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Working Paper

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Diskussionspapier, No. 115

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Suggested Citation: Dluhosch, Barbara; Horgos, Daniel (2012) : Trading up the happiness ladder, Diskussionspapier, No. 115, Helmut-Schmidt-Universität - Universität der Bundeswehr Hamburg, Fächergruppe Volkswirtschaftslehre, Hamburg, https://nbn-resolving.de/urn:nbn:de:gbv:705-opus-29648

This Version is available at:
https://hdl.handle.net/10419/71096

Diskussionspapierreihe
Working Paper Series

Helmut Schmidt
Universität
Universität der Bundeswehr Hamburg

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Nr./ No. 115
März 2012

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Redaktion / Editors

Helmut Schmidt Universität Hamburg / Helmut Schmidt University Hamburg
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Trading Up the Happiness Ladder

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Zusammenfassung/ Abstract

How globalization affects happiness is highly disputed. Several studies use an index that amalgamates globalization's different dimensions into a single variable. Unlike previous studies and in order to better illuminate its facets, we adopt a disaggregated perspective on trade (policy) data. Distinguishing actual trade flows and the option value of trade, we find the former to slightly depress happiness, the latter to significantly promote happiness. Segmentation of WVS-data shows that the positive connotation is concentrated in low-income countries still in the process of climbing the income ladder, thus backing the notion of a shift in values.

JEL-Klassifikation / JEL-Classification: F13, I31

Schlagworte / Keywords: Happiness, Well-Being, International Trade

I. Introduction

The theorem on the gains from international specialization absent distortions is legendary in economic theory. Ever since Adam Smith (1776, Books I and IV, Ch. 3) the prevalent view in theory holds that international specialization implies a win-win situation to both parties of the trade. When discovering the underlying principle of comparative advantage Ricardo (1817) even optimistically concluded that "[The] extension of foreign trade [....] will very powerfully contribute to increase the mass of commodities, and therefore the sum of enjoyments" (Ch.7.1). Adopting a consistent opportunity-cost perspective, von Haberler (1930) showed that the principle and thus the "enjoyments" are by no means restricted to Ricardo's labor theory of value but extend to a wide set of specialization patterns.

Globalization, however, does not seem to be embraced by everybody – despite its apparent "enjoyments". In fact, almost nowhere seems the difference between the proclaimed enjoyments and the public stance as large as in the evaluation of globalization. The gap between theory and actual politics speaks volumes. In trying to explain the dissent standard economic theory usually refers to the impact globalization might have on the within-country income distribution, either between factor owners along Stolper-Samuelson lines (1941) or industry cleavages as suggested by Magee (1980): the former predicts that the comparatively abundant factor of production in a country will enjoy gains from trade whereas the scarce factor will face a decline in its real income, the latter that all factors employed in an industry with a comparative disadvantage will suffer a real income loss. While both of these reasons are more objective in nature as they are clearly measurable on an income scale, the suspect we will put to the test is more subjective in nature: it relates to how the consequences of globalization are individually perceived rather than commonly assessed according to some generally accepted metric such as income. Differences in the evaluation of globalization may be either due to a gap between actual effects and how they are individually perceived or due to the economists and the affected individuals using different metrics when rating outcomes. Caplan (2002, 2008) provides ample, though mostly non-trade related, evidence on differences and their importance when it comes to politically selling and implementing policy measures, as does Kemp (2007) with a particular focus on trade.[1]

The vast number of related studies on individual perceptions with respect to trade and globalization focus on quite narrow a definition of the dependent variable, namely trade opinion.[2] Moreover, they try to closely track predictions of standard trade theory, such as whether endowment or industry of employment explain individual attitudes with respect to trade. By doing so, these studies share in the classic assumption of political-economy models that individuals are primarily motivated by (material) self-interest, that is, personal income and distributional concerns. However, thus far, results are somewhat mixed. Scheve & Slaughter (2001), for instance, by combining US data from the 1992 National Election Studies (NES) survey with US data on tariffs and industry structure, empirically reestablished the case for factor-proportions theory and the Stolper-Samuelson theorem when it comes to pro- and anti-trade sentiments.[3] They found factor type to matter, and more so than industry of employment: in their study, lower skill correlated with preferences

[1] Some studies, as for example Baker (2005) or Broda & Weinstein (2006), lean towards the subjective component in that they try to explore the role of tastes and variety and availability of goods on welfare and attitudes towards trade. Yet, tastes may vary too much across countries to deliver meaningful results on the reasons for dissent.

[2] Surveys of public opinion are not unproblematic though, but have their own difficulties. For a discussion in case of surveys on trade opinion see Hiscox (2006).

[3] Scheve & Slaughter also provide a comprehensive survey of the previous empirical literature on the political economy of trade, mostly with a focus on a single country and in search for Stolper-Samuelson effects versus specific factors as explanans.

for barriers to trade (as did home ownership, although the latter independent of factor type). Based on the 1995 data set of the International Social Survey Program (ISSP), the third wave of the World Value Survey (WVS), and a wider set of countries than just the US, Mayda & Rodrik (2005) found similar evidence in support of Stolper-Samuelson issues.[4] They considered the evidence in favor of personal income along Stolper-Samuelson lines a "...robust result and perhaps... (the) strongest single finding" (p.1395). Unlike previous studies, though, they speculate that non-economic issues at the individual level (e.g. socio-democractic variables) might play at least as much a role in the formation of attitudes towards trade as the narrow personal income impacts of trade (ibid.).

Both of these studies in support of Stolper-Samuelson concerns have been challenged by Hainmueller & Hiscox (2006). Using the NES and the ISSP data sets, they see protectionist sentiments correlated with low education levels rather than with traditional factor abundance theory stressing that the two of them do not always go in tandem – unlike one might suppose prima facie. With education comes a more cosmopolitan perspective and better information about aggregate effects and thus a more trade-friendly attitude, independent of whether individuals are members of the paid work force or not. Likewise, Mansfield & Mutz (2009), draw on two sets of representative surveys and reject at least for the US the notion of either factor or industry cleavage explanations of trade opinion.[5] Rather than individual self-interest, they present evidence that attitudes are shaped by perceptions about how the US economy as a whole is affected by trade. As the authors point out, the aggregate performance does not necessarily bear a strong relationship with a more narrow interpretation in the form of self-interest of individuals. Rather the two of them carry their own weight. Milner & Tingley (2011) share in the emphasis on aggregates as opposed to individuals or interest groups along factor proportions or industry lines. In fact, they adopt an even wider perspective in that they include foreign policy pressures in addition to domestic cleavages as explanans and foreign aid on top of international trade as explanandum. Interestingly, they identify voting behavior on trade bills in the US House of Representatives from the 96th to 108th Congresses as primarily driven by presidential foreign policy concerns (as opposed to pressures from interest groups in local constituencies).[6] Hence, though the overall picture is less from clear, recent evidence increasingly points towards aggregate variables somewhat outperforming personal income concerns in the formation of individual trade opinion.[7]

However, trade opinion is a rather narrow concept referring to a meta-level when it comes to the individual evaluation of globalization and trade.[8] In order to account for the many dimensions in which trade and globalization might be individually perceived and subjectively amalgamated, some studies see a promising route in shifting attention towards the metric and in focusing on a much broader metric. They regress the internationalization of economies not on narrow concepts such as trade opinion but on happiness or other measures of life satisfaction gathered from surveys. In fact, the weak evidence in favor

[4]For a similar approach using the 1995 and 2003 ISSP data set respectively, see O'Rourke & Sinnott (2001) and, with a focus on intra-industry trade liberalization, Beaulieu, Benarroch & Gaisford (2011).

[5]Based on their findings they conclude that "Unfortunately, the explanatory value of these models has been quite limited to date, and even simple demographics often explain more about trade preferences than variables linked to either model." (p. 429)

[6]Kleinberg & Fordham (2010) illuminate the nexus in the other direction, exploring, how trade and its impacts shapes attitutes towards foreign policy in general. Notably, following Milner & Tingley (2011), the embedded-liberalism hypothesis according to which per-capita spending on welfare influences trade opinion does not stand up to the facts.

[7]The evidence on macro-variables affecting trade opinion also eclipses shifts in reference groups as possible determinants of individual happiness when evaluating one's own happiness in the process of globalization as, for instance, suggested by Becchetti et al. (2010) and Van Praag (2011).

[8]In addition, it may be more relevant with respect to economic policies in direct rather than indirect democracies as in case of the latter perceptions on trade and other policies and may be harder to disentangle in the data.

of factor cleavages found by a number of studies might have something to do with the well-known Easterlin paradox that surfaced in happiness studies (see e.g. Di Tella et al., 2003; Gul & Pesendorfer, 2007; Stevenson & Wolfers, 2008; Sacks et al., 2010; or the surveys by Frey & Stutzer, 2002 or Clark et al. 2008): while not undisputed, the Easterlin paradox refers to the fact that many of those studies revealed a significant cross-sectional evidence that higher per-capita income correlates with higher reported subjective well being whereas many longitudinal examinations were not able to lend support to the notion that an increase in incomes increases average happiness (see in particular Easterlin, 1974; 1995; 2005a; 2005b). Yet, the majority of happiness studies is micro-oriented, concentrating on socio-economic variables such as age, health, religion, marital status, number of children etc. and thus remains at a purely individual level. The group of macro-oriented studies is considerably smaller.[9] Yet, in light of the previously cited results on trade opinion suggesting that macro-variables do play a considerable role, a macro-approach, supplemented by individual controls, seems the natural extension. At any rate, the poor performance of income measures with respect to well being may be partly responsible for the weak empirical evidence of income cleavages in recent trade studies.

In this spirit, Bjørnskov et al. 2008 focus on the link between individual life satisfaction in the 1997-2000 WVS and globalization. They find that openness as traditionally measured by the sum of exports and imports over GDP does raise satisfaction, independent of income groups. However, though significant, the impact is fairly small. Broader measures of globalization including synthetic indices that merge political, social and economic dimensions of globalization like the KOF-index[10] show no clear pattern across income groups. At any rate, they turn out to be insignificant, as is the case with the average import tariff rate. However, the latter two approaches might reflect neither subjective weights (in case of the synthetic globalization index) nor effective rates of protection (we will shortly come back to this issue) and thus must be treated with caution. The same applies to Hessami (2011) who also uses the synthetic globalization index developed at the KOF Swiss Economic Institute and finds that globalization thus measured increases life-satisfaction as reported in the 2001 Eurobarometer survey of the EU-15. In fact, as has already been convincingly shown by Scheve & Slaughter (2004), results relying on the mingling of different dimensions of globalization are to a substantial extent driven by subcomponents in the index (in particular FDI), with the individual effects skewed in the aggregation and overall numbers most likely to be misleading.[11]

Di Tella & MacCulloch (2008) differs from those broader index-studies twofold, namely with respect to their approach and their results. As to the approach, they concentrate (inter alia) on how openness with respect to trade in particular affects happiness. And in contrast to studies working with artificial indices, they find that happiness scores as reported in the Euro-Barometer Series and the US General Social Survey are negatively correlated with openness to trade as measured by the sum of exports and imports over GDP. They consider the negative effect as due to trade flows being ultimately associated with risk and exposure to external shocks that include the probability of job loss.[12] Yet,

[9] See also Helliwell (2003) on the general importance of the linkage between the individual and the societal level and, with particular reference to globalization (though retaining largely a Canadian focus), Helliwell (2002).

[10] See Dreher et al. (2008) for details on the index and with the respective data available for download at http://globalization.kof.ethz.ch/ (accessed July 29, 2011).

[11] For a completely disaggregated perspective trying to track the individual sociological impacts of globalization on a purely micro-data level within the Asian populations see Tsai (2007) and Tsai et al. (forthcoming).

[12] The negative effect prevails despite controlling for income effects which may at least partially outweigh any negative impact of increased variability. The interaction of trade with the personal income position is significantly positive at the 1 percent level though, suggesting that negative concerns about trade are mainly clustered around the low-income earners. A similar pattern emerges with respect to skill-

the negative effect is only weakly significant at the 8 percent level.

In order to avoid entangling of various dimensions of globalization each of which, when considered separately, may be perceived very differently, we adopt a disaggregated perspective in that we concentrate on trade, as did Di Tella & MacCulloch. In addition, we distinguish between actual trade flows and trade freedom when tracking the impact of trade on happiness. While the former is self-explaining and very much in line with earlier work on the topic, trade freedom follows a different tack. As to trade freedom, we use data provided by the Heritage Foundation. The Heritage Foundation publishes on a regular basis how countries score in terms of the absence of tariff and non-tariff barriers with respect to exports and imports of goods and services. By drawing on trade freedom we, unlike previous research, take account of the fact that there has been a substantial shift from tariff to non-tariff barriers to trade.[13] Moreover, our approach posits that trade freedom exerts an effect on happiness independent from actual trade flows as displayed by the traditional openness indicators. On face of it, one might conjecture that trade flows are the outcome of trade freedom and that both result from the political economy of trade policy and interest groups successfully lobbying for trade restrictions. Yet, our empirical analysis shows that the two are obviously perceived quite differently and that to a certain extend they even operate in opposite directions. The difference might probably best be interpreted as trade freedom reflecting the option value of trade rather than the trade impacts already realized via actual trade flows. If at all, former studies examined how overall freedom rather than trade freedom in particular affects individual happiness according to surveys (e.g. Veenhoven 2000; Veenhoven & Berg; Verme 2009).

In line with studies showing that unemployment at the macro level (e.g. Blanchflower 2009; Di Tella et al. 2003; Wolfers 2003) and individual employment status (e.g. Clark & Oswald 1994; Winkelmann & Winkelmann 1998) exhibit a considerable leverage on happiness, we explicity control for both the macroeconomic unemployment rate (which might reflect the risk and fear of becoming unemployed) and individual employment status besides income. As suggested by Davidson et al. (2010), Frijters & Geishecker (2008) as well as Geishecker (2010), perceived job insecurity and the fear of job loss might even be exacerbated with trade.

By means of an ordered probit model we show in particular that trade freedom exerts a significantly positive effect on individual happiness as reported in the World Values Survey while actual trade flows marginally lower happiness, though not significantly. Segmentation of data into low and high income economies reveals in addition that the positive association of trade freedom is to a significant extent concentrated in low income economies, whereas in high income economies trade freedom is preceived positively but insignificantly so. Actual trade flows, by contrast, have a significantly depressing effect on happiness in low income economies, but not in high income economies. Notably, the usual other suspects such as income and unemployment rates exhibit the familiar pattern, with higher income being correlated with people being more happy, though only in low income economies significantly so and unemployment concerns largely located in high income economies. Our results in case of segmentation thus provide additional evidence for a shift in individual values up the income ladder as has been strongly suggested by

level. Both results thus indicate that in happiness studies as well, there is some indication of Stolper-Samuelson at work. Xin & Smyth (2010), in a study that examines how openness influences happiness in 30 Chinese cities and a survey especially carried out for these purposes see a negative relationship. However, export and import flows not only difficult to trail but are less meaningful in a within-country nexus.

[13] See Beghin (2008) for a survey. According to recent estimates by Kee et al. (2009) non-tariff barriers add approx. 87 percent to the restrictiveness imposed by tariffs and in about half of their set of 78 countries their restrictiveness exceeds the one caused by tariffs.

Inglehart (see his 2000 publication for a survey and his summary of thoughts on p.219).[14]

In the next section, we will present the empirical analysis on the implication of a country's trade freedom for individual happiness. As a starter, we will give a brief overview over the data. In the second half of the empirical section we will discuss the econometric methodology and report our results.

II. Empirical Analysis

We use data from the World Values Survey (WVS), the Penn World Tables (PWT), the Heritage Foundation, as well as the OECD's Labor Force Statistics. Before presenting the econometric method and the results, we will give a concise description of the data and present some descriptive statistics in the next paragraph.

1. Data

In order to obtain information on individual happiness, we refer to the WVS. The WVS is structured in six waves (1981 - 1984; 1990 - 1993; 1995 - 1997; 1999 - 2004, 2005, 2010-2012) and observes individual happiness as response to the question: "Taking all things together, would you say you are: very happy; quite happy; not very happy; not at all happy?" Thus, the happiness variable is in an ordinal scale with increasing order 1 to 4. With respect to the countries' international trade activities, we consider two variables. The first one captures how liberal the trade regime of a country is. For this purpose, we refer to the trade-freedom index provided by the Heritage Foundation. The Heritage Foundation calculates different economic-freedom indices, inter alia trade freedom, which measures the absence of tariff and non-tariff barriers with respect to exports and imports of goods and services. The index has a percentage scale and provides information at the country level. This index might be interpreted as the option value of trade as it describes the possibilities being put up by trade liberalization.

The second variable we use to examine trade implications captures actual trade flows. Therefore, we draw on the information of a country's openness indicator (in real terms) provided by the PWT. The indicator is calculated as total trade relative to GDP (that is (exports + imports) /GDP). Thus, the trade information used in this contribution captures two dimensions, an option value and the status quo in terms of trade. Since the endogenous variable (happiness) is measured at the level of the individual and the main exogenous variables (trade regime and trade flows) at the country level, we need individual as well as aggregated variables to control for the model's variance.[15]

As control variables we thus include several variables providing information at the level of the individual (taken from the WVS), as e.g. employment status, family information (marital status or the number of children), or social activities (active in human rights movements or youth work). In order to control for part of the aggregated country-level variance additional macro variables are included (as e.g. GDP per capita, provided by the PWT, and the unemployment rate, provided by the OECD Labor Force Statistics).[16]

Table 1 presents average happiness, trade freedom, trade flows relative to GDP, GDP per capita and the unemployment rate for a selection of countries. While, e.g., average happiness in Indonesia is around 3.15, and thus comparable with the high values of average happiness in industrialized economies, it's real GDP per capita is only at 4,000. With a

[14] For a discussion on the many way in which globalization may interact with social values systems see Whalley (2008).

[15] How to treat these differently scaled variables in the regression is described in greater detail below.

[16] We use GDP per capita in current prices converted at PPP in US Dollar. Unemployment information is available for 36 countries: The 34 OECD member countries plus Indonesia and Brasil.

trade-freedom index of 67 percent, Indonesia's trade regime is not as liberal as those of the other economies. Hungary also has a low degree of trade freedom. However, its trade flows are impressive (over 90 percent of GDP). Germany, by contrast, has a very liberal trade regime (Trade Freedom 97.4), but, as typical for larger industrialized economies, nevertheless not as high a trade to GDP ratio (at 56.6). Also, unemployment rates vary considerably across countries. Austria or Luxembourg have unemployment rates below 4 percent, whereas in Germany or France more than 10 percent of the working force is unemployed at the turn of the century.

< Table 1 about here >

2. Regression Method and Results

In order to examine the implication of trade for happiness, this section discusses the econometric methodology and the results obtained. Since our endogenous variable "happiness" is in an ordinal scale at the individual level, we apply an ordered probit model on individual happiness information. Several restrictions that characterize the data force us into a cross-section analysis: *i*) Happiness in the WVS is observed in six waves. Only the last waves though contain a sufficiently large number of observations. Additionally, observations within the waves are for different years and thus, not in a continuous time series. *ii*) The inclusion of the unemployment information from the OECD labor force statistics restricts us to investigate information from the fourth wave of the WVS (1999 - 2004) and 32 countries only. Therefore, we apply a cross section ordered probit model regressing

$$h_{ij} = \beta_0 + \beta_1 T_j + \beta_2 O_j + \gamma N_i + \tau X_j + \epsilon_{ij} \tag{1}$$

with h as ordinal happiness information for individual i in country j. The two exogenous variables of main interest are T, denoting the trade freedom index of country j, and O, trade to GDP of country j. While Matrix N contains several individual control variables, matrix X contains real GDP per capita and unemployment as macroeconomic controls. We include the standard individual controls in happiness studies, such as the number of children and dummy variables indicating employment status, marital status, sport activities, engagement in unpaid professional work, membership in political parties, in labor unions, and activeness in human rights, youth work and peace movements. Since the regression combines information at the individual as well as at the country level, ϵ is a clustered error term, using the robust Huber / White / Sandwich estimator. Investigating the effects of macro variables on individual information is by no means conventional. Thus, we follow an estimation procedure suggested by Chamberlain (1980) and Ferrer-i-Carbonell and Frijters (2004). Results are presented in Table 2.

< Table 2 about here >

Our most important findings are depicted in lines three and four, the effect of the countries trade activity on individual happiness. As can be seen in the first column, when examining the whole sample, the trade freedom index significantly increases subjective well being across countries. With a z-value of 2.2, the effect is significant at the five percent

level. Thus, if an economy provides a more liberal trade regime, individual happiness is significantly higher compared to countries with higher tariff and non-tariff barriers.

As can be seen in the second and third column, this effect of trade holds especially for low income economies. With a z-value of 2.1 (significant at the level of five percent), a more liberal trade regime is correlated with a higher level of individual happiness. A positive tendency is still obvious for high-income economies. With a z-value of .3, though, the effect does not fall in the usually reported range of statistical significance.

In addition to the trade freedom of a country which captures more of an option value of trade as given by trade policies and how the option is perceived, we include the countries' actual trade flows, that is the status quo in contrast to the possibilities openned by the particular trade regime. As can be seen in the fourth row, the trade (flow) to GDP ratio affects individual happiness significantly negative (at a significance level of one percent) in low-income economies.

Happiness in high income economies, by contrast, is not in any sense significantly driven by trade flows. Also, in the whole sample the effect is not at a level of usually reported statistical significance. Thus, while the liberty of a country's trade regime significantly promotes individual happiness, actual trade flows tend to depress happiness levels, especially in low-income economies. The other control variables do not change significantly.[17]

Interesting results also emerge for the different control variables. The macroeconomic control variables affect individual happiness in a way that is already well known from other studies on happiness and well-being. Regarding the whole sample (Column 1), individuals in economies with high GDP per capita significantly exhibit higher values of happiness, the unemployment rate of the country significantly decreases subjective well-being (both coefficients are significant at the level of one percent). These implications differ strongly between low and high-income economies. In low income economies, the macro variable that matters next to trade is income, whereas in high-income economies unemployment rate is the crucial variable: in low-income economies, a higher level of GDP per capita significantly results in higher happiness of individuals (with a z-value of 4.20 significant at the level of one percent); the effect of unemployment, by contrast, is not significant; in high-income economies the implications are the other way round. While the unemployment rate significantly affects individual happiness in a negative manner (significant at the level of ten percent), GDP per capita is positive, however, it loses significance.

Interesting results emerge also for the individual control variables. While being employed, being married, being engaged in youth and human right activities affects individual well-being significantly positive, especially in high income economies, the number of children has a significant negative effect on happiness in low-income economies. The regressions include overall around 27,000 individuals, around 9,000 in low and 19,000 in high-income economies.

III. Conclusions

Globalization and trade are sometimes met with hostility. Demonstrations at various meetings on multilateral trade negotiations are just one example. Trade theory mostly referred to the distributional impacts of trade as possible source of mixed feelings with respect to trade. Although the resulting interest group hypothesis is appealing, empirical investigations have had a difficult time in nailing down the very reasons of why trade reforms sometimes fail. Yet, understanding the political economy of globalization and trade is important for economic policy and the success of economic reforms.

[17] The same results emerge when splitting trade flows into imports and exports with each considered separately. As displayed in Table 3 in the Appendix, both variants of trade flows (imports and exports as percent of GDP) affect individual happiness significantly negative in low income economies.

Recent research has shifted attention from the objectively measureable income effects of trade towards more subjective measures which might yield different results depending on how globalization is actually perceived at an individual level. Several previous studies that tried to track down the more subjective metrics used a highly aggregated index especially designed to capture all possible dimensions of globalization, thereby masking much of the information. However, even among those adopting a disaggregated perspective concentrating on trade, the conveyed information is far from clear.

In contrast to previous studies, we distinguish further between trade freedom on the one hand and trade flows on the other hand. The former might be considered as the option value of trade whereas the latter reflects the status quo. In fact, our analysis shows that both exert an effect differently from each other when regressed on individual happiness data as collected by the World Values Survey. Obviously, trade freedom is rated significantly positive while actual trade flows seem to have a despressing effect though not significant. Disaggregating the data along income lines reveals that the leverage is particularly pronounced in low-income economies, with both effects significant, however, in different directions. Our results suggest that further research on the various dimensions of the freedom to trade and why they are probably perceived quite differently may yield considerable payoffs with respect to the understanding of the political economy of trade and the design of trade policy.

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Appendix

< Table 3 about here >

Tables

Table 1. Country-Level Information on Happiness, Trade, and Economic Performance

Country	Year	Happiness	Trade Freedom	Trade to GDP Ratio	GDP p.c.	Unempl. Rate
Austria	1999	3.2568	63.6	80.2	26199.16	3.8
Finland	2000	3.1398	78.0	71.7	23709.34	9.8
France	1999	3.2383	77.8	46.3	22743.20	10.4
Germany	1999	2.9704	79.4	56.6	24529.10	10.5
Hungary	1999	2.8436	63.2	93.9	10660.44	7.1
Indonesia	2001	3.1520	67.2	54.0	4009.04	8.0
Italy	1999	2.9519	77.8	52.1	22624.20	11
Luxemburg	1999	3.2795	79.0	256.6	50203.14	2.4
UK	1998	3.2154	77.8	48.1	21608.21	4.5
USA	1999	3.3314	78.4	23.9	32998.12	4.2

Data: World Values Survey (happiness), Heritage Foundation (Trade Freedom),
Penn World Tables (Trade to GDP and GDP per capita), and OECD (unemployment rate)

Table 2. Effects of Trade on Happiness

Endogenous Variable: Individual Happiness

	Whole Sample	Low Income Economies	High Income Economies
GDP (log)	.4946***	.7336***	.1990
	(4.52)	(4.20)	(.37)
unempl. rate	−2.4763***	.8761	−3.2684*
	(−2.58)	(.88)	(−1.88)
trade freedom	.0148**	.0117**	.0018
	(2.20)	(2.13)	(.25)
trade to GDP	−.0000	−.0056***	.0009
	(−.00)	(2.67)	(.39)
employed	.1116***	.1112	.1134***
	(3.57)	(1.48)	(3.71)
married	.3574***	.3638***	.3560***
	(10.78)	(5.31)	(10.34)
numb. of childs	−.0304**	−.0707***	−.0170
	(−2.27)	(−4.47)	(−1.02)
sports	.1949***	.1325**	.2062***
	(7.57)	(2.31)	(8.10)
unpaid prof. work	.0671	.1054	.0511
	(1.27)	(1.08)	(.82)
political party	.0140	−.2063	.0367
	(.34)	(−1.20)	(1.08)
labor union	.0712	−.0644	.1142**
	(1.53)	(−1.05)	(2.10)
human rights	.1207**	−.1925	.1166***
	(2.40)	(−.87)	(2.46)
youth work	.1888***	.0784	.2190***
	(4.72)	(1.36)	(4.86)
peace movement	−.0433	−.0218	−.0510
	(−.51)	(−.10)	(−.53)
Observations	27749	8847	18902
Pseudo R2	.0675	.0330	.0384
Clustered Errors	YES	YES	YES

z-Statistics in parentheses, * / ** / *** significant at 10 / 5 / 1 percent
low income economies: GDP per capita < 15,000;
high income economies: GDP per capita > 15,000

Table 3. Effects of Trade on Happiness

Endogenous Variable: Individual Happiness

	Whole Sample	Low Income Economies	High Income Economies
GDP (log)	.4973***	.8406***	−.2471
	(4.52)	(9.50)	(−.45)
unempl. rate	−2.3670***	−1.9743***	−3.3998*
	(−2.47)	(−6.30)	(−1.69)
trade freedom	.0147*	.0194***	.0022
	(1.82)	(7.80)	(.26)
imports	.0003	−.0085***	−.0110
	(.09)	(−8.00)	(−.63)
exports	−.0005	−.0099***	.0133
	(−.17)	(−8.09)	(.97)
employed	.1232***	.1281*	.1342***
	(3.97)	(1.64)	(5.38)
married	.3569***	.3569***	.3650***
	(10.20)	(5.32)	(11.00)
numb of childs	−.0313**	−.0720***	−.0218
	(−2.27)	(−4.35)	(−1.33)
sports	.2031***	.1816**	.2129***
	(7.72)	(2.22)	(8.36)
unpaid prof. work	.0368	.0916	.0001
	(.76)	(.92)	(.00)
political party	.0149	−.1997	.0618*
	(.33)	(−1.13)	(1.82)
labor union	.0640	−.0273	.1185**
	(1.31)	(−.51)	(2.21)
human rights	.1295***	−.2173	.1272***
	(2.49)	(−.96)	(2.70)
youth work	.2071***	.1145**	.2400***
	(5.46)	(2.36)	(5.31)
peace movement	−.0727	−.0141	−.0891
	(−.74)	(−.06)	(−.81)
Observations	26670	8847	17823
Pseudo R2	.0701	.0358	.0381
Clustered Errors	YES	YES	YES

z-Statistics in parentheses, * / ** / *** significant at 10 / 5 / 1 percent
low income economies: GDP per capita < 15,000;
high income economies: GDP per capita > 15,000.

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