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REGULATION OF INTERNATIONAL TRADE: THE UNITED STATES' CARIBBEAN BASIN ECONOMIC RECOVERY ACT

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A. *Introduction*

This paper determines whether domestic pressure groups were able to influence product coverage in the Caribbean Basin Initiative (CBI) using Marvel and Ray's protection formation model [6]. The methodology employed identifies measures of constituent political power predicted by economic regulation theory which influence the ability of an industry to alter regulatory outcomes such as the CBI. A distinction is drawn between the full scope of the CBI and the expanded product coverage of the CBI over that of the U.S. Generalized System of Preferences (GSP) scheme.[1] Results suggest protectionists enjoyed considerable success in shaping CBI product coverage.

B. *The Caribbean Basin Economic Recovery Act*

The Caribbean Basin Economic Recovery Act (CBERA) was signed into law in August 1983. This bill outlines provisions of the Reagan Administration's Caribbean Basin Initiative (CBI), an unprecedented program of trade and economic assistance measures intended to generate economic growth in the Caribbean Basin region by fostering trade and investment. Customs duty-free access to the U.S. market for most categories of product for twelve years beginning in 1984 is the CBI's central feature.

Tariff preference schemes of the United States require implementing legislation. Members of Congress are sensitive to their constituents' needs. The CBI concept met with considerable resistance from protectionists who argued preferential market access posed a threat of serious injury to domestic producers and workers.[2] The Reagan administration's initial proposal called for duty-free treatment for all Caribbean Basin products exported to the United States except certain textile and apparel articles subject quantitative restraints under the multifiber arrangement (MFA). Anti-CBI forces applied pressure on Congress to shape product eligibility.

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1 See [24] [14] [12] [21] [22] for background information on the CBI. The U.S. GSP scheme is described in [7]. A discussion of ways special interest groups were able to exercise influence over the U.S. GSP scheme is presented in [3].

2 See [12] [21] [22] for a summary of concerns voiced by domestic industries and labor unions over CBI product coverage.

Protectionists were successful in delaying introduction of the CBI, and in precluding designation of many import-sensitive items as eligible for duty-free treatment. Although CBI product coverage is much broader than that associated with the U.S. GSP scheme, the CBI statutorily excludes many products of export interest to Caribbean Basin countries.[3]

C. *Regulation Theory and Tariff Preference Schemes*

The ability of domestic pressure groups to shape the CBI is evaluated using Marvel and Ray's protection formation model based upon the theory of economic regulation as advanced by Peltzman [8] and Becker [1]. Regulators strive to maximize political returns by shifting income from some constituents to others. Regulators are sensitive to their constituents' needs, and strive to optimize income redistribution for given levels of political influence possessed by parties involved, and for given costs associated with redistribution.[4] Changes in political preferences or in economic constraints on redistribution will elicit a response from regulators who restructure the scheme to reestablish political equilibrium. The United States' announcement of intent to implement the CBI is viewed in the Marvel-Ray model as disturbing a tariff structure in political equilibrium. Political power and economic interests of industries will shape the product coverage of the preference scheme.

Winners and losers in a regulatory scheme can be identified by focusing on measures of constituent political power predicted by regulation theory which influence ability of an industry to shape the CBI. Regulation theory suggests windfalls accruing to one party of a regulatory scheme will be shared by offsetting regulations to others.[5] Growth industries are expected to forgo protection by becoming eligible for duty-free treatment, while depressed industries will be successful in escaping duty-free treatment. A higher industry growth rate is expected to reduce the probability of a CBI-ineligible designation.

An expressed interest of the CBI is to improve market access in the Caribbean Basin for U.S. exports. The U.S. comparative advantage is particularly strong in high-technology industries, which would become candidates for duty-free treatment. Low-technology activities would escape CBI eligibility. A negative relationship is expected between industry technology intensity and probability of being designated as ineligible for CBI duty-free treatment.

The consumer demand share of industry output, which distinguishes consumer goods from producer goods, is also expected to influence an industry's ability to avoid CBI eligibility. Regulation theory predicts groups who support an exploitive purpose will succeed over groups who support a cooperative purpose. Producer

[3] Articles not eligible for duty-free treatment include the following: textile and apparel articles subject to the multifiber arrangement; canned tuna; petroleum and products; footwear excluding uppers; certain leather, rubber, and plastic gloves; luggage; handbags and flat goods; and some leather wearing apparel. See [24].

[4] One important aspect of these costs is economic losses from policy changes which intensify adjustment pressures in import-sensitive activities.

[5] Cross-subsidization in a regulatory scheme is intended to limit political opposition. See [8, p. 231].

and labor interests will dominate over consumers who favor free trade. A positive relationship is expected between the consumer demand share of industry output and probability of a CBI-ineligible designation.

Regulation theory suggests high seller and regional concentration and the size of an industry will enhance the ability of producers to exert political influence, thereby avoiding the designation of their products as CBI-eligible. Positive relationships are expected between seller concentration, regional concentration, industry size, and the probability of an industry receiving a CBI-ineligible designation.

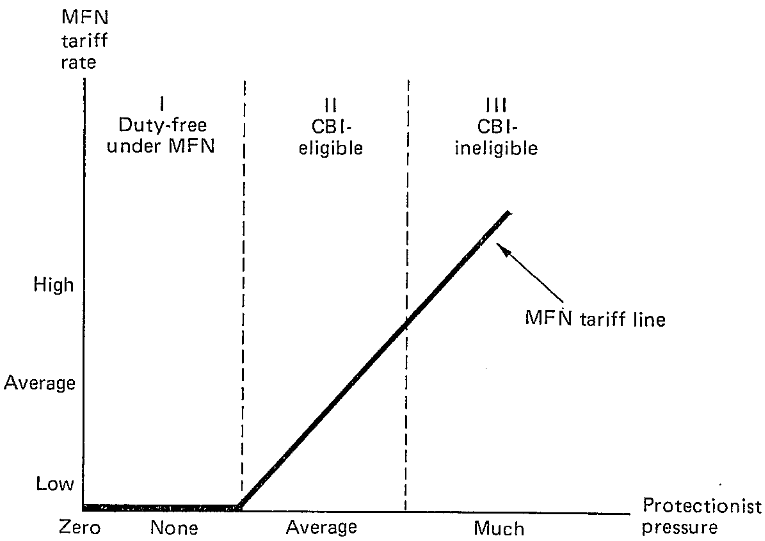
Additional hypotheses relating to success that special interest groups enjoyed in shaping CBI product coverage are investigated by including the MFN tariff rate and an index of nontariff barrier (NTB) use as measures of political pressure influence. If tariff preferences serve to offset the bias against developing country exports inherent in U.S. protective structure, high MFN tariffs, and the presence of NTBs would be found to reduce the probability of a CBI-ineligible designation. However, special interest groups are expected to have enjoyed success in precluding the designation of import-sensitive items as eligible for duty-free treatment. Therefore, the presence of high tariffs and NTBs are expected to increase the probability of securing CBI-ineligibility status.

D. *Evaluating the CBI*

The central feature of the CBI is elimination of tariffs on some products of export interest to Caribbean Basin countries. A problem related to evaluating the relationship between tariff preference margins and political pressures is of interest. Under the CBI, the preference margin is either the existing MFN tariff rate, since CBI-eligible imports enter duty-free, or zero, when CBI eligibility is not granted. Traditional tariff formation models establish the relationship between MFN tariff rates and protectionist pressures illustrated in Figure 1. The horizontal segment I of this MFN tariff line represents products admitted duty-free on an MFN basis. Included here are products not produced in the United States, and products in which the United States enjoys a strong comparative advantage. The most import-sensitive products are depicted by segment III. Assuming CBI eligibility is negotiated in a political environment, eligibility would not be granted on products with the highest MFN tariffs, those depicted by segment III. The relationship between preference margins and political pressures implied here is that preference margins will be zero in the extreme cases of *non* and *much* protectionist pressure.

The methodology used to evaluate the CBI involves the establishment of two product sub-samples. Sub-sample 1, corresponding to segment III, includes four-digit Standard Industrial Classification (SIC) product groupings designated as ineligible for CBI duty-free treatment. Sub-sample 2, corresponding to segment II, includes products dutiable under MFN conditions which are CBI-eligible. Segment I products, admitted duty-free under MFN conditions, are deleted, since they fall outside the scope of the CBI. The first test combines sub-samples 1 and 2 and uses logit analysis to identify characteristics which influence the probability of an industry achieving CBI-ineligibilty status for its products. Since many products

Fig. 1



entering duty-free under the CBI already enjoy duty-free status under the U.S. GSP scheme which was implemented in 1976, a second test evaluates the expanded product coverage of the CBI over that of the GSP by deleting GSP-eligible products from sub-sample 2. An exception is made for GSP-eligible products denied preferential treatment since GSP "competitive-need limits" were reached.[6] These products are still eligible to benefit from expanded duty-free treatment under the CBI. Six product groups for which the CBI is used to circumvent GSP "competitive-need limits" are therefore retained in CBI-eligible sub-sample 2.

Data on U.S. imports from Caribbean Basin countries, tariff rates, and industry pressure group variables for four-digit SIC industries are calculated from information contained in the U.S. Bureau of the Census, U.S. Department of Commerce, and U.S. International Trade Commission publications.[7] Pressure group variables are as follows: MFN Tokyo Round tariff rate (MFN80), index of nontariff barrier use (NTB), regional concentration index (REGS), 1982 four-firm seller concentration ratio (CR4), consumer demand share (CDS), technology intensity (R&D), employment growth rate (GR), and shipment values (VS).[8] Since the dependent

[6] This safeguard requires the president to withdraw preferential treatment under the GSP when annual imports of an item from a beneficiary exceed either a given dollar value, or 50 per cent of total imports of the product.

[7] See [15] [16] [17] [18] [19] [20] [23] [25].

[8] These variables are commonly employed in tariff formation models. See for example, [6] [2]. The NTB index is a dummy variable taking on a value of 1 if a major quantitative restriction is present, and 0 otherwise. The 1977 regional concentration index is

TABLE I
LOGIT ESTIMATES OF CHOICE OF CBI EXEMPTION STATUS

Independent Variables	CBI (1)	CBI (2)	Expanded Coverage of CBI (3)	Expanded Coverage of CBI (4)
Constant	−2.2694 (−2.8679)	−5.6256 (−8.1827)	−1.0728 (−1.0926)	4.0246 (5.5443)
MFN80	—	0.2290 (6.0263)	—	0.1835 (4.3587)
NTB	—	2.1075 (3.8884)	—	2.1672 (3.5539)
REGS	4.3834 (3.7706)	—	4.8745 (3.2247)	—
CR4	−0.0118 (−0.9162)	—	−0.0402 (−2.2462)	—
VS	0.0005 (3.4745)	—	0.0003 (1.9466)	—
R & D	−130.0963 (−3.7665)	—	−77.2323 (−3.5851)	—
CDS	0.0068 (1.2321)	—	0.0092 (1.2496)	—
GR	−1.0727 (−0.8318)	—	−1.5606 (−0.8639)	—
n	251	251	102	102
−2 log likelihood	127.12	111.65	78.78	74.77
Pseudo-R^2	0.38	0.46	0.41	0.43

Notes: 1. Asymptotic t-statistics in parentheses.
2. n=number of observations.
3. Pseudo-R^2 calculated in the manner described in [5, pp. 524–25].

variable is a (0, 1) dummy variable taking on a value of 1 when an industry's products are designated as ineligible for CBI duty-free treatment, and zero otherwise, logit analysis is employed to estimate the probability model.

E. *Results*

Table I presents two sets of logic coefficient estimates. The first set pertains to the full scope of the CBI scheme, and the second set pertains only to products eligible to benefit from expanded product coverage of the CBI over that of the GSP. Two models are estimated. The basic model includes measures of constituent

analogous to a Gini concentration ratio, calculated from a Lorenz curve relationship between the accumulated percentage of industry i employment, and the accumulated percentage of total employment. The 1977 consumer demand share expresses the percent of industry output going to personal consumption expenditures. Technology intensity is measured by scientists and engineers as a fraction of the 1979 workforce. The employment growth rate is calculated over the 1980–83 period. Shipment values pertain to 1983.

political power predicted by regulation theory which influence the ability of an industry to secure CBI-ineligibility status for its products. A second model employs the MFN tariff and an index of NTB use as alternative measures of political pressure influence.[9] This model is included to test the contention that owing to success special interest groups enjoyed in shaping CBI product coverage, tariff preferences do not offset the bias against developing country exports inherent in the U.S. protective structure.

Equations (1) and (3) in Table I pertain to the basic model. Results suggest that special interest groups enjoyed considerable success in shaping CBI product coverage. Similarity in both sets of results highlights the inconsequential nature of the expanded CBI product coverage over that of the GSP. Coefficients on the regional concentration (REGS) and industry size (VS) variables are positive and significant in each equation. These variables are commonly measures of political pressure influence. The likelihood of securing a CBI-ineligible designation for industry output in both samples is increased significantly by the degree of regional concentration, and by industry size.

Seller concentration (CR4), an additional measure of political pressure influence, does not appear to exert a significant influence on exemption status in the "full scope of the CBI" sample. However, seller concentration is found to exert a significant negative effect on the probability of a CBI-ineligible designation in the "expanded product coverage" sample. This result is contrary to predictions of the model, and is difficult to explain since it is influenced by market structure of the products eligible for duty-free treatment under the CBI but not under the GSP.[10]

The coefficients on the technology intensity (R&D) variable are negative and significant, as expected. Technology intensity is found to exert a negative effect on the probability of achieving CBI-ineligibility status in both cases. This result suggests that products with low-technology requirements in which the developing country comparative advantage is highly pronounced would be less likely to benefit from duty-free preferential treatment. The remaining variables, consumer demand share (CDS), and industry growth rate (GR) do not appear as significant determinants of the choice of CBI exemption status.

Equations (2) and (4) of Table I present logit coefficient estimates for the model which employs tariffs (MFN80) and NTBs as alternative measures of special interest group influence. These results support earlier conclusions regarding the success that special interest groups enjoyed in limiting CBI product coverage. Coefficients on the protection measures are positive and significant. High MFN tariffs and the presence of NTBs are found to increase the probability of a CBI-

[9] The MFN tariff and NTB index do not appear in the basic model due to multicollinearity between these protectionist devices and the various measures of constituent political power included as independent variables in the basic model. These measures of political influence have been identified as key determinants of industry protection levels. See [6] [2].

[10] The CBI extends duty-free treatment to steel products, glass products, electronics articles, and a variety of other items which are not eligible for such treatment under the GSP. See [14] for a detailed comparison of product coverages under the schemes.

ineligible designation. These results hold for the full scope of CBI product coverage, and for the expanded product coverage of the CBI over that of the GSP scheme. Both sets of results provide empirical support for Ray's conclusion that owing to the influence of special interests, preference schemes such as the GSP and CBI do little to redress the bias against imports from developing countries inherent in U.S. tariff and NTB structures [9] [10].[11] The same protectionist forces who influenced MFN tariffs and NTB coverage were also successful in shaping product coverage in the CBI scheme.

F. *Conclusions*

This paper provides further support for a regulatory approach to the study of tariff preference schemes. Results suggest special interest groups were successful in shaping product coverage in the CBI scheme, and highlight the inconsequential nature of CBI product coverage over that of the GSP. A similar conclusion was reached in Ray's investigations of determinants of developing country import shares under both the GSP and CBI [9] [10], and also in Clark's study of GSP tariff preference margin determinants [3]. Findings of the present study are also consistent with welfare effect estimates reported by Sawyer and Sprinkle [13], Rousslang and Lindsey [11], and Feinberg and Newfarmer [4] which indicate CBI tariff preferences have been of limited value to Caribbean Basin countries. Preference schemes such as the CBI can provide meaningful gains to developing countries only if coverage is expanded to include all products of export interest to them.

[11] Ray examined preferential imports as a share of total U.S. imports and concluded the CBI has also encouraged Caribbean exports toward manufactured agricultural products, away from textiles.

REFERENCES

1. Becker, G. "Comment," *Journal of Law and Economics*, Vol. 19, No. 2 (August 1976).
2. Clark, D. P. "Regulation of International Trade in the United States: The Tokyo Round," *Journal of Business*, Vol. 60, No. 2 (April 1987).
3. ————. "Regulation of International Trade: The United States' Generalized System of Preferences Scheme," *Weltwirtschaftliches Archiv*, Vol. 123, No. 4 (December 1987).
4. Feinberg, R. E., and Newfarmer, R. "The Caribbean Basin Initiative: Bold Plan or Empty Promise?" in *From Gunboats to Diplomacy: New U.S. Policies for Latin America*, ed. R. Newfarmer (Baltimore: Johns Hopkins University Press, 1984).
5. Judge, G. G.; Hill, R. C.; Griffiths, W. E.; Lutkepohl, H.; and Lee, T. C. *Introduction to the Theory and Practice of Econometrics* (New York: John Wiley and Sons, 1982).
6. Marvel, H. P., and Ray, E. J. "The Kennedy Round: Evidence on the Regulation of International Trade in the United States," *American Economic Review*, Vol. 73, No. 1 (March 1983).
7. Murray, T. *Trade Preferences for Developing Countries* (New York: John Wiley and Sons, 1977).
8. Peltzman, S. "Toward a More General Theory of Regulation," *Journal of Law and Economics*, Vol. 19, No. 2 (August 1976).
9. Ray, E. J. "Trade Liberalization, Preferential Arrangements and their Impact on U.S.

Imports from Latin America," in *Economic Reform and Stabilization in Latin America,* ed. M. Connolly and C. Gonzalez-Vega (New York: Praeger Publishers, 1987).

10. ――――. "The Impact of Special Interests on Preferential Tariff Concessions by the United States," *Review of Economics and Statistics,* Vol. 69, No. 2 (May 1987).
11. ROUSSLANG, D., and LINDSEY, J. "The Benefits to Caribbean Basin Countries from the U.S. CBI Tariff Eliminations," *Journal of Policy Modeling,* Vol. 6, No. 4 (1984).
12. SAMOLIS, F. R. "SOS for the CBI: Lessons of the Caribbean Basin Initiative," in *Managing Trade Relations in the 1980s: Issues Involved in the GATT Ministerial Meeting of 1982,* ed. S. Rubin and T. R. Graham (New Jersey: Rowman and Allanheld, 1984).
13. SAWYER, W. C., and SPRINKLE, R. L. "Caribbean Basin Economic Recovery Act: Export Expansion Effects." *Journal of World Trade Law,* 18 (1984).
14. SCHOEPFLE, G. K., and PEREZ-LOPEZ, J. F. *Trade and Employment Effects of the Caribbean Basin Economic Recovery Act,* Economic Discussion Paper No. 17 (Washington, D.C.: U.S. Department of Labor, 1985).
15. U.S. Bureau of the Census. *1977 Census of Manufactures,* Volume I, *Subject Statistics* (Washington, D.C.: U.S. Government Printing Office, 1981).
16. ――――. *1977 Census of Manufactures.* Volume III. *Geographic Area Statistics* (Washington, D.C.: U.S. Government Printing Office, 1981).
17. ――――. *1980 Census of Population: Detailed Population Characteristics* (Washington, D.C.: U.S. Government Printing Office, 1983).
18. ――――. *U.S. Imports for Consumption and General Imports: TSUSA Commodity by Country of Origin,* Report FT246, Annual (Washington, D.C.: U.S. Department of Commerce, 1985), magnetic tape.
19. ――――. *1982 Census of Manufactures. Subject Series. Concentration Ratios in Manufacturing* (Washington, D.C.: U.S. Government Printing Office, 1986).
20. ――――. *1984 Annual Survey of Manufactures* (Washington, D.C.: U.S. Government Printing Office, 1986).
21. U.S. Congress, House. *A Bill to Promote Economic Revitalization and Facilitate Expansion of Economic Opportunity in the Caribbean Basin Region,* H.R. 5900, 97th Congress, 2nd Session, 1982.
22. ――――. *Caribbean Basin Economic Recovery Act,* H.R. 2769, 98th Congress, First Session, 1983.
23. U.S. Department of Commerce. *The Detailed Input-Output Structure of the U.S. Economy, 1977,* Volume 1 (Washington, D.C.: U.S. Government Printing Office, 1984).
24. ――――. *1986 Guidebook: Caribbean Basin Initiative* (Washington, D.C.: U.S. Department of Commerce, 1986).
25. U.S. International Trade Commission. *Protection in Major Trading Countries,* USITC Publication 737 (Washington, D.C.: U.S. International Trade Commission, 1975).
26. ――――. *Operation of the Trade Agreements Program. 35th Report, 1983,* USITC Publication 1535 (Washington, D.C.: U.S. International Trade Commission, 1984).