

KEVIN H. O'ROURKE

*Trinity College Dublin*

RICHARD SINNOTT

*University College Dublin*

## *The Determinants of Individual Trade Policy Preferences: International Survey Evidence*

What determines trade policy? While this may seem to be mainly a question for political scientists, it is of increasing concern to international trade theorists, faced with the obvious disjunction between the free trade prescriptions of standard trade models and the protectionist policies pursued by so many governments.<sup>1</sup> The intellectual stakes for economists have increased further with the advent of endogenous growth models, which predict that policies can have important, long-run growth effects, as opposed to the fairly trivial deadweight losses implied by static constant returns models. Clearly it is not sufficient to take these policies as exogenous and examine their implications. To understand growth, the theory seems to be telling us, we need to understand why some countries pursue appropriate policies and others inappropriate ones.

When faced with such questions, the instinct of economists is to eschew state-centered or cognitive theories and to reach for the rational choice approach: politicians supply policies; voters and interest groups demand them; the institutional environment helps determine the ways in which these demands

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1. Rodrik (1995).

and supplies interact with each other, and thus the eventual equilibrium. In these models, a key consideration is the determination of individual voter preferences, which in turn depends on the structure of the economy in question. In an environment in which factors are stuck in particular sectors, as in the specific factors model, factors have a direct stake in those particular sectors. Thus, management and labor in each sector will agree with each other that their sector deserves protection (if it is an import-competing sector), or that free trade is the best policy (if it is an exporting sector). On the other hand, if factors are mobile between sectors, as in the Heckscher-Ohlin model, then unskilled workers everywhere will have the same interest (since they all earn the same wage), as will skilled workers, as well as capital and all other relevant, mobile factors of production. In this case, abundant factors will favor free trade, and scarce factors will favor protection.<sup>2</sup> Classic economic contributions to the literature, such as Findlay and Wellisz; Mayer; Magee, Brock, and Young; and Grossman and Helpman all assume such a rational choice world, with some adopting a specific factors specification and others a Heckscher-Ohlin one.<sup>3</sup>

On the other hand there are powerful empirical reasons for believing that interests alone may not provide a complete explanation for the evolution of trade policy. Ideas (or ideology) may matter too. Sometimes the ideology is socialist, as in the case of COMECON, while the case of late nineteenth century Britain arguably provides an example of the power of liberal ideology.<sup>4</sup> In this paper we take seriously a third possibility, that a preference for economic protectionism among voters is a function of strong feelings of national identity and an associated set of patriotic and nationalist attitudes that include pride in country, sense of national superiority, and, at the extreme, antagonistic attitudes toward those who are not part of the nation. Of course nationalist ideology may have its origins in a conjuncture between identity and group interests, and particularly in a conjuncture between identity and perceptions of inequality. The point here, however, is that whatever their origins, nationalist attitudes are likely to have a certain autonomy and may exercise an independent influence on the way in which individuals react to the opening up of trade and to other globalization issues.<sup>5</sup>

2. Rogowski (1989).

3. Findlay and Wellisz (1982), Mayer (1984), Magee, Brock, and Young (1989), and Grossman and Helpman (1994).

4. A controversial claim, to be sure. See Irwin (1989) for one view, and Schonhardt-Bailey (1991) for another.

5. Gellner (1983). One should be wary of oversimplifying the implications of nationalist

These competing explanations have radically different policy implications. If support for economic protectionism is a function of the material interests of individuals, it can in principle be dealt with by offering side payments that compensate for the losses that result from liberalization. For example, in a specific factors framework workers who have been displaced from declining industries can be given help in relocating to other sectors.<sup>6</sup> In a Heckscher-Ohlin framework, the problems faced by unskilled workers in rich countries can be reduced by education and training schemes that, in principle, lower unskilled labor supply. If, on the other hand, protectionist policy preferences are rooted in nationalist attitudes, the strategy to alter them will have to be very different, and the strategist may have to be less sanguine about the prospects of success. Of course, the truth may well lie somewhere between these alternatives, with both interests and ideology reinforcing opposition to free trade. In this case it becomes necessary to tease out the relative effects of each, and to identify the conditions under which such effects operate.

In pursuing these questions, this paper starts with rational choice models of policy formation, and asks to what extent does the Heckscher-Ohlin model provide a useful guide to predicting trade policy preferences. This question has often been addressed in the empirical economics literature. Typically, authors have used aggregate data to ask whether factor interests or sectoral interests are more important in determining policy preferences. For example, Magee looked at industry testimony before the U.S. Congress in 1973, and found that labor and capital seemed to have the same interests within each sector, suggesting that a specific factors model is appropriate.<sup>7</sup> More typically, voting behavior has been related to constituency characteristics, either in the context of U.S. congressional votes on trade-related issues, or in the context of national elections that are assumed to have been fought largely on such issues.<sup>8</sup>

This paper pursues a different strategy. The inquiry is pitched, not at the level of interest groups (where, almost by definition, interests are likely to be

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ideology for foreign economic policy. Shulman, for example, shows that Quebec, Hindu, and Ukrainian nationalists experience both integrationist and protectionist incentives and that policy choices depend on a number of situational factors (Shulman 2000). One could cite the Republic of Ireland's decision to abandon protectionism in the late 1950s and its subsequent pursuit of European integration as another case in point. However, the main thrust of nationalist ideology, particularly at the mass level, probably remains autarkic. At any event, this is the hypothesis tested in this paper.

6. See, for example, several contributions to Bhagwati (1982).

7. Magee (1978).

8. See, for example, Irwin (1994), or Kaempfer and Marks (1993).

determining), or at the level of the electoral constituency (where data on ideological and political variables are likely to be missing), but at the level of individuals or mass public opinion. In so doing, we are following in the footsteps of Balistreri, and Scheve and Slaughter, both of whom use survey data to tackle the question of who is in favor of free trade, and why.<sup>9</sup> As Scheve and Slaughter point out, individual-level preferences regarding trade must lie at the heart of any rational choice account of policy formation, but using aggregate data provides only indirect information on agents' preferences, since "policy preferences and institutions together determine policy actions, so the mapping from preferences to actions is not unambiguous."<sup>10</sup>

Of course, using survey data has its own limitations. If the Heckscher-Ohlin trade model accurately describes the world, then that has profound (and negative) implications for the impact of global North-South trade on Northern wage inequality, and equally profound, but positive, implications for the impact of that same trade on Southern wage inequality. It might well have political implications for the ease with which the transition economies of Eastern Europe can be integrated into the European Union. Finally, it would clearly have intellectual implications for the way in which theorists should specify their models of endogenous tariff formation. Leaving aside measurement problems in attitude research (to which we return below), survey data on their own cannot tell us whether the Heckscher-Ohlin model in fact describes reality. All that they can tell us is that agents' preferences are consistent, or inconsistent, with the predictions of the model. Our claim is that findings of the latter, more cautious variety are useful, since the determinants of preferences matter in themselves, both intellectually and politically.

Our paper provides a brief discussion of what theory has to say about the impact of trade on skilled and unskilled wages, since it is this link that leads us to expect a relationship between skill and trade policy preferences. We introduce the data, including our measures of nationalist attitudes, and discuss the strengths and weaknesses of our evidence relative to the data used by previous authors. This paper provides an ordered probit analysis of the determinants of individual trade preferences in twenty countries, including both "economic" and "ideological" determinants. Finally, we conclude by drawing some preliminary inferences and outlining an agenda for future research.

9. Balistreri (1997), and Scheve and Slaughter (2001, p. 270).

10. Scheve and Slaughter (2001, p. 4, citing Rodrik (1995)). Since beginning this project, we have become aware of the simultaneous and independent work being pursued by Anna Maria Mayda and Dani Rodrik (2001), who use the same International Social Survey Program (ISSP) survey data as we do, and who reach many of the same conclusions.

### **Trade and Wages: A Theoretical Digression**

In a simple two country, two commodity, two factor (skilled and unskilled labor) framework, the links between trade and wage gaps are clear. Assume that Mexico is abundant in unskilled labor, and that the United States is abundant in skilled labor. Let NAFTA reduce the barriers to trade between the two economies. Mexico will export and produce more unskilled-labor-intensive products, and the demand for unskilled labor will increase. The country will import more skill-intensive goods, which will lead to a reduced demand for skilled workers, and a fall in the skilled wage. Wage inequality in Mexico will thus fall. Unskilled Mexican workers should favor free trade, while skilled workers should oppose it. Of course precisely the opposite scenario will occur in the United States. Skilled wages will rise and unskilled wages will fall. Thus in the United States it is the unskilled who should be protectionist, and the skilled who should favor free trade.

There have been several recent trade-theoretic papers exploring the ways in which the links between trade and income distribution become more complicated once we move away from simple two-by-two-by-two models. These contributions have been largely motivated by the fact that, while simple Heckscher-Ohlin logic might seem to suggest that globalization should lower skill differentials in the South, in fact differentials have widened in several developing countries (DCs) during the past twenty years (Wood, 1997). One possibility is that FDI, associated with trade liberalization, might lead to new skill-intensive activities being introduced into DCs.<sup>11</sup> Under such circumstances, the relative demand for skilled labor could rise in the South. Alternatively, if skilled labor and capital are complementary to some natural resource (for example, minerals), then liberalization in a resource-rich DC might increase skill premiums and inequality overall.<sup>12</sup> Clearly, allowing for more than two factors of production, or for links between trade and factor flows, or between trade and technology transfers, leads to theoretical ambiguity regarding the relationship between trade and wages. Nonetheless, it is interesting to ask whether the predictions of simple two-by-two models help to shed light on policy preferences generated in the admittedly complicated real world.

Even within a simple two-factor framework, however, there is another set of complications that has to be faced. Not all DCs are homogeneous. Instead,

11. Feenstra and Hanson (1996).

12. Kanbur (1999).

they differ greatly in their endowments of capital, labor, and skills. Davis points out that in a two-factor (capital and labor) world, a country may be globally labor abundant, but locally capital abundant, in the sense that it is capital abundant relative to other countries in the same “production cone.” For such a country, liberalization lowers wages.<sup>13</sup> By implication, a middle-income country such as Mexico might be skill abundant relative to countries like China and India. It might therefore protect its unskilled-labor-abundant sectors and might thus see skill premiums rising on liberalization.<sup>14</sup> There is, in fact, evidence that unskilled-labor-intensive sectors received the most protection in countries such as Mexico and Morocco prior to liberalization.<sup>15</sup>

The argument may have some relevance for this study. With the exception of the Philippines, our data set does not include any third world countries (see below). Rather it contains data for rich countries and for the transition economies of Eastern Europe. We will be interested to see whether there are different determinants of trade policy preferences in the latter group of economies than in the former, but the Davis article reminds us that while these countries may be poor relative to the West, they are rich and skill abundant relative to most of the rest of the world. In that sense, our sample is a truncated one, and the results need to be interpreted in that light.

In particular the Heckscher-Ohlin theory predicts that the highly skilled will favor free trade in the most skill-abundant countries (such as the United States). In these countries, a regression explaining protectionist attitudes should find a negative coefficient on skills. Whether the coefficient on skills in the least skill-abundant country in our sample should be positive or negative depends entirely on where that country fits in terms of the worldwide hierarchy of skill abundance. The sign of the coefficient is thus a priori unclear. In order to test the Heckscher-Ohlin theory, therefore, we will pursue two strategies. First, we will estimate models (for the entire sample of countries) of the form

$$PROTECT_{ij} = \alpha_i + \beta_1 SKILL_j + \beta_2 SKILL_j * GDPCAP_i + \beta_3 X_{ij} + \varepsilon_{ij}. \quad (1)$$

where

$PROTECT_{ij}$ : the extent to which individual  $j$  in country  $i$  is protectionist

$SKILL_j$ : a measure of the individual's skill

$GDPCAP_i$ : the GDP per capita of country  $i$

$X_{ij}$ : a vector of control variables.<sup>16</sup>

13. Davis (1996).

14. Slaughter (2000); Wood (1997).

15. Currie and Harrison (1997); Hanson and Harrison (1999).

16. Equations (1) and (2) are used for expositional purposes. However, because of the nature

In this setup, the test of whether the Heckscher-Ohlin theory holds is the sign of the interaction term,  $\beta_2$ , which should be negative, since in richer countries high-skilled workers should be more in favor of free trade (that is, less protectionist).<sup>17</sup>

Second, we run country-specific regressions of the form

$$PROTECT_j = \alpha + \beta_1 SKILL_j + \beta_2 X_j + \varepsilon_j \quad (2)$$

and compare the  $\beta_1$  coefficients across countries. Again, the test of the Heckscher-Ohlin theory is whether these coefficients are systematically lower (that is, more negative) in richer, more skill-abundant countries.

## Data

What do we need to accomplish our objectives? We need a data set that provides information on individuals' trade preferences, socioeconomic position, sociodemographic characteristics, and political attitudes. Since the Heckscher-Ohlin model predicts that skill levels will have different implications for trade policy preferences in different countries, the data should be cross-national in scope.

What we have are data provided by the 1995 International Social Survey Program (ISSP) module on national identity. The ISSP is an international consortium of survey research agencies that conducts comparative public opinion research on economic, social, and political issues across a wide range of countries on a regular basis. The sample in each country is a national representative random sample of the adult population designed to achieve a norm of 1,400 cases and, in any event, not less than 1,000 cases. Questionnaires are designed to be completed in fifteen minutes (not including a standard set of sociodemographic questions). Questionnaires are also designed to be suitable for self-administration.<sup>18</sup> The ISSP national identity survey was conducted in twenty-four countries in 1995–96. The countries concerned were: Australia,

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of the data, we actually estimate nonlinear ordered probit models, as explained below. As shown the specification incorporates country dummies, but we also experiment by running regressions without these country fixed effects.

17. We used country GDP per capita rather than educational attainment variables for reasons given later in this paper. This amounts to assuming that GDP per capita is highly correlated with country endowments of human capital.

18. Full details on the ISSP consortium, including details on membership, rules and procedures, and availability of data sets and technical reports can be obtained at [www.issp.org/info.htm](http://www.issp.org/info.htm).

West Germany, East Germany, Great Britain, the United States, Austria, Hungary, Italy, Ireland, the Netherlands, Norway, Sweden, the Czech Republic, Slovenia, Poland, Bulgaria, Russia, New Zealand, Canada, the Philippines, Japan, Estonia, Latvia, and Slovakia. The questionnaire (as implemented in the Republic of Ireland) is available on request.

Our dependent variable is the scaled response to a question that asked respondents how much they agreed or disagreed with the statement that their country “should limit the import of foreign products in order to protect its national economy” (question six in the survey). While in an ideal world one would like to have a battery of questions on trade policy preferences, we take this to be a reasonable operationalization of protectionist sentiment.<sup>19</sup> The data set also provides individual-level measures of a range of demographic, socioeconomic, and political variables. Among the socioeconomic variables, the most valuable from the point of view of testing the implications of trade theory is the respondent’s skill level. This is arrived at by coding the answers to questions on respondents’ occupation using the International Labour Organisation’s (ILO) ISCO88 (International Standard Classification of Occupations) coding scheme. ISCO88 is a radical revision of the ILO’s previous occupational coding scheme (ISCO68). The main thrust of the revision makes ISCO88 particularly relevant for our purposes. As Ganzeboom and Treiman put it, “the logic of the classification is mostly derived from skill requirements at the expense of industry distinctions” and the overall effort may “be seen as an attempt to introduce more clear-cut skill distinctions into ISCO88.” They go on to illustrate this point by noting that “whereas in ISCO68 all ‘textile workers’ were organized in a single minor group, irrespective of their skill level (thereby precluding distinctions based on skill), textile workers are now spread out over three different minor groups, depending on whether they do elementary labor, operate machines, or perform craft work.”<sup>20</sup> Similar changes were implemented for other manual occupations and, analogously, for nonmanual occupations. While a complex coding scheme of this sort allows for very fine distinctions between different occupations, we are interested in the four main skill categories provided by ISCO88. In brief, these are:

19. One might argue that the inclusion of the phrase ‘in order to protect its national economy’ is unfortunate in that it could bias responses in a protectionist direction by assuming that limiting imports is in some sense good for the economy. On the other hand, this is the way protectionist measures are defended in political discourse. Furthermore, we are interested in the relationships between this variable and our independent variables, not in estimating the absolute levels of support for protectionism. This objective is much less vulnerable to any response bias that may exist.

20. Ganzeboom and Treiman (1996, p. 206).

—Elementary occupations (that is, “simple and routine tasks, involving...with few exceptions, only limited personal initiative”).

—Plant and machine operators and assemblers, craft and related trades workers, skilled agricultural and fishery workers, service workers and shop and market sales workers, clerks.

—Technicians and associate professionals.

—Professionals.<sup>21</sup>

A fifth group, “legislators, senior officials, and managers,” does not have a skill coding under this four-step skill classification and were included as a separate, fifth skill category. Finally, we excluded members of the armed forces, since it was unclear what their skill levels were.

Unfortunately our use of the occupational coding in the 1995 ISSP survey created a complication which had to be faced. The survey that we are using coded occupation in three different ways, depending on the country in question. The ISCO88 coding scheme was used in twelve cases: Australia, Hungary, Ireland, East Germany, West Germany, Czech Republic, Poland, Slovenia, Canada, Russia, Slovakia, and Latvia. The earlier ISCO68 scheme was used in five countries: Norway, New Zealand, Bulgaria, Austria, and the United States. Finally, a further six countries (Britain, Italy, Netherlands, Sweden, Japan, and the Philippines) used a variety of national coding schemes. Estonia provided no occupational coding. It was, however, possible to reclassify the ISCO68 countries' occupation codes according to the ISCO88 classification. We were also able to derive an approximation to the ISCO skill classification from the country-specific occupational codes used in Britain, the Netherlands, and the Philippines. This left us with skill data for twenty of our twenty-four countries. We have had to omit the other four (Estonia, Italy, Sweden, and Japan) when estimating models involving skill.<sup>22</sup>

In addition to the foregoing reasonably objective economic variables, we will make use of a subjective economic variable, namely the stated willingness of people to move from one location to another in order to improve their standard of living or their work environment. Respondents were asked: “If you could improve your work or living conditions, how willing or unwilling would you be to move to another neighborhood or village; another town or city within this county or region; another county or region; outside [named country]; outside [named continent]?” Based on the responses to these ques-

21. ILO (1990, p.7).

22. We checked whether our results are dependent on our recoding schemes, by running separate regressions for our twelve ISCO88 countries, and the other eight countries for which we were able to obtain skill data. The results (available on request) were reassuringly similar.

tions, we derived two binary variables, indicating whether or not individuals were nationally mobile and internationally mobile.<sup>23</sup> Arguably those willing to relocate within the country should be more sanguine about the dislocation implied by free trade than those who are immobile. The rationale behind including the international mobility variable is to test Rodrik's argument that globalization is currently favoring internationally mobile factors of production (physical and human capital) over immobile factors such as unskilled labor.<sup>24</sup> By the same token, we also make use of a question which asks whether the respondent had ever lived abroad, on the basis that previous experience of living abroad may provide a signal regarding willingness to move again.

The ISSP national identity data set includes a wide range of indicators of nationalist attitudes. Rather than focusing on just one or two of these as indicators of what is, after all, a complex phenomenon, the approach taken here is to seek to identify an underlying dimension (or dimensions) of nationalism that would be measured by a subset (or subsets) of the items. An added advantage of this approach is that using multiple items to measure the same basic concept should improve the reliability of measurement. Factor analysis provides a statistical means of identifying the hypothesized dimension or dimensions.<sup>25</sup> A combination of a priori assessment of the individual items and exploratory factor analysis suggested a strategy of focusing on the following seven items (versions implemented in Ireland, other country/nationality labels substituted as appropriate):

—“Generally speaking, Ireland is a better country than most other countries.”

—“The world would be a better place if people from other countries were more like the Irish.”

—“I would rather be a citizen of Ireland than of any other country in the world.”

—“It is impossible for people who do not share Irish customs and traditions to become fully Irish.”

23. Details available on request.

24. Rodrik (1997). Although immigration to the United States, for example, has become increasingly unskilled in recent decades (Borjas, 1999).

25. Factor analysis is a generic term often used to cover both principal components analysis and factor analysis strictly speaking. Both are techniques that can be applied to a set of variables “when the researcher is interested in discovering which variables in the set form coherent subsets that are relatively independent of one another. Variables that are correlated with one another but largely independent of other subsets of variables are combined into factors. Factors are thought to reflect underlying processes that have created the correlations among variables” (Tabachnick and Fidell, 2001, p. 582).

**Table 1. Factor Analysis of Nationalist Items in ISSP National Identity Survey 1995<sup>a</sup>**

<i>Questions</i>	<i>Factor 1</i>	<i>Factor 2</i>
[Country] better country than most other countries	0.86	0.02
World better place if people from other countries more like the [nationality]	0.78	0.2
Rather be citizen of [country] than of any other country in world	0.61	0.29
Impossible for people who do not share [nationality] traditions to be fully [nationality]	-0.01	0.71
People should support their country even if country is wrong	0.20	0.63
Importance of having been born in [country] to be fully [nationality]	0.16	0.63
[Country] should follow own interests, even if conflicts with other nations	0.23	0.55
Percent variance	26.34	24.50

Source: Authors' calculations using data from ISSP National Identity Survey 1995.

a. Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization.

—“People should support their country even if the country is in the wrong.”

—“Ireland should follow its own interests, even if this leads to conflicts with other nations.”

—“How important do you think each of the following is for being truly Irish?” . . . “to have been born in Ireland?”

In each case, respondents were asked to rank their responses along a scale, in the case of the first six items, from one (strongly disagree) to five (strongly agree) and, in the case of the seventh item, from one (very important) to four (not at all important). The seventh item was reordered to make it consistent with the other six. Principal components analysis of these responses yielded two factors or underlying dimensions of nationalist attitudes. As can be seen from the rotated factor loadings in table 1, the first factor is a straightforward preference for and sense of the superiority of one's own country (here labeled patriotism). The second factor identifies a narrow or exclusive sense of nationality combined with a degree of chauvinism of the “my country right or wrong” variety (here labeled chauvinism). On the basis of this analysis, patriotism and chauvinism scores have been calculated by averaging responses across the relevant subsets of items identified in the factor analysis.<sup>26</sup>

Appendix table A-1 provides summary statistics for our key variables. As mentioned, “Protect” ranges from one to five, as do “patriotism” and “chauvinism.”

26. The Cronbach's alpha reliability coefficient for the three-item patriotism scale is .68 and the item-total correlations vary from .41 to .57. The four-item ethnic chauvinism scale is somewhat less satisfactory in this regard: an alpha of .53 and inter-item correlations ranging from .31 to .36.

“Skill” also ranges from one to five, reflecting the fivefold classification above. Note, however, that we do not include such a variable in our regression analyses, since there is no reason to believe that the gap between the first and second skill levels, say, is equivalent in its effects to the gap between the second and third levels. For this reason, we incorporate skill into the analysis by introducing a variety of dummy variables. The mobility variables are both categorical. Zero denotes immobility and one, mobility. As table A-1 makes clear, there is a lot of variation both between and within countries, which is exploited later in this paper.

This brings us to the advantages and disadvantages of our data set compared to the data used by other authors and in particular those used by Scheve and Slaughter.<sup>27</sup> The big disadvantage is that we do not have data on the sector in which respondents are employed. Thus, we cannot directly confront the Heckscher-Ohlin and specific factors world views, as other authors have done.<sup>28</sup> The big advantage is that we have data for not just one country, but twenty. Scheve and Slaughter find that low-skill workers in the United States favor protection, which is useful evidence consistent with the Heckscher-Ohlin model. But such a finding on its own does not preclude the possibility that low-skill workers everywhere have the same attitudes (which would be completely at variance with the predictions of such a model).<sup>29</sup> Our data set allows us to explore whether skill has a differential impact on attitudes across countries, and thus allows for a cleaner test of the Heckscher-Ohlin predictions. Finally, our data allow us to test these “economic” relationships while controlling for the effect of variations along two dimensions of nationalist ideology.

### **Determinants of Attitudes toward Protection**

We begin by looking at some crude country-level correlations. Table 2 takes the country means of seven variables (the six given in table A-1 and GDP per capita), and calculates the cross-country correlations between these variables. While this ignores the vast range of variation in attitudes within countries, the data are nonetheless instructive. Richer countries have higher skill levels and

27. Scheve and Slaughter (2001).

28. Nor do we have data on home ownership, another variable which Scheve and Slaughter (2001) found to be important.

29. For example, it might be the case that better-educated people everywhere are more flexible and able to cope with the rigors of the market, or even that they are more likely to understand the intellectual case for free trade.

**Table 2. Cross-Country Correlations**

	<i>Protect</i>	<i>Patriotism</i>	<i>Chauvinism</i>	<i>Skill</i>	<i>National mobility</i>	<i>International mobility</i>	<i>GDP per capita</i>
Protect	1.000						
Patriotism	0.127	1.000					
Chauvinism	0.691	0.105	1.000				
Skill	-0.271	0.223	-0.590	1.000			
National mobility	-0.376	0.126	-0.572	0.468	1.000		
International mobility	-0.151	0.012	-0.120	0.003	0.633	1.000	
GDP per capita	-0.482	0.383	-0.582	0.672	0.664	0.080	1.000

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

rates of internal mobility than poorer countries, and they also show more patriotism and less chauvinism. There is a strong positive correlation (+.691) between protectionism and chauvinism, but only a weak correlation between protectionism and patriotism. Skill, mobility, and income per capita are all associated across countries with pro-free-trade sentiments, rather than with protectionism.

However, our interest is in the determinants of protectionism at the individual level and table 3 provides some exploratory analysis. In all cases, the dependent variable is "protect," which as already mentioned is an ordered variable running from one to five. We therefore used ordered probit methods in estimating our relationships.<sup>30</sup> In each case, there is assumed to be a latent variable, *PROTECT\**, related to the independent variables as in equation (1):

$$PROTECT_{ij}^* = \alpha_i + \beta_1 SKILL_j + \beta_2 SKILL_j * GDPCAP_i + \beta_3 X_{ij} + \epsilon_{ij}. \quad (3)$$

There are also four cutoff points,  $\mu_1 - \mu_4$ , such that protect takes the value:

- One if *PROTECT\** lies below  $\mu_1$
- Two if *PROTECT\** lies between  $\mu_1$  and  $\mu_2$
- Three if *PROTECT\** lies between  $\mu_2$  and  $\mu_3$
- Four if *PROTECT\** lies between  $\mu_3$  and  $\mu_4$
- Five if *PROTECT\** lies above  $\mu_4$ .

The disturbance term is assumed to be normally distributed.

In this model, the probability that protect will take on the value one, say, is the probability that

$$PROTECT^* = \beta'Y + \epsilon < \mu_1, \quad (4)$$

30. For an introduction, see Greene (2000, chap. 19).

**Table 3. Exploratory Regressions: Ordered Probit<sup>a</sup>**

<i>Country dummies</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	<i>Yes</i>	<i>No</i>	<i>Yes</i>						
GDPCAP								-0.0163 (-13.2)	0.0034 (1.47)
Patriotism		0.1946 (20.35)	0.1722 (17.34)	0.1750 (17.14)	0.1734 (12.55)	0.1864 (14.05)	0.1527 (11.34)	0.2077 (22.04)	0.1750 (17.14)
Chauvinism		0.3369 (36.45)	0.3293 (34.8)	0.3301 (33.85)	0.3183 (23.7)	0.3594 (28.96)	0.3176 (23.43)	0.3382 (36.27)	0.3301 (33.85)
Skill345	-0.0816 (-2.16)	-0.0169 (-0.44)	0.0070 (0.18)	-0.0204 (-0.51)	-0.0913 (-1.81)	-0.0713 (-1.28)	0.0558 (1.04)	-0.0353 (-0.92)	-0.0204 (-0.51)
Skill345*GDPCAP	-0.0137 (-6.36)	-0.0104 (-4.75)	-0.0109 (-4.88)	-0.0095 (-4.16)	-0.0055 (-1.74)	-0.0074 (-2.50)	-0.0115 (-3.30)	-0.0039 (-1.80)	-0.0095 (-4.16)
National mobility			-0.0174 (-1.18)	-0.0048 (-0.31)	0.0181 (0.86)	-0.0113 (-0.56)	0.0095 (0.45)	0.0313 (2.05)	-0.0048 (-0.31)
International mobility			-0.1325 (-7.22)	-0.1179 (-6.2)	-0.1174 (-4.68)	-0.1218 (-4.97)	-0.0890 (-3.47)	-0.1025 (-5.46)	-0.1179 (-6.2)
Never lived abroad			0.1132 (6.35)	0.1043 (5.64)	0.1141 (4.67)	0.1015 (4.46)	0.0848 (3.29)	0.0234 (1.31)	0.1043 (5.64)
Age					0.0014 (2.98)	0.0022 (3.55)	0.0008 (1.21)	0.0022 (4.72)	0.0014 (2.98)
Woman					0.2222 (15.96)	0.2243 (11.66)	0.1863 (9.72)	0.2251 (16.31)	0.2222 (15.96)
Married					0.0333 (2.24)	0.0002 (0.01)	0.0446 (2.23)	0.0156 (1.07)	0.0333 (2.24)
Catholic					0.0667 (3.36)	0.0469 (1.72)	0.1155 (4.47)	0.1302 (9.06)	0.0667 (3.36)
Rural					0.1326 (5.84)				



(where  $Y$  is the vector of all independent variables), which is equivalent to the probability that:

$$\varepsilon < \mu_1 - \beta'Y, \quad (5)$$

or

$$\varphi(\mu_1 - \beta'Y), \quad (6)$$

where  $\varphi$  is the standard normal distribution. The probabilities that protect will take on any of the other possible values are similarly constructed. They depend on the respondent's characteristics,  $Y$ ; the vector of estimated coefficients,  $\beta$ ; the cutoff points, which are parameters to be estimated alongside  $\beta$ ; and the standard normal distribution.

It follows that the marginal effect of changing an independent variable on the probability of a given outcome depends not only on  $\beta$  but on the standard normal density function evaluated using a particular choice of  $Y$ . A significant positive coefficient implies that changing the relevant independent variable increases the probability that protect takes on the value five, and reduces the probability that protect takes on the value one. The marginal effect of changing such a variable on the probability that protect takes on the values two–four is, however, a priori unclear. Initially we will simply estimate ordered probit models and will loosely speak of variables being either positively or negatively related to protectionism. Marginal effects will be estimated later.

In nearly all cases we include a full set of country dummy variables, to take account of country-level effects operating on all individuals within a country (coefficients not reported). Each column in table 3 indicates whether these dummies have been included or not. For all other variables the table reports the coefficient, with the  $t$  statistic in parentheses below.

Equation (1) provides a preliminary examination of the impact of skill. *Skill345* is a binary variable which takes the value one if the respondent's skill level is either three, four, or five, and zero if his or her skill level is one or two.<sup>31</sup> In what follows, we will loosely speak of the variable as indicating whether a respondent is high-skilled or not. The equation relates protectionism not only to this variable, but to *Skill345* interacted with the country's GDP per capita (measured in thousands of U.S. dollars).<sup>32</sup> The results indicate that the high-skilled are more predisposed toward free trade than the low-skilled, and the interaction term suggests that this effect is greater in rich countries

31. We will explore other skill-related specifications later.

32. These are the World Bank's data for 1995 PPP-adjusted GDP per capita, in 1995 international dollars.

than in poor countries, just as Heckscher-Ohlin theory predicts. Equations (2) through (9) indicate that the latter finding is quite robust to the inclusion of other variables (although the former is not). Since it is the interaction term which is crucial in testing Heckscher-Ohlin theory, it seems that, so far, preferences are entirely consistent with that theory.

Equation (2) in table 3 establishes that patriotism and chauvinism are both positively related to protectionism, as expected, with chauvinism having a larger impact. A glance across the table confirms that these findings are also extremely robust to the choice of specification: the hypothesis that nationalism is an important determinant of attitudes toward trade policy is, on the basis of these results, confirmed. However, nationalist attitudes are not all-important. Taking them into account still leaves scope for skill differentials to have an effect in ways that, as noted above, are consistent with economic theory.

National mobility has no consistent effect on attitudes, which is perhaps a surprise, but those who consider themselves to be internationally mobile, as well as those who have lived abroad in the past, are more positively disposed toward trade, supporting Rodrik's arguments.<sup>33</sup> Older people tend to be more protectionist, as are rural dwellers, women, Roman Catholics, and those in marital relationships (although the latter finding is not robust across specifications). There is a statistically weak but positive link between trade union membership and public sector employment and protectionism, while the self-employed are more likely to be free traders, as are those who can be identified as right wing on the basis of the political party they support.<sup>34</sup> The last three variables measure familiarity with, and attitudes toward, relevant regional associations (for example, the European Union, in Ireland's case). There was a negative but statistically insignificant relationship between familiarity with the association and protectionism. But those who felt that their country did not benefit from the association, as well as those who felt that their country should be protecting its independence, were more likely to be protectionist.<sup>35</sup>

Finally we experimented with our specification by including country GDP per capita, with and without country dummies.<sup>36</sup> With country dummies omitted, richer countries tend to be associated with a higher preference for free trade, but this relationship goes away (and indeed the sign of the coefficient is reversed) when country dummies are introduced. More importantly for our

33. Rodrik (1997).

34. Data on these variables are not available for all countries.

35. Again these regional integration questions were only asked in a subset of our countries.

36. An additional country dummy is of course dropped in the specification involving both country dummies and GDP per capita.

purposes, the sign of the interaction term between high skills and GDP per capita remains negative and significant in both these specifications. Another noteworthy feature of these regressions is that when country dummies are excluded, the coefficient on Roman Catholicism becomes much larger and more statistically significant, suggesting that variation in religious beliefs might be explaining cross-country differences in protectionist attitudes, as well as within-country differences. Roman Catholic social teaching has traditionally been more skeptical of the market than some brands of Protestantism, so these correlations make intuitive sense. On the other hand, Catholicism could be proxying across our set of countries for the Mediterranean region, which might have more protectionist attitudes for reasons unrelated to religion.

Table 4 explores the links between skill levels and preferences in greater detail.<sup>37</sup> The first regression in table 4 uses five dummy variables reflecting the five skill categories, rather than the single high-skill variable used in table 3, and as before introduces them into the regression both on their own, and interacted with GDP per capita. Using this finer grid does reveal several relationships consistent with Heckscher-Ohlin theory. Most importantly the coefficient on Skill1 is negative, suggesting that the lowest skilled are in favor of free trade. But the interaction term is positive, suggesting that the association between being low skilled and having protectionist preferences rises with incomes. The coefficients imply that in countries with per capita incomes below \$11,942 in 1995 (roughly \$1,000 more than incomes in Slovenia), belonging to the lowest skill category is associated with a preference for free trade, but that in countries with incomes higher than that amount those in the lowest category are more likely to be protectionist. We take this to be strong evidence in favor of the Heckscher-Ohlin hypothesis. A similar sign pattern emerges for Skill2, although the coefficient on Skill2 itself (as opposed to its interaction term) is statistically insignificant. For Skill3 and Skill4 (but not Skill5), the sign of the interaction term becomes negative, again consistent with the theory, although the coefficients are statistically insignificant.

The second regression drops the interaction terms, but allows the coefficient on the high-skill variable to vary, depending on whether the economy is western, a transition economy, or the Philippines. In the West, high skills are strongly associated with a preference for free trade. They are also strongly associated with such a preference in the transition economies, although the coefficient is only about half the size as in the West. Finally the relationship

37. Country dummies were included for all regressions in tables 4 through 6.

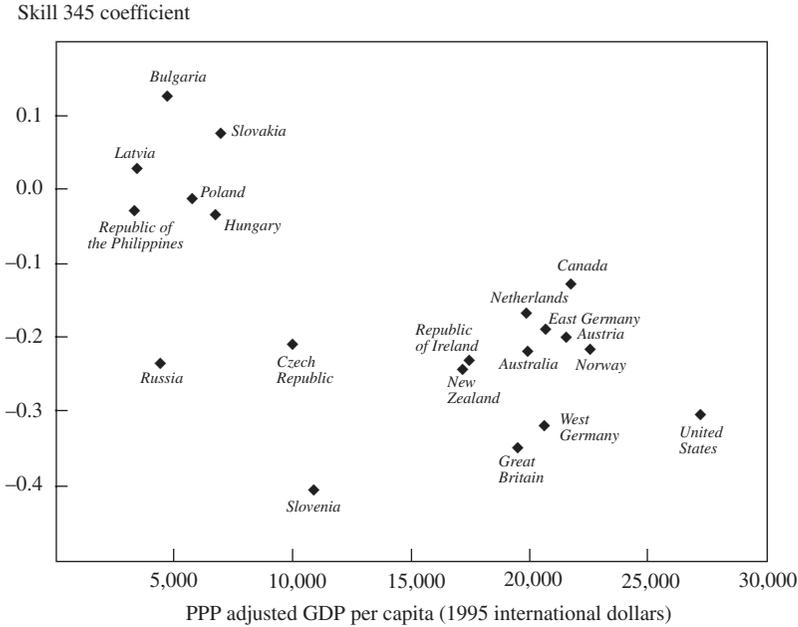
**Table 4. Different Specifications of Skill<sup>a</sup>**

<i>Variable</i>	<i>(1)</i>	<i>(2)</i>
Patriotism	0.175 (17.16)	0.175 (17.12)
Chauvinism	0.329 (33.73)	0.331 (33.92)
Skill1	-0.162 (-1.90)	
Skill1*GDPCAP	0.0136 (2.67)	
Skill2	-0.068 (-0.90)	
Skill2*GDPCAP	0.0087 (2.02)	
Skill3	-0.019 (-0.21)	
Skill3*GDPCAP	-0.0031 (-0.63)	
Skill4	-0.098 (-1.12)	
Skill4*GDPCAP	-0.0017 (-0.36)	
Skill5	-0.300 (-2.80)	
Skill5*GDPCAP	0.0056 (0.96)	
Skill345*DWEST		-0.212 (-9.99)
Skill345*DEAST		-0.104 (-3.80)
Skill345*DPHILIPPINES		-0.013 (-0.09)
National mobility	-0.005 (-0.35)	-0.005 (-0.33)
International mobility	-0.117 (-6.16)	-0.118 (-6.20)
Never lived abroad	0.102 (5.50)	0.104 (5.61)
Age	0.002 (3.37)	0.001 (2.90)
Woman	0.220 (15.69)	0.222 (15.97)
Married	0.031 (2.07)	0.033 (2.25)
Catholic	0.065 (3.29)	0.067 (3.36)
Cut1	-0.063	-0.055
Cut2	0.890	0.897
Cut3	1.608	1.615
Cut4	2.610	2.616
Number of observations	24,278	24,278
LR chi <sup>2</sup>	6097.800	6059.440
Prob > chi <sup>2</sup>	0.000	0.000
Pseudo R <sup>2</sup>	0.084	0.083
Log likelihood	-33265.257	-33284.436

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).  
*T* statistics are in parentheses.

a. Dependent variable is protect. Country dummies included (coefficients not reported).

Figure 1. Skill, Protectionism, and GDP



Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

in the Philippines is insignificant. Again this is suggestive evidence in favor of the Heckscher-Ohlin world view.

Table A-2 pursues the same issue in a different way, again using the single “high-skill” dummy variable. It runs identical regressions (data permitting) for each country individually. While interesting patterns emerge for several of the other variables, our focus here is on the skill variable. Figure 1 plots the “high-skill” coefficient, for each country, against that country’s GDP per capita. A clear negative association appears between the two variables (the correlation coefficient is  $-0.634$ ). That is, the richer the country, the more negative (less positive) is the association between high skills and protectionist attitudes. To the left of the picture, there is a cluster of poorer countries for which the coefficient on high skills is either close to zero or positive, while to the right of the picture are the rich countries in which high skills are clearly associated with a preference for free trade, rather than protection.<sup>38</sup>

38. We also ran a regression over the entire sample which included country dummies, the high-skill variable, and the high-skill variable interacted with country dummies (one country

Again, we take figure 1 to be strong evidence in favor of the Heckscher-Ohlin perspective. Of course, it might be objected that high skills are only associated with protectionism in three countries, and that the  $t$  statistics fall below conventional levels in all three cases (see table A-2). But we think that there is a convincing counter-argument (already suggested earlier in this paper), which, however, we are unable to provide evidence for given our current data set. Our sample of countries, while twenty times bigger than the samples used in previous studies, only contains twenty countries. There are many, poorer countries in which the high-skilled might be even more protectionist than in Bulgaria and Slovakia. One could imagine the negatively sloped relationship in figure 1 extending further to the left, with the countries of the world as a whole more evenly divided between those where skills are associated with protectionism, and those where skills are associated with liberal attitudes toward trade. Of course, this is pure speculation on our part. Nonetheless, the results we are able to obtain from these data seem entirely consistent with the insights of Eli Heckscher and Bertil Ohlin.

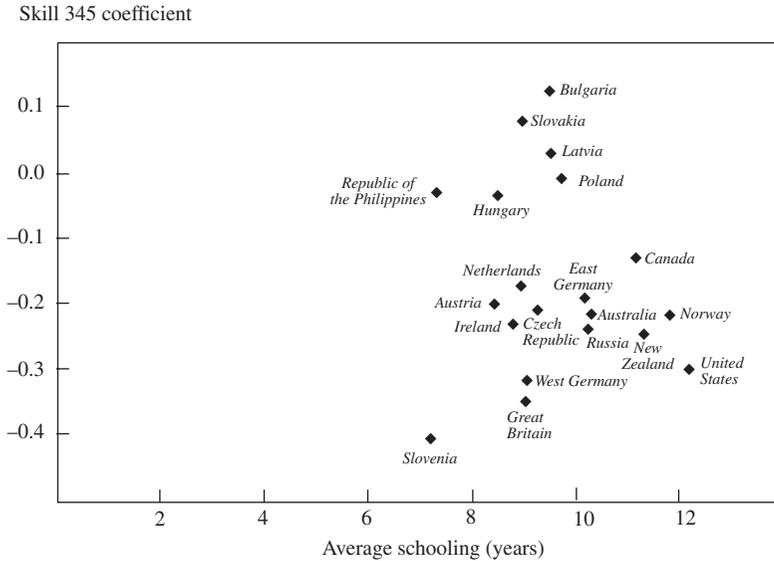
The evidence in figure 2, which plots the same coefficients against the average years of schooling in each country,<sup>39</sup> is less compelling. The correlation is much weaker (-.0993), and this is disturbing, since theory says that attitudes should be related to factor endowments, rather than income per capita. (The rationale for using income per capita is thus that it is correlated with the skill level of the population.) As can be seen from the figure, however, the Barro-Lee figures for schooling in several transition countries are very high. For example, average schooling is higher in Slovakia, Bulgaria, Latvia, and Poland than in the Netherlands, Ireland, and Austria. We doubt whether these figures provide a genuine reflection of the economically relevant human capital endowments of these economies, and thus doubt the usefulness of figure 2 as a test of the Heckscher-Ohlin theory.

Leaving aside the testing of trade theory for a moment, what other insights can be gleaned from table A-2? Patriotism and chauvinism are significantly related to protectionist attitudes in virtually all countries, with the size of the coefficients being fairly consistent throughout. Clearly, our findings regarding nationalism and trade policy preferences reflect a quite general phenomenon (at least in this sample of countries), rather than depending on

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was of course omitted). The interaction terms were jointly highly statistically significant (and several individual interaction terms were also statistically significant), indicating that the skill coefficients are indeed significantly different across countries.

39. Taken from Barro and Lee (2000).

**Figure 2. Skill, Protectionism, and H/L**

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and Barro and Lee (2000), available at ([www.cid.harvard.edu/ciddata/ciddata.html](http://www.cid.harvard.edu/ciddata/ciddata.html)).

strong correlations in a few countries. There are several exceptions to the general rule that the old are more protectionist. They are significantly more likely to favor free trade in East Germany, Poland, and Estonia, all former Communist countries, and coefficients are statistically insignificant in several countries. The finding that women tend to be more protectionist than men is, however, a fairly general one.

Table 5 investigates the data further, by estimating models separately for various sub-samples of the data. The first four columns take a further look at cross-country variations in the data by splitting the sample into its western and former Communist components.<sup>40</sup> The high-skill coefficient in column 2 is positive (and statistically significant at the 10 percent level) in the east, and the interaction term between skills and GDP per capita is negative and significant, consistent with both Heckscher-Ohlin theory and figure 1. The results in column 2 suggest that in countries with per capita incomes below \$4,215 (slightly lower than the Russian income) high-skilled workers are more likely to be protectionist, whereas they are more likely to support free trade

40. The Philippines is not included in either sample.

**Table 5. Sensitivity Analysis<sup>a</sup>**

<i>Equation Sample</i>	(1) <i>West only</i>	(2) <i>East only</i>	(3) <i>West only</i>	(4) <i>East only</i>	(5) <i>Men only</i>	(6) <i>Women only</i>	(7) <i>Immobile only</i>	(8) <i>Mobile only</i>
Patriotism	0.1672 (13.08)	0.1809 (10.18)	0.1699 (9.42)	0.1670 (7.20)	0.1772 (12.36)	0.1793 (12.26)	0.1760 (11.45)	0.1710 (12.42)
Chauvinism	0.3692 (30.64)	0.2766 (16.01)	0.3463 (20.17)	0.2938 (12.85)	0.3340 (24.37)	0.3250 (23.33)	0.3240 (22.61)	0.3350 (25.07)
Skill345	-0.1647 (-1.01)	0.1037 (1.66)	-0.6101 (-1.83)	0.1192 (1.24)	-0.0840 (-1.41)	0.0517 (0.96)	0.0240 (0.44)	-0.0640 (-1.08)
Skill345*GDPCAP	-0.0027 (-0.35)	-0.0246 (-3.33)	0.0205 (1.24)	-0.0329 (-2.53)	-0.0110 (-3.26)	-0.0079 (-2.55)	-0.0128 (-3.74)	-0.0067 (-2.08)
National mobility	-0.0089 (-0.46)	-0.0080 (-0.29)	0.0260 (0.96)	-0.0071 (-0.20)	-0.0111 (-0.50)	-0.0003 (-0.02)		
International mobility	-0.1150 (-5.01)	-0.1380 (-3.78)	-0.1380 (-4.47)	-0.1195 (-2.43)	-0.0936 (-3.54)	-0.1476 (-5.37)	-0.1510 (-3.55)	-0.1230 (-5.69)
Never lived abroad	0.1200 (5.63)	0.0861 (2.19)	0.1501 (5.24)	0.0574 (1.12)	0.1483 (5.85)	0.0646 (2.38)	0.1090 (3.82)	0.1010 (4.14)
Age	0.0003 (0.50)	0.0038 (4.28)	0.0015 (1.51)	0.0052 (3.85)	0.0027 (3.80)	0.0008 (1.22)	0.0010 (2.06)	0.0020 (2.32)
Woman	0.2810 (16.42)	0.1187 (4.70)	0.3143 (12.74)	0.1041 (3.11)			0.1970 (9.61)	0.2490 (13.03)
Married	0.0282 (.54)	0.0487 (1.82)	-0.0242 (-0.91)	0.0275 (0.74)	0.0125 (0.54)	0.0349 (1.74)	0.0610 (2.76)	0.0040 (0.20)
Catholic	0.0472 (1.84)	0.0887 (2.70)	0.0593 (1.64)	0.0217 (0.48)	0.0852 (3.06)	0.0478 (1.68)	0.0680 (2.24)	0.0610 (2.33)
Rural			0.1528 (5.02)	0.1496 (3.98)				
Unemployed			0.1067 (1.48)	0.0189 (0.19)				
Public sector			0.0035 (0.13)	0.0773 (1.71)				
Self-employed			-0.0432 (-1.18)	-0.1055 (-1.52)				
Trade union			0.0069 (1.40)	0.0100 (0.75)				
Cut1	0.0053	0.1404	-0.4000	-0.1878	0.0844	-0.4003	-0.0110	-0.0910
Cut2	1.0338	0.9306	0.7877	0.6078	1.0380	0.5692	0.8790	0.9080
Cut3	1.8017	1.5632	1.5314	1.2312	1.6756	1.3776	1.6260	1.6040
Cut4	2.9218	2.3338	2.6924	2.0111	2.6575	2.4011	2.5560	2.6810
Number of obs.	15977	7671	7887	4492	11811	12467	11499	12779
LR chi <sup>2</sup>	4556.3	1381.3	2058.3	833.9	3134.7	2822.2	2658.9	3280.1
Prob > chi <sup>2</sup>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R <sup>2</sup>	0.0957	0.0610	0.0885	0.0632	0.0866	0.0782	0.0780	0.0850
Log likelihood	-21523.6	-10640.3	-10595.9	-6176.5	-16522.4	-16631.2	-15622.3	-17579.1

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

T statistics are in parentheses.

a. Dependent variable is protect. Country dummies included (coefficients not reported).

in countries with higher incomes. The interaction term is insignificant within the West, which is again consistent with figure 1. There may be too little variation in the western data to pick up any relationship here.

The impact of gender appears to be much stronger in the West, although it is still strong in the East (consistent with Blanchflower, who finds that women are less satisfied with democracy). But age appears only to affect attitudes in the East.<sup>41</sup> Unemployment is weakly associated with protectionist attitudes in the west, but not at all in the east. Attitudes toward being unemployed may be quite different in a society undergoing rapid structural change than in a typical western economy. Interestingly, the impact of being rural appears to be almost identical in East and West. This is at odds with the intuition that western farmers should be more protectionist, since they are less competitive and more dependent on protection than their eastern counterparts. Of course agriculture is not the only rural industry, but it is the main one. The data are consistent with other rural characteristics of a sociological or even cultural nature driving these correlations.

We estimated the model for men and women separately. The results are given in columns 5 and 6. The most notable difference to our mind is that while age appears to matter for men, it does not matter for women. We were also interested in whether the gender effect was due to the fact that women are less likely to be in the labor force than men. We therefore estimated the model separately for those in the labor force and those outside it. The results (given in table 6) suggest that the gender effect is not due to lower female labor force participation, since the gender effect is actually stronger for those in the labor force than for those outside it.<sup>42</sup>

The last two columns in table 5 address the issue of whether those reporting themselves to be immobile (within the country) are less influenced by their skill type than those who are mobile. The reason for the question is that, arguably, the immobile should care more about their sector of employment (assuming that regions are largely dominated by particular industries). The hypothesis is rejected in that the interaction between skills and GDP per capita (the test of the Heckscher-Ohlin theory) is even stronger for the immobile than

41. Blanchflower (2001).

42. Moreover the gender effect remains unchanged when a labor force dummy variable is included in the model, estimated over the full sample (results available on request). We counted those in full-time and part-time work, as well as the unemployed, as being in the labor force. We could also have included those working less than fifteen hours a week and relatives assisting, but there were too few respondents in these categories (less than 500 across all countries) for this to be worthwhile.

**Table 6. Sensitivity Analysis: Labor Force Participation and Age<sup>a</sup>**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>In labor force?</i>	<i>In LF</i>	<i>In LF</i>	<i>Not in</i>	<i>Not in</i>	<i>Both</i>	<i>Both</i>	<i>Both</i>	<i>Both</i>
<i>Sample</i>	<i>West</i>	<i>East</i>	<i>LF West</i>	<i>LF East</i>	<i>West</i>	<i>East</i>	<i>West</i>	<i>East</i>
	<i>only</i>							
Patriotism	0.1521 (9.43)	0.2029 (9.64)	0.2019 (9.53)	0.1239 (3.68)	0.1672 (13.07)	0.1812 (10.19)	0.1663 (12.99)	0.1811 (10.18)
Chauvinism	0.3718 (24.69)	0.2776 (13.58)	0.3605 (17.75)	0.2789 (8.57)	0.3692 (30.62)	0.2772 (16.04)	0.3690 (30.61)	0.2767 (16.01)
Skill345	-0.1692 (-0.87)	0.0337 (0.50)	0.1633 (0.50)	0.3667 (1.86)	-0.1647 (-1.01)	0.0948 (1.52)	-0.0717 (-0.41)	-0.0697 (-0.67)
Skill345*age							-0.0020 (-1.55)	0.0038 (1.99)
Skill345*GDPCAP	-0.0029 (-0.31)	-0.0193 (-2.48)	-0.0167 (-1.07)	-0.0498 (-1.99)	-0.0027 (-0.35)	-0.0244 (-3.31)	-0.0029 (-0.38)	-0.0246 (-3.33)
National mobility	0.0098 (0.40)	-0.0283 (-0.87)	-0.0467 (-1.49)	0.0364 (0.65)	-0.0089 (-0.46)	-0.0105 (-0.38)	-0.0085 (-0.44)	-0.0117 (-0.42)
International mobility	-0.1321 (-4.76)	-0.0955 (-2.33)	-0.0801 (-1.94)	-0.2897 (-3.55)	-0.1150 (-5.01)	-0.1345 (-3.68)	-0.1160 (-5.05)	-0.1351 (-3.70)
Never lived abroad	0.1481 (5.56)	0.1278 (2.64)	0.0758 (2.12)	0.0240 (0.35)	0.1199 (5.63)	0.0856 (2.18)	0.1191 (5.59)	0.0892 (2.26)
Age	0.0000 (0.03)	0.0062 (4.18)	0.0001 (0.08)	0.0032 (2.19)	0.0001 (0.05)	0.0148 (3.13)	0.0003 (0.09)	0.0136 (2.86)
Age-squared					0.0000 (0.05)	-0.0001 (-2.37)	0.0000 (0.14)	-0.0001 (-2.30)
Woman	0.3059 (13.78)	0.1497 (4.91)	0.2316 (7.89)	0.0587 (1.26)	0.2810 (16.42)	0.1173 (4.64)	0.2793 (16.29)	0.1213 (4.79)
Married	-0.0023 (-0.09)	-0.0143 (-0.42)	0.0903 (3.09)	0.1340 (2.89)	0.0286 (1.44)	0.0243 (0.85)	0.0287 (1.45)	0.0264 (0.92)
Catholic	0.0441 (1.42)	0.0928 (2.31)	0.0605 (1.31)	0.0707 (1.22)	0.0472 (1.84)	0.0882 (2.68)	0.0465 (1.81)	0.0888 (2.70)
Cut1	-0.2033	0.3189	0.0707	-0.2083	0.2035	0.3440	0.0135	0.3059
Cut2	0.8476	1.1260	1.0620	0.5484	1.2319	1.1342	1.0419	1.0961
Cut3	1.5838	1.7013	1.8914	1.3419	1.9999	1.7670	1.8099	1.7290
Cut4	2.6954	2.4932	3.0286	2.0781	3.1200	2.5382	2.9302	2.5006
Number of obs.	9808	5242	6169	2429	15977	7671	15977	7671
LR chi <sup>2</sup>	2719.3	965.1	1749.5	386.0	4556.3	1386.9	4558.7	1390.9
Prob > chi <sup>2</sup>	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R <sup>2</sup>	0.0921	0.0611	0.0977	0.0572	0.0957	0.0612	0.0958	0.0614
Log likelihood	-13403.0	-7412.3	-8083.3	-3179.0	-21524	-10637	-21522	-10635

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

T statistics are in parentheses.

a. Dependent variable is protect. Country dummies included (coefficients not reported).

for the mobile. (We also experimented by including interaction terms between skill and mobility in various models, but these interaction terms are always insignificant.)

Finally, table 6 explores the effect of age on protectionist attitudes in greater detail. Consistent with our expectations, age squared has a negative coefficient in the East, suggesting that the marginal effect of age declines as respondents get older. Age remains insignificant in the West, but important in the East. Could it be that the overall correlation between age and attitudes is simply being driven by the length of time over which East-bloc respondents were exposed to Communist ideology? Two pieces of evidence suggest not. First, columns 7 and 8 in table 6 introduce an interaction term between skill and age. In the West the term is negative (and significant, at the 12.5 percent level), suggesting that the high-skilled become more pro-free trade the older they get. If respondents' human capital increases with age, as the labor economics literature suggests, then this is precisely what one would expect. On the other hand, in the East the high-skilled become more protectionist the older they get. This is consistent with the skills acquired under communism being largely irrelevant to a modern economy, and to these individuals' position in society being threatened by liberalization.<sup>43</sup> The second piece of evidence suggesting that age is influencing attitudes through economic channels is given in columns 2 and 4 of table 6. These show that the impact of age on protectionist attitudes is much larger for those in the labor force than for those not in it.

So much for statistical significance. What about the quantitative impact of these variables on attitudes toward protection? In order to answer this question, we began by estimating the model in column 4 of table 3, and then set all right-hand-side variables equal to their median values. Having done that, we calculated the impact of changing each individual independent variable on the probabilities that "protect" would take on each of the values one to five. For binary variables, we considered the impact of changing the variable from zero to one; for other variables we explored more complicated changes, as discussed below.

Our point estimates of the coefficients and cutoff points, together with the assumption that other variables are set equal to their median values, produce a point estimate of the impact of changing a given independent variable on the dependent variable. On the other hand, our coefficients are estimated with uncertainty. We therefore estimated our impact effects with 95 percent confidence intervals, to reflect the fact that different samples would have produced

43. Indeed labor economists have found that the "return to experience obtained under communism fell during the transition" (Svejnar 1999, p. 2839).

**Table 7. Simulating the Impact of Changing Dependent Variables**

Variable	$Pr(\text{protect}=1)$	$Pr(\text{protect}=2)$	$Pr(\text{protect}=3)$	$Pr(\text{protect}=4)$	$Pr(\text{protect}=5)$
Benchmark (simulated probability, equation 4, table 3)	0.0148	0.0954	0.1954	0.3833	0.3111
Impact of changing patriotism					
from 40th to 60th percentile	-0.0023	-0.0090	-0.0093	+0.0004	+0.0203
from 20th to 80th percentile	-0.0117	-0.0451	-0.0464	+0.0022	+0.1011
Impact of changing chauvinism					
from 40th to 60th percentile	-0.0062	-0.0249	-0.0267	-0.0005	+0.0582
from 20th to 80th percentile	-0.0247	-0.0901	-0.0894	+0.0065	+0.1977
Impact of being high-skilled					
when GDP per capita = \$5,000	+0.0027	+0.0103	+0.0106	-0.0007	-0.0229
when GDP per capita = \$15,000	+0.0072	+0.0263	+0.0253	-0.0042	-0.0547
when GDP per capita = \$25,000	+0.0128	+0.0436	+0.0390	-0.0109	-0.0844
Impact of					
being female	-0.0106	-0.0372	-0.0342	+0.0080	+0.0739
being internationally mobile	+0.0050	+0.0188	+0.0186	-0.0021	-0.0402
never having lived abroad	-0.0044	-0.0166	-0.0166	+0.0017	+0.0359

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

different coefficient estimates.<sup>44</sup> Full results, including confidence intervals, are given in table A-3. Table 7 provides a summary of the most important results (point estimates only).

The first row simply presents the simulated probabilities that an observation will take on any of the five values of the dependent variable, *protect*. As can be seen, there is nearly a 20 percent probability that *protect* takes on the value three, a 38 percent probability that it takes on the value four, and a 31 percent probability that it takes on the value five. The rows immediately below give the impact of changing our nationalism variables on all five probabilities. In the following discussion we focus on the probability that *protect* takes on the value five. Increasing patriotism from its fortieth to sixtieth percentile increases the probability that *protect* takes on the value five by two percentage points, with a 95 percent confidence interval of 1.79 to 2.28 percentage points (table A-3). Changing chauvinism from its fortieth to sixtieth percentile increases the probability that *protect* takes on its highest value by 5.8

44. All results were produced using *Clarify*, as described in Tomz, Wittenberg, and King (1999) and King, Tomz, and Wittenberg (2000).

percentage points. If these two variables are changed from their twentieth to their eightieth percentiles, the impact on protect is enormous. The probability of the most protectionist response occurring increases by 10.1 percentage points in the case of patriotism, an increase of 32 percent over the benchmark simulated probability. In the case of chauvinism, the impact is to increase the probability that protect equals five by 19.8 percentage points, an increase of 64 percent (with a 95 percent confidence interval of 18.4 to 21.2 percentage points). These are huge effects by any standards.

No other variable has an impact as big as chauvinism, although some come close. The interaction term between high-skill and GDP per capita in the equation indicates that the effect of being high-skilled on protectionist attitudes depends on how rich the country is. The next three rows therefore indicate the impact of being high-skilled in economies with GDPs per capita of \$5,000, \$15,000, and \$25,000, respectively. As the regression results (and Heckscher-Ohlin logic) suggest, the impact on protectionism is much greater in the richer countries. Thus, the probability that protect is five declines by only 2.3 percentage points in the poorest country, but by 5.5 percentage points in the middle-income country, and by 8.4 percentage points in the rich country (a fall of 27 percent). Clearly skill has a large effect on preferences in rich countries.

The only other variable to matter to this extent was gender. Being a woman increases the probability of the most protectionist response by 7.4 percentage points, or 24 percent. This is clearly a large effect. Being internationally mobile reduces the probability that protect takes on the value five by 4 percentage points, while never having lived abroad increases that probability by almost the same amount (3.6 percentage points). The other variables do not have a particularly large effect on attitudes (table A-3).

We then generated the simulated probabilities implied by the model given in column five of table 3. This allowed us to explore the impact of further variables, not available for all countries, on preferences (all results are given in table A-3). The simulated probability that protect would take on the value five was equal to nearly 26 percent. Being a rural dweller increases this probability by 4.4 percentage points, quite a large effect, but being unemployed only increases it (surprisingly, it might be argued) by 2.1 percentage points. Belonging to a trade union has almost no impact on attitudes, which again seems surprising. But being self-employed reduces the probability of an extreme protectionist response by some 2.6 percentage points.

### **What Have We Learned?**

There are a number of key results from this study.

First protectionist attitudes are strongly related to both patriotism and chauvinism. This is a quite general result across countries, and the effect is quantitatively as well as statistically significant. To that extent it would appear that trade policy preferences are heavily influenced by noneconomic—in this case cultural or ideological—factors. Nationalism is, of course, a complex phenomenon with many roots, including, as noted above, adverse economic experiences and conditions. A totally economic-determinist or reductionist explanation of nationalism is, however, implausible. It seems safe, therefore, to conclude that nationalist attitudes exercise some autonomous influence and are a significant factor in the genesis of protectionist policy preferences.

The second result is that even when cultural or ideological factors are taken into account, skill matters for policy preferences, and the effect that skill has on those preferences varies across countries in ways which are consistent with Heckscher-Ohlin theory. Roughly speaking, in countries with per capita incomes below \$12,000, the lowest skilled tend to be more in favor of free trade, while they tend to be more protectionist in countries above that income threshold. Belonging to one of the higher skill categories only shifts attitudes in a slightly more liberal direction in poor countries. The effect is a large one in rich countries. Finally, there seems to be a strong negative relationship between the impact of skills on protectionist attitudes, on the one hand, and income per capita on the other. That is, high skills are generally associated with a preference for free trade, and this effect is stronger in richer countries than in poorer countries. Indeed, in some of the poorest countries in our truncated sample, high skills are, albeit weakly, associated with a preference for protection.

Third we have found evidence of a pronounced gender gap regarding trade policy preferences, which is quantitatively important and apparently consistent across countries. We have no explanation for this phenomenon, though we note that it is consistent with findings regarding the persistence of gender differences in support for European integration even after controlling for the effects of a wide range of other variables.<sup>45</sup>

45. Wessels (1995, pp. 111–14). Similarly Carol Graham and Stefano Pettinato find that Latin American men are more likely to have pro-market attitudes (Graham and Pettinato, 2000), and to agree with the proposition that trade is “very important” to their country’s prosperity (Graham and Pettinato 2002).

In terms of the economic debates surrounding the determinants of protectionist attitudes, we have, as stated, found evidence broadly consistent with the Heckscher-Ohlin viewpoint. What we have not been able to do, given the data we are currently working with, is to compare the impact of skills on protectionist attitudes with the impact of the sector of employment. Nor have we been able to follow Scheve and Slaughter in exploring the impact of home ownership. We will shortly have access to a data set from the Republic of Ireland that includes both these variables, and we intend to pursue these questions via this avenue. Unfortunately, that analysis, like that of Scheve and Slaughter, will lack a cross-country comparative dimension. However, it is our intention in the future to organize the collection of relevant data across a broad range of countries that will allow us to address all these issues on an appropriate comparative scale.

**Table A-1. Summary Statistics, Selected Variables**

<i>Country</i>	<i>Variable</i>	<i>Protect</i>	<i>Patriotism</i>	<i>Chauvinism</i>	<i>Skill</i>	<i>National mobility</i>	<i>International mobility</i>
Australia	Obs	2398	2398	2339	2181	2407	2404
	Mean	3.997	3.956	2.952	2.934	0.619	0.204
	Std.dev.	0.988	0.677	0.862	1.262	0.486	0.403
W.Germany	Obs	1255	1248	1234	709	1171	1193
	Mean	3.083	3.089	2.672	2.677	0.638	0.220
	Std.dev.	1.232	0.922	0.960	1.074	0.481	0.415
E. Germany	Obs	604	596	589	306	569	577
	Mean	3.563	3.136	2.818	2.699	0.571	0.125
	Std.dev.	1.189	0.900	0.957	1.063	0.495	0.331
Britain	Obs	1043	1029	1016	1006	974	982
	Mean	3.723	3.535	3.322	2.613	0.574	0.231
	Std.dev.	1.004	0.817	0.830	1.174	0.495	0.422
United States	Obs	1343	1348	1281	1300	1336	1340
	Mean	3.707	3.972	3.113	2.746	0.738	0.166
	Std.dev.	1.016	0.705	0.841	1.204	0.440	0.373
Austria	Obs	1007	1007	1007	505	1007	1007
	Mean	3.873	3.871	3.422	2.638	0.393	0.127
	Std.dev.	1.163	0.820	0.888	1.256	0.489	0.333
Hungary	Obs	998	995	996	913	997	1000
	Mean	4.047	3.285	3.430	2.318	0.311	0.094
	Std.dev.	1.075	0.779	0.805	1.082	0.463	0.292
Italy	Obs	1093	1090	1090	0	1091	1094
	Mean	3.571	3.067	3.112	...	0.630	0.224
	Std.dev.	1.216	0.873	0.778	...	0.483	0.417
Ireland	Obs	991	994	988	908	987	986
	Mean	3.650	3.729	3.342	2.439	0.421	0.173
	Std.dev.	1.128	0.684	0.709	1.171	0.494	0.379
Netherlands	Obs	2071	2070	2052	1702	2035	2048
	Mean	2.912	3.065	2.881	2.791	0.639	0.250
	Std.dev.	0.992	0.789	0.812	1.018	0.480	0.433
Norway	Obs	1494	1492	1458	1280	1485	1491
	Mean	3.144	3.537	3.144	2.665	0.602	0.192
	Std.dev.	1.038	0.739	0.846	1.121	0.490	0.394
Sweden	Obs	1284	1274	1265	0	1245	1265
	Mean	3.228	3.290	3.042	...	0.590	0.288
	Std.dev.	1.081	0.800	0.869	...	0.492	0.453
Czech Republic	Obs	1109	1111	1099	970	1068	1104
	Mean	3.415	3.110	3.129	2.533	0.488	0.121
	Std.dev.	1.294	0.806	0.817	1.041	0.500	0.327
Slovenia	Obs	1036	1035	1035	823	1036	1036
	Mean	3.465	3.229	3.292	2.350	0.378	0.125
	Std.dev.	1.174	0.792	0.791	0.992	0.485	0.330
Poland	Obs	1582	1573	1556	1454	1094	1564
	Mean	3.787	3.456	3.458	2.221	0.441	0.187
	Std.dev.	1.083	0.731	0.714	0.914	0.497	0.390
Bulgaria	Obs	1102	1098	1095	996	1097	1099
	Mean	4.190	3.582	3.998	2.228	0.418	0.257
	Std.dev.	1.090	0.865	0.750	1.130	0.493	0.437
Russia	Obs	1585	1585	1585	807	1585	1585
	Mean	3.670	3.297	3.517	2.530	0.218	0.107
	Std.dev.	1.282	0.831	0.805	1.067	0.413	0.310

Table A-1 (continued)

<i>Country</i>	<i>Variable</i>	<i>Protect</i>	<i>Patriotism</i>	<i>Chauvinism</i>	<i>Skill</i>	<i>National mobility</i>	<i>International mobility</i>
New Zealand	Obs	1019	1015	996	633	1018	1021
	Mean	3.406	3.798	3.060	2.866	0.623	0.245
	Std.dev.	1.147	0.693	0.798	1.263	0.485	0.430
Canada	Obs	1525	1527	1496	923	1519	1519
	Mean	3.264	3.831	2.707	3.115	0.722	0.286
	Std.dev.	1.135	0.823	0.809	0.963	0.448	0.452
Philippines	Obs	1200	1200	1198	633	1200	1200
	Mean	3.624	3.613	3.430	1.790	0.469	0.279
	Std.dev.	0.918	0.633	0.564	0.897	0.499	0.449
Japan	Obs	1252	1252	1247	0	1256	1256
	Mean	2.919	3.931	2.890	...	0.318	0.076
	Std.dev.	1.282	0.740	0.950	...	0.466	0.265
Estonia	Obs	1221	1221	1221	0	1221	1221
	Mean	3.813	3.260	3.362	...	0.498	0.215
	Std.dev.	0.906	0.760	0.692	...	0.500	0.411
Latvia	Obs	1041	1026	1026	434	1027	1035
	Mean	4.042	3.146	3.252	2.816	0.251	0.135
	Std.dev.	1.180	0.831	0.828	1.136	0.434	0.342
Slovakia	Obs	1388	1388	1388	1222	1359	1388
	Mean	3.488	3.029	2.851	2.265	0.531	0.241
	Std.dev.	1.273	0.906	0.926	0.982	0.499	0.428

Source: Authors' calculations using data from ISSP National Identity Survey 1995.

**Table A-2. Country-Specific Models<sup>a</sup>**

<i>Variable</i>	<i>Australia</i>	<i>West Germany</i>	<i>East Germany</i>	<i>Great Britain</i>	<i>United States</i>	<i>Austria</i>	<i>Hungary</i>	<i>Italy</i>
Patriotism	0.240 (5.63)	0.128 (2.07)	0.246 (2.52)	0.159 (2.78)	0.286 (5.39)	0.057 (1.09)	0.053 (0.98)	0.174 (3.91)
Chauvinism	0.344 (9.76)	0.425 (7.12)	0.433 (4.85)	0.510 (9.18)	0.419 (9.54)	0.454 (8.97)	0.225 (4.62)	0.299 (6.01)
Skill345	-0.216 (-4.04)	-0.318 (-3.59)	-0.191 (-1.40)	-0.352 (-4.38)	-0.300 (-4.58)	-0.201 (-2.20)	-0.035 (-0.41)	...
National mobility	0.029 (0.51)	-0.215 (-2.23)	-0.338 (-2.38)	0.089 (1.08)	0.056 (0.74)	-0.158 (-1.94)	-0.052 (-0.62)	0.069 (0.94)
International mobility	-0.119 (-1.76)	-0.187 (-1.77)	-0.123 (-0.63)	-0.124 (-1.28)	0.001 (0.01)	-0.154 (-1.33)	-0.160 (-1.22)	-0.027 (-0.31)
Never lived abroad	0.102 (1.81)	0.188 (1.66)	0.443 (1.47)	0.073 (0.84)	0.099 (1.31)	0.174 (1.77)	-0.103 (-0.73)	0.271 (2.64)
Age	0.003 (1.66)	-0.002 (-0.37)	-0.013 (-1.96)	0.003 (1.08)	0.002 (1.18)	-0.003 (-1.38)	0.005 (1.90)	0.000 (0.19)
Woman	0.333 (6.29)	0.405 (4.53)	0.680 (5.06)	0.191 (2.54)	0.155 (2.44)	0.311 (4.34)	0.074 (0.98)	0.215 (3.28)
Married	-0.060 (-0.99)	-0.199 (-2.06)	0.125 (0.82)	0.005 (0.07)	0.113 (1.79)	0.180 (2.44)	0.010 (0.14)	0.152 (2.09)
Catholic	0.083 (1.33)	0.014 (0.16)	-0.166 (-0.46)	0.077 (0.61)	-0.031 (-0.42)	-0.076 (-0.83)	-0.033 (-0.42)	-0.130 (-0.84)
Cut1	-0.321	-0.177	0.047	-0.100	0.529	-0.173	-0.961	0.228
Cut2	0.863	0.971	1.255	1.228	1.431	0.750	-0.291	1.050
Cut3	1.401	1.728	1.912	2.040	2.223	1.267	0.468	1.567
Cut4	2.679	2.716	2.888	3.325	3.546	2.226	1.172	2.535
Number of obs.	1827	648	285	906	1225	985	930	1084
LR chi <sup>2</sup>	313.120	179.890	104.600	243.020	276.110	226.380	50.160	124.830
Prob > chi <sup>2</sup>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.067	0.091	0.120	0.098	0.083	0.083	0.021	0.039
Log likelihood	-2164.910	-899.460	-385.137	-1113.125	-1535.116	-1255.603	-1188.651	-1553.800

Source: Authors' calculations using data from ISSP National Identity Survey 1995. *T* statistics are in parentheses.  
a. Dependent variable is protect.

Table A-2. Country-Specific Models<sup>a</sup> (continued)

Variable	Czech							
	Ireland	Netherlands	Norway	Sweden	Republic	Slovenia	Poland	Bulgaria
Patriotism	0.197 (3.33)	0.073 (2.01)	0.218 (4.51)	0.337 (7.26)	0.154 (3.12)	0.254 (4.59)	0.171 (2.94)	0.103 (2.14)
Chauvinism	0.335 (5.63)	0.480 (12.71)	0.281 (6.83)	0.352 (8.39)	0.318 (6.82)	0.357 (6.57)	0.231 (3.99)	0.397 (7.41)
Skill345	-0.233 (-2.81)	-0.170 (-3.19)	-0.217 (-3.56)	... ...	-0.212 (-2.85)	-0.407 (-4.97)	-0.009 (-0.11)	0.128 (1.50)
National mobility	-0.038 (-0.44)	-0.036 (-0.65)	-0.098 (-1.52)	-0.113 (-1.62)	-0.068 (-0.94)	-0.090 (-1.09)	-0.009 (-0.11)	0.017 (0.21)
International mobility	-0.110 (-1.01)	-0.087 (-1.35)	-0.281 (-3.43)	-0.275 (-3.45)	-0.125 (-1.10)	-0.109 (-0.90)	-0.034 (-0.35)	-0.219 (-2.29)
Never lived abroad	0.139 (1.72)	0.123 (1.78)	0.160 (2.21)	0.135 (1.79)	0.034 (0.33)	0.069 (0.77)	0.142 (1.29)	0.161 (1.43)
Age	-0.002 (-0.88)	0.001 (0.69)	0.000 (-0.16)	0.006 (2.68)	0.010 (4.23)	-0.001 (-0.21)	-0.005 (-2.11)	0.002 (0.87)
Woman	0.371 (4.96)	0.335 (6.59)	0.235 (4.11)	0.506 (8.00)	0.217 (3.17)	0.109 (1.48)	0.034 (0.47)	0.019 (0.27)
Married	-0.035 (-0.45)	0.111 (2.07)	0.038 (0.59)	-0.070 (-1.02)	0.032 (0.44)	-0.082 (-0.97)	-0.102 (-1.30)	0.139 (1.74)
Catholic	0.051 (0.35)	0.061 (0.95)	-0.923 (-2.27)	-0.164 (-0.46)	0.095 (1.32)	0.064 (0.72)	0.057 (0.54)	-0.573 (-0.97)
Cut1	-0.149	0.097	-0.150	0.783	0.563	-0.071	-0.724	0.454
Cut2	1.147	1.551	1.072	1.769	1.315	1.171	0.198	0.750
Cut3	1.510	2.503	2.050	2.885	1.929	1.873	0.894	1.445
Cut4	2.679	3.794	3.228	3.990	2.709	2.702	1.838	2.181
Number of obs.	866	1827	1391	1186	994	876	951	1050
LR chi <sup>2</sup>	126.500	372.290	263.010	383.120	177.000	186.410	58.420	132.090
Prob > chi <sup>2</sup>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.053	0.074	0.067	0.110	0.057	0.071	0.022	0.053
Log likelihood	-1133.695	-2325.767	-1845.643	-1547.066	-1461.511	-1214.625	-1320.243	-1192.092

**Table A-2. Country-Specific Models<sup>a</sup> (continued)**

<i>Variable</i>	<i>Russia</i>	<i>New Zealand</i>	<i>Canada</i>	<i>Philippines</i>	<i>Japan</i>	<i>Estonia</i>	<i>Latvia</i>	<i>Slovakia</i>
Patriotism	0.201 (3.96)	0.120 (2.12)	0.117 (2.24)	0.127 (1.79)	0.142 (2.96)	0.135 (2.67)	0.140 (1.90)	0.288 (6.94)
Chauvinism	0.323 (6.31)	0.400 (8.05)	0.354 (6.47)	0.103 (1.31)	0.312 (8.16)	0.295 (5.22)	0.237 (3.22)	0.171 (4.46)
Skill345	-0.237 (-2.96)	-0.246 (-3.04)	-0.129 (-1.48)	-0.030 (-0.19)	...	...	0.030 (0.26)	0.078 (1.11)
National mobility	0.182 (1.97)	-0.035 (-0.44)	0.121 (1.27)	0.205 (2.18)	-0.004 (-0.06)	0.162 (2.14)	0.012 (0.10)	0.025 (0.39)
International mobility	-0.165 (-1.34)	0.005 (0.06)	-0.142 (-1.54)	0.030 (0.29)	-0.124 (-1.03)	0.083 (0.91)	-0.217 (-1.39)	-0.137 (-1.81)
Never lived abroad	-0.187 (-1.05)	0.140 (1.86)	0.028 (0.33)	-0.091 (-0.58)	0.091 (0.66)	-0.153 (-1.53)	0.162 (1.21)	0.120 (1.20)
Age	0.013 (3.53)	0.007 (2.88)	-0.005 (-1.31)	0.000 (-0.13)	-0.003 (-1.46)	-0.005 (-2.58)	0.014 (2.70)	0.004 (2.03)
Woman	0.201 (2.58)	0.242 (3.37)	0.169 (2.12)	0.083 (0.89)	0.389 (6.32)	0.127 (1.96)	0.003 (0.03)	0.133 (2.25)
Married	0.218 (2.58)	-0.177 (-2.27)	0.090 (1.03)	0.071 (0.68)	-0.070 (-0.99)	0.138 (2.00)	-0.179 (-1.43)	0.038 (0.62)
Catholic	...	-0.070 (-0.69)	0.187 (2.24)	-0.053 (-0.45)	0.415 (1.09)	0.433 (3.72)	0.376 (2.47)	0.087 (1.44)
Cut1	0.653	0.222	-0.305	-1.653	0.619	-0.770	0.124	0.285
Cut2	1.486	1.285	0.767	-0.121	1.127	0.375	0.786	1.050
Cut3	2.053	1.931	1.536	0.442	2.099	1.107	1.264	1.651
Cut4	2.774	3.001	2.591	1.968	2.718	2.543	1.834	2.455
Number of obs.	821	893	727	630	1228	1184	418	1346
LR chi <sup>2</sup>	127.990	159.410	81.440	14.850	166.810	107.660	47.200	204.910
Prob > chi <sup>2</sup>	0.000	0.000	0.000	0.138	0.000	0.000	0.000	0.000
Pseudo R <sup>2</sup>	0.052	0.060	0.038	0.010	0.044	0.036	0.041	0.049
Log likelihood	-1177.318	-1252.144	-1034.937	-775.849	-1817.111	-1425.143	-546.282	-1970.547

Source: Authors' calculations using data from ISSP National Identity Survey 1995. T statistics are in parentheses.  
a. Dependent variable is protect.

**Table A-3. Simulating the Impact on Preferences of Changing RHS Variables**

## A. Equation (4), table 3

<i>Simulated Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
Pr(protect=1)	.014755	.0014167	.0121608	.0177452
Pr(protect=2)	.0954396	.0055841	.0846833	.1061769
Pr(protect=3)	.195409	.0062344	.1829937	.2076478
Pr(protect=4)	.3832816	.0036822	.376044	.390276
Pr(protect=5)	.3111148	.0128818	.286102	.3362912

## First Difference: Change Patriotism from 40th to 60th percentile

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0023152	.0002286	-.0027948	-.001922
dPr(protect=2)	-.0090372	.0006171	-.0102836	-.0079466
dPr(protect=3)	-.0093477	.0005717	-.0105066	-.0082473
dPr(protect=4)	.0004353	.0007389	-.0010632	.001884
dPr(protect=5)	.0202647	.0012482	.0178992	.0227651

## First Difference: Change Patriotism from 20th to 80th percentile

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0117189	.0011616	-.0141546	-.0097234
dPr(protect=2)	-.045126	.0030677	-.051317	-.0397028
dPr(protect=3)	-.0463831	.0028001	-.0520588	-.0409887
dPr(protect=4)	.0021564	.0036593	-.0052714	.0093273
dPr(protect=5)	.1010716	.0061935	.0893281	.1134693

## First Difference: Change Chauvinism from 40th to 60th percentile

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0061805	.0005189	-.0072785	-.0051952
dPr(protect=2)	-.0248769	.001137	-.0270738	-.0226583
dPr(protect=3)	-.0266989	.0009393	-.0285721	-.0249653
dPr(protect=4)	-.0004574	.0020837	-.0047143	.0036249
dPr(protect=5)	.0582136	.0020582	.0541598	.0622817

## First Difference: Change Chauvinism from 20th to 80th percentile

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0247046	.0020259	-.0289362	-.0207627
dPr(protect=2)	-.0900888	.0039576	-.097731	-.0822445
dPr(protect=3)	-.0894131	.0031579	-.0956985	-.083667
dPr(protect=4)	.0065264	.0070095	-.0078236	.0199749
dPr(protect=5)	.1976801	.0069093	.1840308	.2115107

## First Difference: Impact of high-skill when GDP per capita = \$5000

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.0026699	.0012682	.0001494	.0052034
dPr(protect=2)	.0103182	.004741	.0006345	.0194862
dPr(protect=3)	.0105686	.0047525	.0006773	.0195221
dPr(protect=4)	-.0006657	.0010204	-.0030787	.0010019
dPr(protect=5)	-.0228909	.0102694	-.0420419	-.0014672

## First Difference: Impact of high-skill when GDP per capita = \$15000

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.0072067	.0009877	.0053957	.0093273
dPr(protect=2)	.0263177	.002958	.0206797	.0324438
dPr(protect=3)	.025299	.0026539	.0202207	.0305039
dPr(protect=4)	-.0041574	.0021097	-.0083383	-.0003163
dPr(protect=5)	-.0546661	.0057117	-.0655149	-.0436477

## First Difference: Impact of high-skill when GDP per capita = \$25000

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.0127708	.0020405	.0090668	.0170057
dPr(protect=2)	.0436224	.0054026	.0330583	.0541702
dPr(protect=3)	.0389498	.003894	.0312127	.0462664
dPr(protect=4)	-.0109429	.004037	-.019564	-.0036387
dPr(protect=5)	-.0844001	.008483	-.1006383	-.0677581

## First Difference: Impact of national mobility

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.0001647	.000602	-.0009862	.0013277
dPr(protect=2)	.0006607	.0024323	-.0039293	.0052194
dPr(protect=3)	.0007024	.002618	-.004298	.0055967
dPr(protect=4)	-3.03e-06	.0002122	-.0004342	.0004178
dPr(protect=5)	-.0015247	.0056915	-.0121468	.0094165

## First Difference: Impact of international mobility

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.0049903	.0009142	.0032012	.0068706
dPr(protect=2)	.0187507	.0030806	.0125397	.0248353
dPr(protect=3)	.0185949	.0029016	.0125033	.024531
dPr(protect=4)	-.0021242	.0015527	-.0053734	.0007657
dPr(protect=5)	-.0402116	.0062809	-.0528894	-.0271189

## First Difference: Impact of never having lived abroad

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0043958	.0009459	-.0064719	-.0026324
dPr(protect=2)	-.0166275	.0031617	-.0230548	-.0104391
dPr(protect=3)	-.016615	.0029039	-.0221301	-.010629
dPr(protect=4)	.0017006	.0015057	-.0010203	.0051738
dPr(protect=5)	.0359378	.006238	.0227924	.0476815

## First Difference: Impact of changing age from 30 to 60

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0015981	.0005331	-.0026549	-.0005986
dPr(protect=2)	-.0064954	.002123	-.010649	-.0024426
dPr(protect=3)	-.007031	.0023066	-.0115803	-.0026377
dPr(protect=4)	-.0001971	.0005872	-.0014513	.0008854
dPr(protect=5)	.0153217	.0050335	.0057954	.025114

## First Difference: Impact of being female

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0105906	.0009866	-.0127733	-.0087948
dPr(protect=2)	-.0371693	.0025282	-.0422877	-.0322484
dPr(protect=3)	-.0341823	.0023486	-.0386092	-.0295846
dPr(protect=4)	.0080248	.0027035	.0025342	.0136012
dPr(protect=5)	.0739175	.0049386	.0640913	.0829416

## First Difference: Impact of being married or living as married

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0013144	.0005919	-.002546	-.0002151
dPr(protect=2)	-.0051992	.0022952	-.009917	-.0009015
dPr(protect=3)	-.0054664	.0023992	-.01021	-.0009952
dPr(protect=4)	.0001146	.0004661	-.0008027	.0011273
dPr(protect=5)	.0118654	.0052007	.0021536	.0223169

## First Difference: Impact of being a Roman Catholic

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0023132	.0007333	-.0038933	-.0009683
dPr(protect=2)	-.0097175	.0029776	-.0159036	-.0042047
dPr(protect=3)	-.0109054	.0033224	-.0176632	-.0046724
dPr(protect=4)	-.0009572	.0008932	-.0029647	.0005849
dPr(protect=5)	.0238934	.0072726	.0102972	.0384006

## B. Equation (5), table 3

<i>Simulated Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
Pr(protect=1)	.0174649	.002789	.0127167	.0233261
Pr(protect=2)	.1264871	.0114484	.1065978	.1500246
Pr(protect=3)	.2110957	.009337	.1925624	.2294772
Pr(protect=4)	.3859744	.0055172	.3751257	.3963836
Pr(protect=5)	.2589779	.0198112	.2198795	.2959962

## First Difference: Impact of being rural

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0049403	.0010727	-.0071378	-.0030334
dPr(protect=2)	-.0228495	.0041677	-.0308445	-.0147179
dPr(protect=3)	-.0199502	.0036924	-.0268114	-.0128275
dPr(protect=4)	.0033016	.0028547	-.0020696	.0091907
dPr(protect=5)	.0444383	.0082096	.0288076	.0594362

## First Difference: Impact of being unemployed

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0023965	.0022055	-.0065941	.0020396
dPr(protect=2)	-.0109467	.0099035	-.0300374	.008259
dPr(protect=3)	-.0094249	.0085891	-.0270617	.006401
dPr(protect=4)	.0017947	.0024421	-.00296	.0070637
dPr(protect=5)	.0209735	.0191444	-.0142154	.060015

## First Difference: Impact of working in public sector

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0015352	.0009784	-.0034262	.0003988
dPr(protect=2)	-.0067115	.0042186	-.0146584	.0016643
dPr(protect=3)	-.0054888	.0034838	-.0121543	.0013485
dPr(protect=4)	.0015316	.0012789	-.0004131	.0044134
dPr(protect=5)	.0122039	.0077459	-.0029597	.0272057

## First Difference: Impact of being self-employed

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	.003982	.0015977	.0011853	.0072821
dPr(protect=2)	.0159954	.0059724	.0050317	.0280853
dPr(protect=3)	.0118232	.0043245	.0040024	.0206445
dPr(protect=4)	-.0053709	.0028221	-.0116064	-.0010744
dPr(protect=5)	-.0264298	.0096174	-.0462615	-.0088937

## First Difference: Impact of belonging to a trade union

<i>Change in Probability</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>[95% Conf. Interval]</i>	
dPr(protect=1)	-.0003211	.0002013	-.0007417	.0000625
dPr(protect=2)	-.0013806	.00085	-.003074	.0002784
dPr(protect=3)	-.0011037	.0006855	-.0024854	.000232
dPr(protect=4)	.0003517	.0002788	-.0000952	.0010108
dPr(protect=5)	.0024536	.0015179	-.0005132	.0055294

Source: Authors' calculations using data from ISSP National Identity Survey 1995 and World Bank (1999).

## *Comments and Discussion*

**J. David Richardson:** This paper is a treasure trove of fascinating patterns. It charts the correlates of answers to a question about whether a government “should limit the import of foreign products in order to protect its national economy” across a diverse array of individuals and countries of residence. Robust and memorable patterns from ordered probit regressions with elaborate and rich controls include the ways that:

- individual skills correlate negatively with protectionist sentiment, but the correlation weakens and even reverses as a country’s average standard of living falls,

- extreme, but not more moderate nationalism, correlates positively with protectionist sentiment, and

- union status hardly correlates at all with protectionist sentiment.

But I have two broad complaints. The first is about the paper’s repeated claim that its empirical patterns correspond to Heckscher-Ohlin theory. The second is about the authors’ seeming omission of sensible econometric approaches to interpreting their patterns and perhaps to uncovering new ones.

I find the authors’ attempt to root their specification and interpret their results using Heckscher-Ohlin trade theory to be intriguing, but not very compelling. They use the theory rhetorically—heuristically at best. There are two problems in how they argue. The more severe problem is that in a world with more than two inputs, Heckscher-Ohlin theory loses its sharp intuitive predictions about what happens to the returns to any single input when border liberalization occurs. It is no longer intuitively clear whether skilled or unskilled labor gains when other inputs (for example, physical capital) are in the background. A worker’s stake in liberalization is determined by “friendship/rival” relations

between the multiple inputs—and these are in turn determined by input substitution and complementarity relationships.<sup>1</sup> The second and less severe problem is that there are alternative trade theories to Heckscher-Ohlin that would explain why skilled workers are less protectionist in richer countries. One recent example (associated with Marc Melitz) is the theory that border liberalization increases the implicit scope of input markets and amplifies the dispersion of the rewards to every input group's heterogeneous membership. A more traditional example is one in which Ricardian technology differences across countries are associated with hard-to-measure quality-and-productivity differences in inputs that go by the same name (with "skilled labor" in rich countries being more productive than in poor countries).

In a similar vein, I applaud the authors' wide spectrum of econometric approaches, and suspect indeed that their empirical results are robust. But I think they neglected some potentially illuminating variations. For one example, though they report separate regressions by country, gender, and labor-force participation, they do not report separate regressions by age group (old-young, say, or old-young women, then men). Since age is important as a freestanding variable in determining Eastern European import-protection preferences, it seems natural to me to ask whether the skill coefficients or the patriotism-chauvinism coefficients differ significantly between old and young. Alas, I can't tell. Or for a second example, the estimated properties of the disturbance term in such split-sample regressions are intrinsically interesting. The estimated error variance is a measure of how diffuse the unexplained preferences are—are western preferences more "inexplicable" than eastern? Alas, I can't tell. More generally, the authors' assumption about the stochastic properties of the disturbance term seems always at the natural extreme—the stochastic properties are always common across observations, both in the full sample and in the various split samples. However I would like to know the effect of maintaining that assumption, but allowing the coefficients to differ across sample splits, testing for significant differences between the entire regressions over the various subsamples using something like standard F tests for probit regres-

1. Nor do the authors fully answer the implicit criticism of the multicountry models they cite in one paragraph. Even when the number of inputs is conveniently and intuitively two, say skilled and unskilled labor, the position of each toward border liberalization is determinate only in the two countries of the "world" that are most and least skill abundant, not in the "middle-abundance" countries. Nor is there any a priori theoretical reason to rank those middle-income countries by their proximity to either input-abundance extreme. Yet such ranking is precisely what the authors use to justify the key interaction term in their fundamental equation (1).

sions. Do Canadians determine protectionist sentiment “differently” than the British? Alas, I can't tell.

But I can tell a lot more at the end of the paper than when I started. And that's a fine commendation.

**Dani Rodrik:** Before I begin, a disclaimer. I stand in an awkward position vis-à-vis this paper as I have just completed (jointly with Anna Maria Mayda) a very similar paper.<sup>1</sup> We too use the ISSP 1995 survey, and focus on both the economic and noneconomic determinants of preferences over trade. Reassuringly many of our key conclusions coincide with those of O'Rourke and Sinnott, even though we have made somewhat different methodological choices. Since this compromises my status as a dispassionate critic of the present paper, I shall content myself with elaborating some of the striking features of this line of research.

As O'Rourke and Sinnott emphasize, there are two irresistible advantages of the ISSP data set. First, it is rich enough in content that we can look for the influence on trade attitudes of not just material self-interest, but of values, attachments, and identities. Second, the data have a cross-national dimension, allowing us to check for the validity of, say, the Stolper-Samuelson theorem in novel ways.

Indeed the evidence that emerges in favor of Stolper-Samuelson is strong and (in view of my own priors, at least) surprising. Previous studies, such as those of Scheve and Slaughter, have shown that higher-skilled individuals are more likely to be pro-trade in an advanced country such as the United States that is well-endowed with human capital.<sup>2</sup> This does not constitute direct evidence in favor of Stolper-Samuelson because it could well be that higher skilled individuals prefer free trade for other reasons than its anticipated distributive effect: they could simply be better informed about its efficiency benefits, for example. The evidence in favor of Stolper-Samuelson would be more compelling if we were to find that the relationship between an individual's skill and his attitude to trade weakens or reverses in countries that are poorly endowed with human capital. This paper, along with ours, are the first papers that present evidence of this kind.

Let me note here that in Mayda and Rodrik we use a different measure of skill, which is based on years of education.<sup>3</sup> O'Rourke and Sinnott use an

1. Mayda and Rodrik (2001). A third recent paper that uses the same survey is Beaulieu, Benarroch, and Gaisford, (2001).

2. Scheve and Slaughter (2001).

3. Mayda and Rodrik (2001).

occupation-based measure. Regardless of measure used, the pattern is the same, which is reassuring. Individuals with higher levels of human capital are in favor of trade, but only in countries that are well endowed with human capital. When we use education as a measure of human capital (as in our paper), the results are stronger in that we find one case where the relationship between pro-trade views and skills is reversed: the Philippines (the poorest country in our sample), where better-educated individuals are significantly less likely to be in favor of trade. Had the ISSP sample contained more low-income, low-skill countries, perhaps we would have had more such cases.

In Mayda and Rodrik we also test for the implications of the sector-specific factors model. We do that by establishing a concordance between detailed occupational codes (included in ISSP) and manufacturing industries. As mentioned above, O'Rourke and Sinnott use the occupational codes to infer skills instead, and therefore do not test separately for the sector-specific factors model. We find that individuals employed in import-competing industries are more likely to be in favor of trade restrictions (compared to individuals in nontraded sectors). Individuals in export-oriented sectors tend to be in favor of import restrictions as well (compared again to individuals in nontraded sectors), if less so than individuals in import-competing industries. In other words, controlling for preferences in nontraded industries, individuals in export-oriented sectors are on average more likely to be pro-trade than individuals in import-competing sectors. This finding can be rationalized within the sector-specific model by appealing to the presence of intra-industry (two-way) trade: individuals in export-oriented sectors still feel the pressure of imports and thus their attitudes to trade are intermediate: they do not favor trade as much as individuals in nontraded sectors, but neither are they as protectionist as individuals in import-competing sectors.

The fact that Stolper-Samuelson and the sector-specific factors model both find support in the data can in turn be interpreted as the result of differing time horizons or perceptions of mobility among the respondents. Individuals with long time horizons and greater mobility act in accordance with Stolper-Samuelson, while the others act in accordance with the sector-specific factors model. When we run a horse race between the two models, both survive.

O'Rourke and Sinnott's treatment of the noneconomic determinants of trade attitudes is particularly insightful. They usefully distinguish between patriotism and chauvinism, and find that both are powerful determinants of anti-trade attitudes (the latter somewhat more than the former). To the extent that protectionist attitudes are tied up with deep-seated values and norms, the

economist's usual trick of compensating losers is unlikely to be effective in fostering open trade. In Mayda and Rodrik we show that a large part of the cross-country variation in average protectionist attitude is explained by differences in feelings of patriotism/nationalism.<sup>4</sup> We also show that such protectionist attitudes are somewhat moderated when individuals have greater confidence in the working of domestic political and economic institutions.

The last point is an important one. Trade policy is often an arena where domestic political conflicts play out in full force—at the expense of other countries. The better the quality of conflict-management institutions, the more conducive the environment to compromise, and the more vibrant the level of economic activity, the less likely that purely protectionist forces will prevail. Relative income disparities and perceived social injustices are an important motivation behind protectionist pressures. As the O'Rourke and Sinnott paper shows, the narrow, materialist perspective of our trade models is a useful first step in understanding the determinants of protectionist attitudes, but it goes only so far.

**General discussion:** Barry Eichengreen pointed out that free trade is a subtle concept and education may show up differently than a skill variable as a determinant of pro-trade attitudes. He also suggested that whether or not there is an accountable government that can compensate the losers will matter both for attitudes toward trade as well as for how powerfully the Heckscher-Ohlin-Samuelson logic operates. He was concerned about regressing attitudes on attitudes, as it is not clear what are the primitive variables. Whether one is born Catholic is presumably exogenous. But if one feels good about one's nation and wants to protect the national industry from imports, which is the causal variable and the other the result? Frederic Pryor reported the results of an exercise he had carried out, looking at 200 or so questionnaires about protectionism in the United States from 1950 to about 1998. He expected to find attitudes toward protection declining as U.S. tariffs had declined, but attitudes toward protectionism have not changed very much over the last fifty years. He also found that the answers varied greatly depending on how the question was phrased and presumably what the people being questioned understood. For instance, 45 percent of the American population that was questioned did not know what a tariff was, so their answers to "do you favor tariffs?" are a bit difficult to interpret. This may account for the low pseudo-R-squares in the paper.

4. Mayda and Rodrik (2001).

Edwin Truman asked what the policy implications of the paper were, particularly with respect to the chauvinism/nationalism variable. He also wanted to know if the authors had uncovered any evidence of the sort that had been mentioned by Dani Rodrik in his comments, that greater confidence in a country's social security institutions moderates anti-trade feelings. Along the same lines, Gordon Hanson suggested that the data set may allow taking into account the fact that the institutions that mediate between preferences and policies vary systematically across countries, and that it may be possible therefore to say something about when individuals are going to be more concerned about import competition. Referring to his earlier work on the United States, Matthew Slaughter suggested that the reason less-skilled workers do not like freer trade may be because they have had really bad labor market outcomes, in real and relative terms. He wondered if the same was going on in many of the countries in the sample. He suggested caution in interpreting the results as a horse race between the Heckscher-Ohlin and the specific-factors models, because it may be the case that people think both about the very short run and the very long run, in which case industry and factor type may both matter. It seemed, from figure 1, that a lot of the countries in which the skill coefficients are around zero are in Eastern Europe, where, given the turmoil that has been going on in recent years, people discount the future a lot more heavily than they do in other countries.

With respect to the gender difference, Daniel Tarullo suggested looking at the psychology literature on differences in moral reasoning, which contains fairly robust findings for a different approach to these kinds of issues among men and women of similar education and economic backgrounds. He also echoed others' concern that the particular question being analyzed was somewhat loaded, crying for a nationalist response in those who have a tendency in that direction anyway.

Moreover, perceptions of what is at stake with trade almost surely vary with what is happening in the policy realm at the time that they are asked the question. At the time the database for the paper was put together, NAFTA was the issue in the United States, and so almost everything was surely seen through that lens. Carol Graham pointed out the only real developing country in the sample is the Philippines, which is fairly different. In her own work on Latin America, Graham had found the opposite result, at least in terms of support for an index of market-oriented policies, of which trade is one of the three: skilled or more educated people are much more in favor of market-oriented policies than unskilled workers. Susan Collins suggested that the gender dif-

ference might be accounted by the fact that women are perhaps more concentrated in import-competing industries, as they are in the United States.

Kevin O'Rourke responded that it would be a good idea to add more interactions with country-level variables such as institutions or cross-industry dispersion of tariffs as well as looking at correlations between their skill variables and patriotism and chauvinism variables. With regard to the question being loaded, he reiterated Rodrik's point that the analysis could not shed light on the average levels of protectionism, but on the dispersion around the mean. On Latin America, he pointed out, referring to work by Hanson and Harrison, that if those countries have been protecting the labor-intensive sectors, if skill differentials have widened, and if the high-skilled are in favor of reform, that would all be consistent with Heckscher-Ohlin.

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