- Organization for Economic Cooperation and Development. "Recommendation of the Council

Concerning Effective Action Against Hard Core Cartels,” OECD Doc. C(98)35/FINAL (1998).

Sawyer, W. Charles and Richard L. Sprinkle. “The Demand for Imports and Exports in the U.S.: A Survey.” *Journal of Economics and Finance*, vol. 20, no. 1 (1996), pp. 147-178.

Sugden, William. “Global Antitrust and the Evolution of an International Standard,” *Vanderbilt Journal of Transnational Law*, vol. 35 (2002), pp. 989-1017.

Sullivan, John J., Testimony before the Antitrust Modernization Committee in public hearings on “Statutory Immunities and Exemptions” held on December 1, 2005, available at http://www.amc.gov/commission_hearings.htm.

Victor, Paul A. “Export Cartels: An Idea Whose Time Has Passed,” *Antitrust Law Journal*, vol. 60 (1992), pp. 571- 581.

Waller, Spencer Weber. “The Failure of the Export Trading Company Program,” *North Carolina Journal of International Law and Commercial Regulation*, vol. 17 (1992), pp. 239-276.

Waller, Spencer Weber, Kingman Brewster and James Atwood. *Antitrust and American Business Abroad*, vol. 1, 3rd ed. (1997), Thomson West publishers.

Warner, Dennis and Mordechai E. Kreinin. “Determinants of International Trade Flows,” *Review of Economics and Statistics*, vol. 65, no. 1 (1983), pp. 96-104.

FIGURE 1

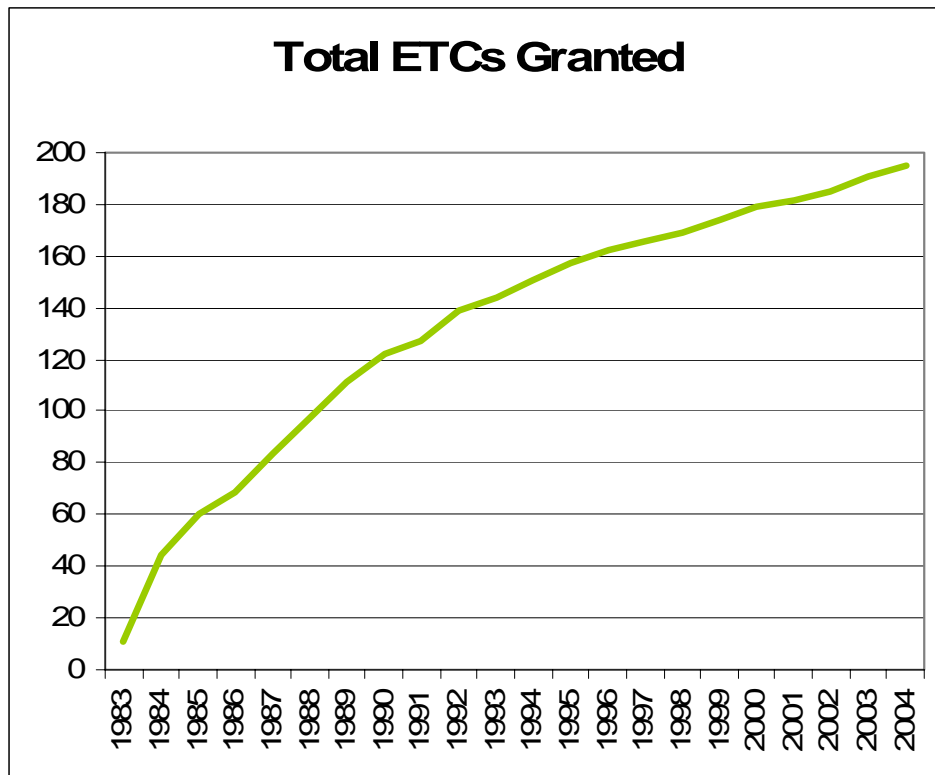


FIGURE 2

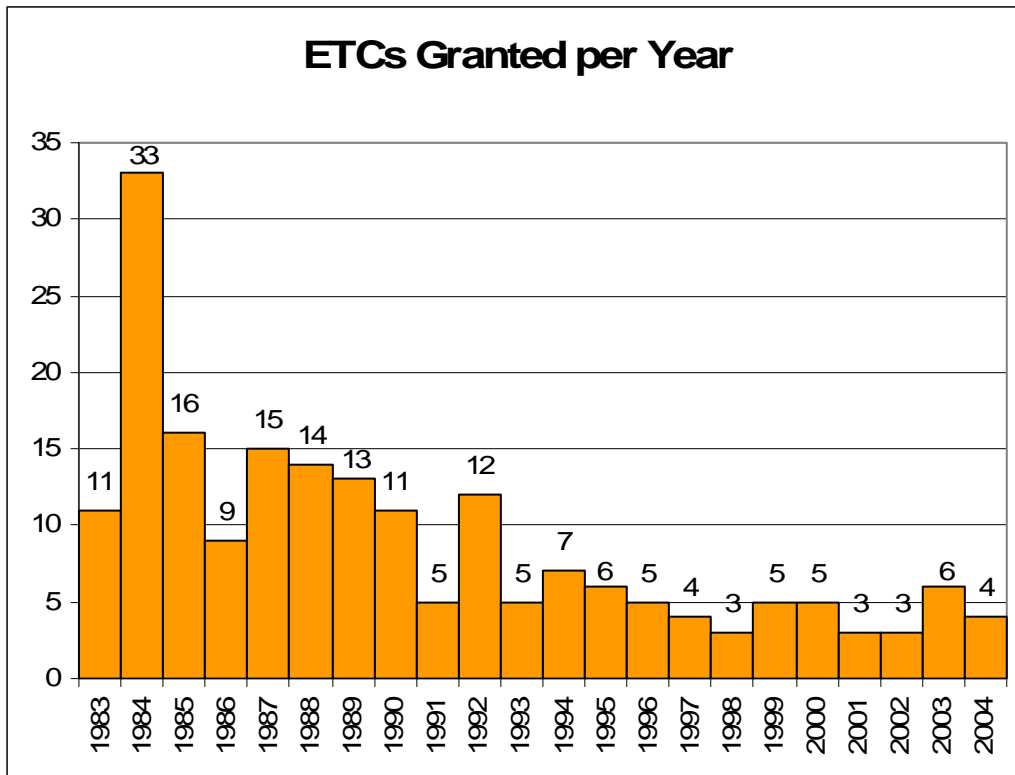


FIGURE 3

CONCENTRATION IN MANUFACTURING INDUSTRIES WITH AN ETC:

COMPARISON OF HHI 1987 & 1997

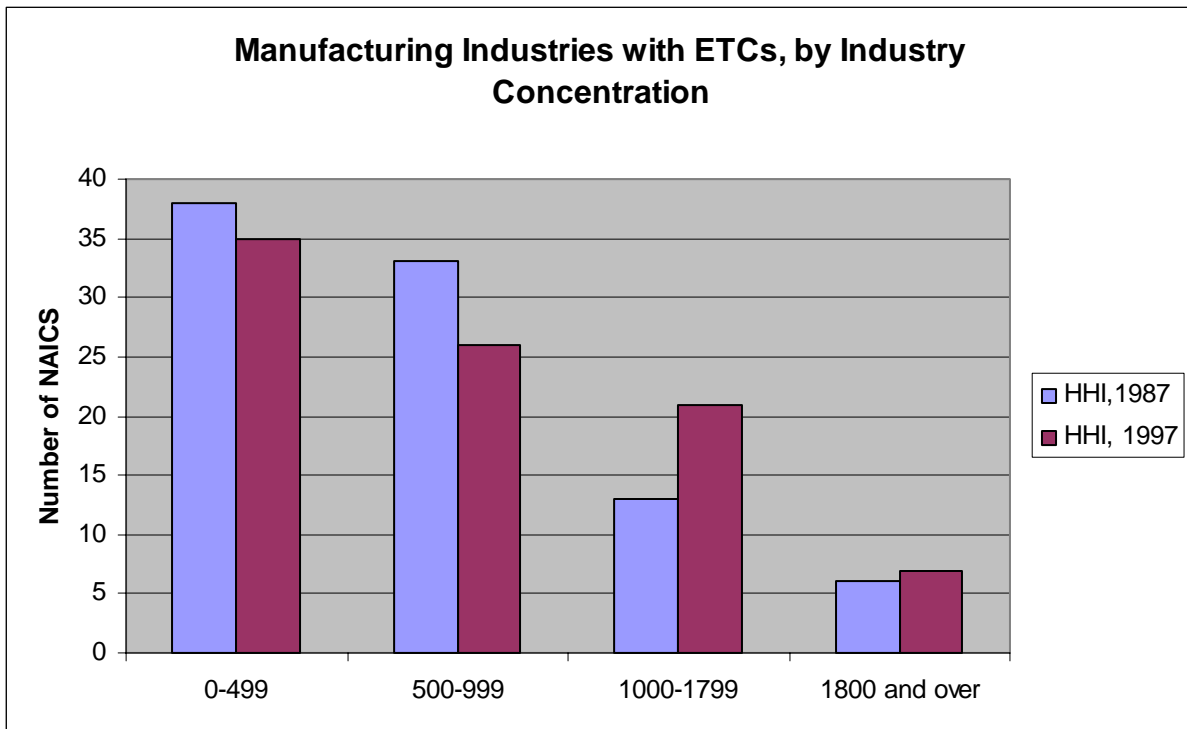


FIGURE 4
VALUE OF EXPORTS IN MANUFACTURING INDUSTRIES WITH AN ETC,
ORGANIZED BY 1997 HHI

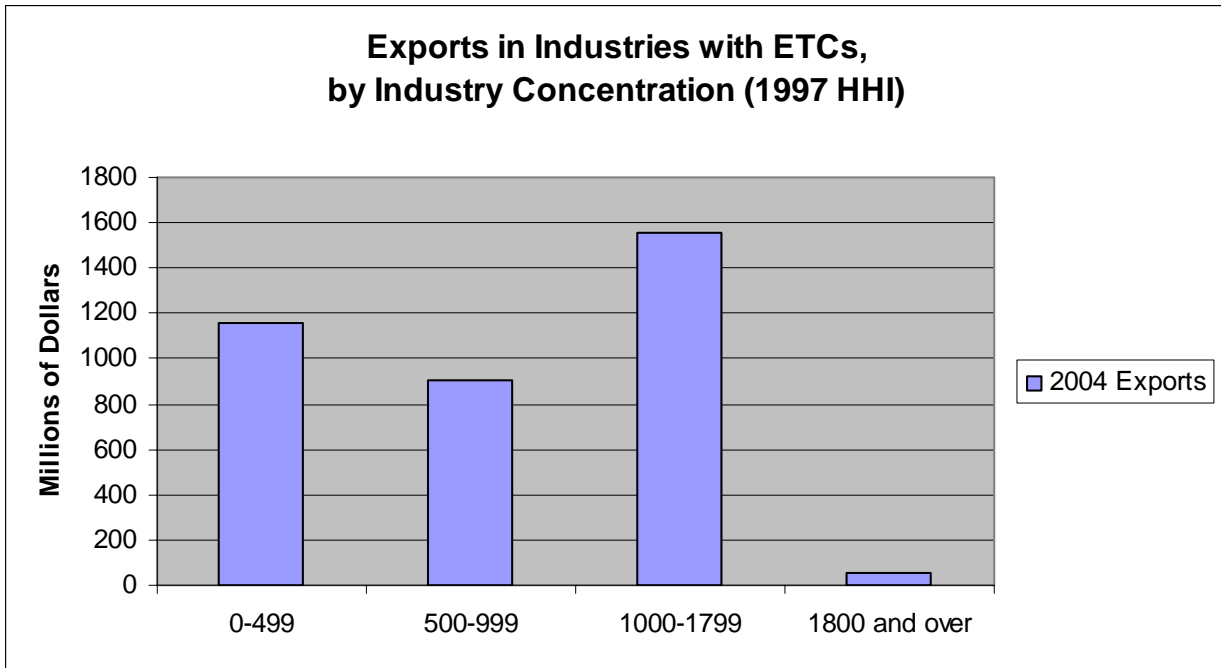


Table 1

Sectoral Distribution of Export Trading Companies

Sector	Number of ETCs in Sector	Percent of all ETCs that are in this sector
Agricultural	31	25%
Mining & Construction	3	2%
Manufacturing	111	88%
Information	3	2%
Total number of ETCs classified by sector	126	100%
Unclassified ETCs	69	35%

Table 2

Prevalence of Export Trading Companies in Manufacturing Sectors

Sector (3-digit NAICS Code)	# 6-digit NAICS in Sector	# NAICS with ETCs	% NAICS that ever had ETC	# ETCs in Sector
Food & Kindred Products (311)	31	14	45%	31
Tobacco Products (312)	8	5	63%	1
Textile Mill Products (313 and 314)	15	6	40%	5
Apparel & Other Textile Products (315)	11	0	0	0
Lumber & Wood Products (321)	8	4	50%	12
Furniture & Fixtures (337)	5	0	0	0
Paper & Allied Products (322)	13	3	23%	3
Printing & Publishing (323)	2	0	0	0
Chemical & Allied Products (325)	27	12	44%	12
Petroleum & Coal Products (324)	3	1	33%	1
Rubber & Miscellaneous Plastics (326)	10	2	20%	2
Leather & Leather Products (316)	10	1	10%	1
Stone, Clay, and Glass Products (327)	23	1	4%	1
Primary Metal Industries (331)	15	2	13%	4
Fabricated Metal Industries (332)	23	3	13%	3
Industrial Machinery (333)	37	13	35%	23
Electronic & Electric Equipment (334)	26	12	46%	12
Transportation Equipment (336)	24	5	21%	8
Instruments & Related Products (335)	20	3	15%	3
Miscellaneous Manufacturing (339)	14	3	21%	7
Total*	325	90	28%	106

* Many of these ETCs covered products that fall into several NAICS codes (that is, they export more than one type of product). There are 106 ETCs for which we were able to identify specific products, exporting in 90 different NAICS categories.

Table 3
 Descriptive Statistics for Regression Sample
 (Manufacturing only)

Variable	Units	Mean	StdDev	Min	Max
Value of Exports	Millions of US \$ (base year 2000)	1107.5	2921.3	0.02	47950.8
Non-U.S. GDP	Billions of US \$ (base year 2000)	17330.9	3723.4	11718.7	24204.9
Industry Exchange Rate		424.3	44.1	328.9	548.1
Is there an ETC in a given NAICS?	0/1	0.07	0.26	0	1
HHI	Index (0 to 10,000)	773.8	654.3	14.9	2983.5

* Number of observations is 8764. Observations are at the year-NAICS level.

Table 4

Economic Impact of ETCs

Dependent variable: $\ln(\text{Value of Exports})$

Ordinary Least Squares Estimates

Variable	Coefficient	Standard Error	t-statistic
ETC_first 7 years (dummy)	0.691	0.103	6.68
HHI	0.0001	0.00002	2.09
ETC Dummy*HHI	-0.0001	0.0001	-0.94
$\ln(\text{Non-US GDP})$	2.033	0.0760	26.77
$\ln(\text{Exchange rate})$	-1.065	0.163	-6.54
Constant	-12.670	0.997	-12.73

8764 observations; 3-digit NAICS dummy variables not reported

Adjusted R-squared = 0.3298

Table 5

Economic Impact of ETCs

Dependent variable: ln(Value of Exports)

Fixed Effects Estimates

Variable	Coefficient	Standard Error	t-statistic
ETC_first 7 years (dummy)	-0.104	0.049	-2.10
HHI	-0.00007	0.00003	-2.21
ETC Dummy*HHI	0.00001	0.00005	0.21
ln(Non-US GDP)	2.034	0.033	61.41
Ln(Exchange rate)	-1.028	0.070	-14.66
Constant	-12.412	0.430	-28.90

8764 observations; 325 groups (6-digit NAICS)

R-squared: within = 0.3188, between = 0.0668, overall = 0.0433

Table 6

Controlling for WP and permission to fix prices

Dependent variable: $\ln(\text{Value of Exports})$

Variable	Model 1 OLS	Model 2 FE
	Coefficient (t-statistic)	Coefficient (t-statistic)
ETC first 7 years (dummy)	0.881 (5.16)	0.016 (0.20)
HHI	0.00006 (2.07)	-0.00007 (-2.25)
ETC Dummy*HHI	-0.0001 (-1.06)	8.41e-7 (0.02)
Webb Pomerane (dummy)	0.211 (0.83)	0.251 (2.03)
Price Fixing Ability (dummy)	-0.230 (-1.44)	-0.152 (-1.98)
$\ln(\text{Non-US GDP})$	2.033 (26.76)	2.033 (61.42)
$\ln(\text{Exchange rate})$	-1.070 (-6.57)	-1.030 (-14.69)
Constant	-12.656 (-12.68)	-12.394 (-28.84)
# observations	8764	8764
Adj R-squared	0.3298	
R-squared within; between; overall		0.3194; 0.0613; 0.0436
Other notes	3-digit NAICS dummy variables not reported	Fixed effects at 6- digit NAICS level

Table 7

Allowing Impact of ETC to Diminish Over Time

Dependent variable: $\ln(\text{Value of Exports})$

Variable	Model 1 OLS	Model 2 FE
	Coefficient (t-statistic)	Coefficient (t-statistic)
ETC1	0.814 (4.72)	-0.038 (-0.49)
ETC2	0.758 (4.35)	-0.082 (-1.05)
ETC3	0.716 (4.11)	-0.123 (-1.58)
ETC4	0.716 (4.12)	-0.121 (-1.55)
ETC5	0.738 (4.24)	-0.097 (-1.25)
ETC6	0.689 (3.94)	-0.147 (-1.88)
ETC7	0.760 (4.32)	-0.104 (-1.32)
HHI	0.00006 (2.15)	-0.00007 (-2.22)
ETC Dummy*HHI	-0.0001 (-1.34)	0.00001 (0.20)
$\ln(\text{Non-US GDP})$	2.039 (26.61)	2.037 (60.94)
$\ln(\text{Exchange rate})$	-1.078 (-6.52)	-1.037 (-14.55)
Constant	-12.673 (-12.67)	-12.390 (-28.75)
# observations	8764	8764
Adj R-squared	0.3300	
R-squared within; between; overall		0.3189; 0.0677; 0.0432
Other notes	3-digit NAICS dummy variables not reported	Fixed effects at 6- digit NAICS level

Table 8

Allowing Impact of ETC to Diminish Over Time, Controlling for WP and Price fixing status

Dependent variable: $\ln(\text{Value of Exports})$

Variable	Model 1 OLS	Model 2 FE
	Coefficient (t-statistic)	Coefficient (t-statistic)
ETC1	1.074 (5.00)	0.087 (0.88)
ETC2	1.022 (4.69)	0.042 (0.42)
ETC3	0.980 (4.50)	0.001 (0.01)
ETC4	0.964 (4.50)	-0.008 (-0.08)
ETC5	0.985 (4.60)	0.016 (0.16)
ETC6	0.929 (4.37)	-0.038 (0.38)
ETC7	1.011 (4.66)	0.010 (0.10)
HHI	0.00006 (2.10)	-0.00007 (-2.26)
ETC Dummy*HHI	-0.0002 (-1.41)	3.40e-6 (0.06)
Webb Pomerane (dummy)	0.227 (0.89)	0.260 (2.10)
Price Fixing Ability (dummy)	-0.315 (-2.04)	-0.154 (-2.07)
$\ln(\text{Non-US GDP})$	2.040 (26.62)	2.038 (60.99)
$\ln(\text{Exchange rate})$	-1.091 (-6.60)	-1.043 (-14.62)
Constant	-12.598 (-12.59)	-12.362 (-28.67)
# observations	8764	8764
Adj R-squared	0.3302	
R-squared within; between; overall		0.3196; 0.0612; 0.0436
Other notes	3-digit NAICS dummy variables not reported	Fixed effects at 6- digit NAICS level

DATA APPENDIX

EXPORTS: The export data from 1978 to 2001 come from Robert Feenstra's web page on the NBER website at: <http://cid.econ.ucdavis.edu/>.

The data are disaggregated by trading partner and product code. We aggregated across trading partners to create a variable measuring total exports by the United States by product code. Data from 2001 to 2004 are from the Census Bureau website, International Trade Statistics section, at: <http://www.census.gov/foreign-trade/statistics/country/index.html>.

Prior to 1989, the data are organized by Standard Industrial Classification. From 1989 forward, they are organized by North American Industrial Classification. In order to create a consistent series, we have reorganized all export data into NAICS. While we have tried to preserve a mapping into six-digit NAICS, in some cases this was not possible and data have been aggregated to the five-digit level.

WORLD GDP: World and non-U.S. GDP, in real 2000 U.S. dollars, come from the U.S. Department of Agriculture website at:

<http://www.ers.usda.gov/Data/macroeconomics/Data/HistoricalRealGDPValues.xls>

EXPORTS PRICE INDEX: Industry exports are deflated by an overall exports price index from the Bureau of Labor Statistics, at: <http://www.bls.gov/mxp>. The base year of the price index is 2000.

INDUSTRY EXCHANGE RATE INDEX: The industry specific exchange rate data through 2002 come from Linda Goldberg's web page on the New York Federal Reserve Bank:

<http://www.ny.frb.org/research/economists/goldberg/papers.html>.

Data were taken from the "Database on Industry-Specific Exchange Rates." We used the tab containing annual industry-specific export-weighted real exchange rates in manufacturing. Industries are identified by 2-digit SIC codes. Goldberg generously provided us with data from 2003 and 2004. We use Goldberg's mapping of 2-digit SIC industries to 3-digit NAICS industries to match these data to our export data.

HHI INDEX OF INDUSTRY CONCENTRATION: HHI data are published every five years. We use the value of shipments HHI for 1987 and 1997. (The 1997 HHI numbers are also available in value added terms, but the 1987 data were based on value of shipments.)

Industry data for 1997 come from the U.S. Census, at:

<http://www.census.gov/epcd/www/concentration.html>

Historical U.S. Census data are available at:

<http://www.wooster.edu/economics/archive/indconc.html>.

All NAICS observations for 1978-1991 are assigned the corresponding HHI for 1987. All NAICS observations for 1992 through 2004 are assigned the corresponding HHI for 1997. Prior to 1997, concentration ratios are only reported using the SIC industry codes, all NAICS observations before 1992 are matched to their corresponding SIC industry number using NAICS-SIC concordance available at: <http://www.census.gov/epcd/www/naicstab.htm>.