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Does the G7/G8 Promote Trade?

Volker Nitsch
Freie Universität Berlin

Abstract
The Group of Eight (G8) is an unofficial forum of the heads of state of the eight leading industrialized countries. In this paper, I examine the effect of the G8 (and its predecessor, the G7) on international trade. I use a gravity model of trade; the panel data set covers bilateral trade between 175 countries from 1948 through 1999. I find that membership in the G7/G8 is consistently associated with a strong positive effect on trade.

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Address:
Volker Nitsch
Free University Berlin
Department of Economics
Boltzmannstrasse 20
14195 Berlin
Germany
Tel.: (030) 838-56280
Fax: (030) 838-54142
E-mail: vnitsch@wiwiss.fu-berlin.de
Web: http://userpage.fu-berlin.de/~vnitsch

I. Introduction

Recent research has produced some surprising results on the trade (liberalization) effects of international organizations. Rose (2004) finds that membership in the General Agreement on Tariffs and Trade (GATT) and its successor the World Trade Organization (WTO), the multilateral organization most prominently associated with trade liberalization, has no measurable effect on patterns of trade. Rose (2005) examines the trade effect of other international institutions (that have trade liberalization as part of their mandate) and finds the strongest effect for membership in the Organisation for Economic Cooperation and Development (OECD) and its predecessor the Organisation for European Economic Co-operation (OEEC), an organization with a wide range of objectives (other than trade), a limited set of policy instruments and weak enforcement mechanisms. In this short note, I examine the effect on trade of another international institution which is at the center of global governance, the Group of Eight (G8) and its predecessor the Group of Seven (G7).

II. G7/G8

The G7/G8 is of particular interest for at least two reasons. One the one hand, the group shares many characteristics with the OEEC/OECD. It is a small, exclusive club of industrial economies; it has broad interests, including trade liberalization; and it has no legal power or sanctions. On the other hand, the G7/G8 represents a radically different institutional approach towards international cooperation. It is a very informal forum (the G7/G8 has no permanent staff of its own; the chair rotates between members); it often deals with major, complex issues; topics addressed vary according to current relevance; and compliance is often achieved by reaching consensual agreement among state leaders and the leaders' subsequent personal commitment to these collective decisions. Most notably, with its informal organizational structure, the G7/G8 has been a blueprint for other (groups of) countries seeking to coordinate policies, such as the G20 or the G77.

Is it really reasonable to expect that the G7/G8 has liberalized trade among member countries? While the G7/G8 has no clear mandate or objective, the frequency of the coverage of trade issues at summit meetings and the credibility of summit commitments on trade may provide some useful insights. Indeed, trade liberalization has often featured prominently on the summit agenda. Summarizing traditional summit themes, Bayne and Putnam (1995) argue (emphasis added): "A *prime* task of the summits […] has been to restrain protectionist trends among the G-7 countries. […] In addition, the G-7 summits have *always* sought to encourage international trade negotiations and promote their successful conclusion." Kirton and Kokotsis (2003) note that international trade is one of only three policy areas (along with macroeconomic policy and north-south development) that has been dealt with by *every* summit since the start in 1975. Also, compliance with summit commitments appears to be particularly high in regard to agreements in international trade. Von Furstenberg and Daniels (1992) apply a scoring technique to evaluate the credibility of the commitments announced in the economic summit declarations and report a high score for trade commitments. Finally, in addition to the annual summit meetings, a network of supporting ministerial meetings has evolved which allow ministers to meet on a regular (as well as on an ad hoc) basis. According to Ullrich (2001), meetings of the trade ministers are widely viewed as having played a key role in multilateral negotiations of trade liberalization.[1]

III. Data and Methodology

To identify the effect of membership in the G7/G8 on international trade, I use a gravity model of trade; this model essentially links the bilateral value of trade between two countries to their economic size and the distance between them. It has been used extensively

[1] The meetings of trade ministers are labeled Quadrilateral ministerials because in this forum the European Commission represents all member states of the European Union.

in the literature. Most importantly, Rose (2004, 2005) applies this framework to analyze the effect of other international institutions on trade.

In particular, I estimate an equation of the form:

$$\ln(T_{ijt}) = \alpha + \beta_1 \ln(D_{ij}) + \beta_2 \ln(Y_{it}Y_{jt}) + \Sigma_{k=3} \beta_k X_{ijkt} + \gamma_1 G8\_2_{ijt} + \gamma_2 G8\_1_{ijt} + \varepsilon_{ijt}$$

where T_{ijt} denotes real bilateral trade between countries i to j at time t; D and Y denote the standard gravity variables: the great-circle distance between the geographic centers of i and j and the real gross domestic product, respectively; X is a set of other control variables that are typically found to affect the bilateral pattern of trade, including per capita incomes, sharing a common land border, sharing a common language, membership in the same free trade arrangement, current and former colonial links, and sharing a common currency; $G8\_2_{ijt}$ is a binary dummy variable that takes the value of one if both i and j are a member of the G7/G8 at time t; $G8\_1_{ijt}$ is a binary dummy variable that takes the value of one if either i or j is a member of the G7/G8 at time t; and ε_{ijt} is a stochastic error.

To allow a direct comparison of the estimation results with Rose's (2005) findings, I use exactly the same data; the data set has been graciously made available by Andrew Rose at http://faculty.haas.berkeley.edu/arose.[2]

IV. Results

Table 1 presents the results. The first column reports coefficient estimates derived from a simple pooled OLS regression (with year controls). Similar to Rose (2004, 2005) and others, I find that the gravity framework has a good empirical fit; (most of) the variables take on the expected sign and are statistically highly significant. I am mainly interested, however, in the effect of membership in international institutions on trade. For the GATT/WTO, the

[2] See Rose (2005) for a more detailed description of variable definitions and data sources.

IMF and the OEEC/OECD, I essentially reproduce Rose's (2005) results. Membership in the OEEC/OECD is strongly positively associated with trade, while the point estimates are much lower (and even negative) for the other institutions. The most noticeable result, however, concerns membership in the G7/G8. The γ coefficients are positive, economically large and statistically highly significant. The point estimate of γ_1 of 0.44 implies that trade between two G7/G8 members is 55% (=exp[0.44]-1) higher than trade between otherwise identical nonmembers. Analogously, the γ_2 estimate of 0.41 implies that trade between a G7/G8 member and a nonmember is greater by 51% (=exp[0.41]-1), possibly reflecting the support of the G7/G8 system for an open trading regime. Interestingly, Rose (2005) reports point estimates of about exactly the same magnitude for membership in the OEEC/OECD for which I find slightly reduced (but still large and significant) effects if I control for G7/G8 membership.

The other two columns of table 1 present the results of robustness checks, as does table 2. I have experimented with alternative estimation techniques (adding country-pair effects), entering the G7/G8 individually (without other institutional dummies), disaggregating the effect of regional trade agreements on trade, and splitting the sample across various (country and time) dimensions. The estimates of the G7/G8 effect on trade were generally robust to those perturbations.

V. Summary

The G7/G8 is a highly non-legalized institution. Still, it has situated itself at the center of global governance. In this paper, I examine the effect of the G7/G8 on international trade. Using a gravity model to examine trade between 175 countries over the period from 1948 through 1999, I find that membership in the G7/G8 is consistently associated with a strong positive effect on trade. Even informal institutions may be successful in liberalizing trade.

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Table 1: Benchmark results

	Default OLS	Fixed country-pair effects	Random country-pair effects
Both in G7/G8	0.44* (0.21)	0.53** (0.08)	0.68** (0.08)
One in G7/G8	0.41** (0.04)	0.13** (0.02)	0.20** (0.02)
Both in GATT/WTO	-0.09# (0.05)	0.29** (0.02)	0.25** (0.02)
One in GATT/WTO	-0.10* (0.05)	0.17** (0.02)	0.12** (0.02)
Both in IMF	-0.52** (0.10)	-0.52** (0.04)	-0.44** (0.04)
One in IMF	-0.29** (0.10)	-0.29** (0.04)	-0.23** (0.04)
Both in OECD	0.35** (0.04)	0.87** (0.04)	1.14** (0.04)
One in OECD	0.36** (0.04)	0.29** (0.02)	0.47** (0.02)
Regional FTA	1.15** (0.11)	0.76** (0.04)	0.87** (0.04)
GSP	0.59** (0.03)	0.16** (0.01)	0.24** (0.01)
Currency union	1.06** (0.12)	0.59** (0.05)	0.54** (0.05)
Log distance	-1.10** (0.02)		-1.28** (0.03)
Log product real GDP	0.90** (0.01)	0.47** (0.02)	0.87** (0.01)
Log product real GDP per capita	0.27** (0.02)	0.19** (0.02)	-0.04** (0.01)
Common language	0.34** (0.04)		0.27** (0.05)
Land border	0.58** (0.11)		0.74** (0.13)
Number landlocked	-0.33** (0.03)		-0.57** (0.03)
Number islands	0.03 (0.04)		0.12** (0.04)
Log product land area	-0.10** (0.01)		-0.07** (0.01)
Common colonizer	0.65** (0.07)		0.32** (0.06)
Currently colonized	0.94** (0.23)	0.10 (0.09)	0.10 (0.09)
Ever colony	0.99** (0.11)		1.83** (0.17)
Common country	0.01 (1.05)		1.38 (1.33)
G7/G8=0	0.00	0.00	0.00
GATT/WTO=0	0.13	0.00	0.00
IMF=0	0.00	0.00	0.00
OECD=0	0.00	0.00	0.00
R^2	0.65	0.54	0.62

Notes: Dependent variable is the log of real trade. Robust standard errors are in parentheses. Number of observations = 234,597. Time effects are included in all regressions (but not reported). ** denotes significant at the 0.01 level.

Table 2: Robustness checks

	Both in G7/G8	**One in G7/G8**
Only G7/G8	0.55** (0.21)	0.48** (0.04)
Separate regional FTAs	0.86** (0.13)	0.51** (0.04)
Only 1970s	0.15 (0.21)	0.46** (0.04)
Pre-1985	-0.13 (0.24)	0.18** (0.04)
Post-1985	0.78** (0.20)	0.61** (0.04)
No low-income countries	0.26 (0.18)	0.34** (0.05)
No middle-income countries	0.38** (0.15)	0.36** (0.06)

Notes: Dependent variable is the log of real trade. Robust standard errors are in parentheses. Same set of regressors as in table 1. Time effects are included in all regressions (but not reported). ** denotes significant at the 0.01 level.