LIKE ME, BUY ME:
THE EFFECT OF SOFT POWER ON EXPORTS

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ABSTRACT

In this paper I quantify a gain that a country receives when its global influence is considered to be admirable by others. I use a standard gravity model of bilateral exports, a panel of data from 2006 through 2013, and an annual survey conducted for the BBC by GlobeScan which asks people in up to 46 countries about whether each of up to 17 countries were perceived to have "a mainly positive or negative influence in the world." Holding other things constant, a country's exports are higher if it is perceived by the importer to be exerting more positive global influence. This effect is statistically and economically significant; a one percent net increase in perceived positive influence raises exports by around .8 percent. Succinctly, countries receive a commercial return on their soft power.

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1. Introduction

In this paper, I show that countries do well by doing good. More precisely, I show that a country sells more exports to other countries which perceive it to be a force for good, holding other factors constant. These higher exports can be viewed as a carrot that rewards behavior admired by others, symmetric to the sticks more commonly used in international commerce. A prominent example of the latter currently is the "Boycotts, Divestment and Sanctions" (BDS) campaign being used currently by Palestinians against Israel.[1] My results show that global behavior perceived to be better/worse has a material effect on exports; countries admired/disliked by others reap a direct economic benefit/cost, even without any formal organized intervention.

I use a panel of recent data and a plain-vanilla gravity model of trade to show that countries seen to be exerting a positive influence on the world export more to their admirers, holding a host of other factors constant. My point estimate is that a one percent net increase in perceived positive influence raises exports by around .8 percent, holding other things constant. That is, I find an economically and significant trade effect of this "soft power" of being an attractive country; being perceived as a force for good has a direct economic payoff. Succinctly, winning hearts and minds also wins sales. I find this effect to be relatively (but not completely) insensitive to a variety of robustness checks.

2. Methodology and Data

I am interested in the question of whether countries with more soft power achieve any tangible commercial benefit; I do this in the context of international trade. This seems natural since the question is intrinsically international in scope.

I use a standard gravity model of international trade to account for other influences on bilateral exports besides soft power. In particular, I pursue "theory-consistent estimation" of the gravity equation, closely following the suggestions in the recent survey by Head and Mayer (2014). I focus on their "LSDV" (Least Squares with time-varying country Dummy Variables) technique which they show works well in many situations. In particular, I estimate:

$$\ln(X_{ijt}) = \gamma \ln(Inf_{ijt}) + \beta_1 \ln(D_{ij}) + \beta_2 Lang_{ij} + \beta_3 RTA_{ijt} + \beta_4 Cont_{ij} + \beta_5 CU_{ijt}$$

$$+ \beta_6 Colony_{ij} + \{\lambda_{it}\} + \{\psi_{jt}\} + \varepsilon_{ijt} \tag{1}$$

where i and j denote countries, t denotes time, and the variables are defined as:

- X_{ijt} denotes the nominal value of bilateral exports from i to j at time t, measured as the average of FOB exports from i to j and CIF imports into j from i,
- Inf_{ijt} denotes the perception at time t in country j of i's global influence,
- D is the distance between i and j,
- Lang is a binary variable which is unity if i and j have a common language,
- RTA is unity if i and j belong to the same regional trade agreement and 0 otherwise,
- Cont is unity if i and j share a land border and 0 otherwise,
- CU is unity if i and j use the same currency at time t and 0 otherwise,
- Colony is unity if i colonized j or *vice versa* and 0 otherwise,
- β is a vector of nuisance coefficients,
- $\{\lambda_{it}\}$ is a complete set of time-varying exporter dummy variables,
- $\{\psi_{jt}\}$ is a complete set of time-varying importer dummy variables,
- ε_{ij} represents the myriad other influences on exports, assumed to be well behaved.

The coefficient of interest to me is γ, which I interpret as the effect (on bilateral exports) of the importer's perception of the exporter's global influence or soft power, *ceteris paribus*. I estimate this equation with least squares, using robust standard errors.

The Data Set

The data set is taken from Glick and Rose (2015); it relies on trade data drawn from the *Direction of Trade* data set assembled by the International Monetary Fund. The data set covers bilateral trade between over 200 IMF country codes between 1948 and 2013. Bilateral trade on FOB exports and CIF imports is recorded in U.S. dollars. To this, I add a number of other variables that are necessary to estimate the gravity model. I exploit the CIA's *World Factbook* for a number of country-specific variables. These include: latitude and longitude, physically contiguity, language, colonial history, and date of independence. I obtain data from the World Trade Organization to create an indicator of regional trade agreements, and include: EEC/EC/EU; US-Israel FTA; NAFTA; CARICOM; PATCRA; ANZCERTA; CACM, Mercosur, COMESA, and more. I add information on whether the pair of countries was involved in a currency union; Glick and Rose (2015) provide more detail.

Most of the heavy lifting in this equation is done by the country-year fixed effects (one set each for the exporter and importer), which control a host of other influences on bilateral exports. For instance, any boost to American sales arising from the 2008 election of Barack Obama is taken out by the 2008 American exporter fixed effect; similarly, any effect on Egyptian imports arising from the 2011 Arab Spring is taken out by the 2011 Egyptian importer fixed effect. Anything that is specific to a country and a year – such as the size of its economy, population, culture, or military spending, for either the exporter or the importer – is accounted for by the fixed effects.

World Influence: the BBC/GlobeScan Measure

The key variable which adds novelty to this exercise concerns perceptions of international influence. I am interested in whether importers change their observable behavior when they perceive an exporter to be behaving better or worse in the world. My default measure is developed for the BBC World Service through its partnership with the international polling firm GlobeScan, which

> "… conducts news agenda-driven polling questions twice a year to representative samples of adults in over 20 countries, interviewing nearly 50,000 people in the process. Recent polls have addressed issues such as the public's views on the free market economic system, the war in Afghanistan … and the influence of different countries around the world."[2]

The BBC and GlobeScan work with the Program on International Policy Attitudes (PIPA) at the University of Maryland.[3] Survey results are freely available online, along with the associated methodological details. Participants in a large number of countries (33 in 2006) are asked about their views about a smaller number of countries (8 in 2006, as well as "Europe"). The precise question wording in English is:

> "Please tell if you think each of the following are having a mainly positive or mainly negative influence in the world:
> READ AND ROTATE
> a)   China
>   01 Mainly positive
>   02 Mainly negative
>
>   VOLUNTEERED DO NOT READ
>   03 Depends
>   04 Neither, no difference
>   99 DK/NA
>
> b)   Britain
> c)   Russia
> d)   France
> e)   The United States
> f)   Europe
> g)   India
> h)   Japan
> i)   Iran"[4]

These surveys have been conducted annually since 2006. Participants in a total of forty-six countries have been asked about the influence of a total of seventeen countries over the years; both sets are listed in an appendix, along with the number of observations available. All in, there are a total of 2730 observations, with two variables concerning the global influence of one country as perceived by others: the percentages answering "mainly positive" and "mainly negative" (these do not usually sum to

100%). I construct a third variable by subtracting the negative from the positive perceptions; the difference is a measure of net perceived influence.

I consider the BBC/GlobeScan to be a manifestation of "soft power", although this interpretation is not strictly necessary for this study.[5] Soft power is a term first used by Joseph Nye (1990) that describes the ability of a country to attract or persuade others to do what it wants rather than by means of force or coercion; Nye (2004) provides more detail. Whereas hard power—the ability to coerce—grows out of a country's military or economic might, soft power arises from the attractiveness of a country's culture, political ideals, and policies; it is by no means under government control. Nye considers hard power to stem from a country's population, resources, economic and military strength and the like. By way of contrast "Soft power is … the ability to attract, [since] attraction often leads to acquiescence … soft power uses a different type of currency (not force, not money) to engender cooperation – an attraction to shared values ..." (Nye, 2004, pp 6-7).[6] Nye thinks of this as "…the ability of a country to structure a situation so that other countries develop preferences … consistent with their own."[7] The BBC/GlobeScan measure seems like a good way to measure the manifestation of soft power, since it asks implicitly about the attractiveness of a country.[8]

The BBC/GlobeScan measure is certainly not a perfect indicator of soft power.[9] For one thing, it does not distinguish explicitly between hard (military) and soft power.[10] There are also more technical problems with the variable. Most importantly, the data coverage is limited in span. This is not a balanced panel; different countries are asked each year about the influence of different countries (with a number of common threads). It is clear that larger and richer countries are both disproportionately surveyed and asked about; Albanians have never been surveyed, nor has Albania's influence.[11] For all these reasons, there may be no link at all in the data between exports and the BBC/GlobeScan measure, especially since other determinants are well-handled by the gravity equation. To the best of my knowledge, no one in the literature has suggested that soft power is linked to any direct pecuniary gain.

Histograms of the positive, negative, and net perceptions are presented in Figure 1, pooling

across all exporters, importers, and years. Both positive and negative perceptions are intuitively shaped,

with slight negative skew and a longish right tail. The scatter-plot of positive against negative is also

presented in the lower-right corner of Figure 1; while there is a clear tradeoff between positive and

negative perceptions, it is by no means perfect.

Figure 1 portrays all the available data together, lumping together survey perceptions of

different countries towards different countries across different years. By way of contrast, Figure 2

provides some concrete examples. Consider the top-left graph in Figure 2. This graphs positive views of

American influence in 2006 (on the y-axis) against positive views of American influence in 2013 (on the

x-axis). There are big differences across countries; in 2013, only 17% of Russians considered American

influence mainly positive, in contrast to 82% of Ghanaians. Interestingly, there are also (smaller) changes

over time for a given dyad (a 45° line is included in the graph). For instance, Mexican perceptions of

America's influence rose from being 10% mainly positive in 2006 to 41% in 2013, while French

perceptions rose from 25% to 52% over the same period of time, and Brazilian from 33% to 59%. The

analogous data for mainly negative views of the United States are portrayed in the top-right figure.

Here too, there is considerable dispersion across both countries and time. The two figures in the

bottom part of the figure are analogous, but present data of the (mainly positive and negative) global

influences of other countries, as perceived by the United States. Figure 3 is the analogue for China.[12]

In practice, I usually use the (natural) logarithms of positive and negative separately in equation

(1); in my statistical work I divide net perceptions by 100.[13] Some descriptive statistics on log positive,

log negative and net perceived influence are presented in Table 1. In the bottom panel of Table 1, I also

present simple bivariate correlations between the key variables. There are few surprises, and the simple

correlations do not lead one to believe that equation (1) will suffer from multicollinearity.[14]

3. Results

Benchmark estimates of equation (1) are presented in Table 2. There are three sets of results tabulated, one for each of the measures of perceived influence (log positive, log negative, and net).

The gravity model I employ implicitly tests for the relevance of perceived world influence, while holding the usual suspects constant. All influences of either the exporter or the importer in a given year (such as its output, population, culture, politics, geography, or armed forces) are accounted for by the time-varying exporter and importer fixed effects. In addition, the model includes a number of dyadic features that have been found in the literature to affect exports, as surveyed by Head and Mayer (2014). These include both physical and cultural distance, the former modeled through log distance and a dummy variable for a common land border, the latter through dummies for common language and colonial relationship. I also include two policy controls, for joint membership in a regional trade agreement, and the use of a common currency. Although I treat the {β} coefficients as nuisances, they seem sensible in statistical and economic magnitude; distance reduces trade with the traditional coefficient of approximately unity, while two countries that share a common language, regional trade agreement, or colonial relationship experience substantially more trade (the effects of land or monetary borders are insignificant in this sample of countries). This is a heavily parameterized statistical model with fewer than nine observations per parameter. All these controls manifestly result in an equation that fits the data well; the R^2 exceeds .8 in this panel, while the RMSE is less than 1.1 (the standard deviation of log exports ≈ 2.6).

What is the additional effect on exports from x to y of the (mainly positive) global influence of x as perceived by y? The coefficient is tabulated in the top-left cell of Table 2. The estimate is an economically large elasticity of .5; a one percent (not one percentage point!) increase in the exporter's

positive world influence, as perceived by the importer, is associated with a .5 percent increase in bilateral exports. This effect is statistically large; the robust t-ratio exceeds six and thus is different from zero at all reasonable confidence levels. The results from the other measures of world influence are consistent. An exporter perceived to be exerting more of a negative influence experiences exports that are lower by an economically and statistically significant amount. The coefficient estimates of positive and negative influences have different signs but also different magnitudes; the effect of positive perceived influence is almost twice as big as the effect of negative influence. This absence of symmetry implies that it may not be appropriate to combine the two together into a single net effect, as the right-hand column does. Still, the perceived net effect tabulated there is also positive, and statistically large.

Figure 4 provides visual evidence of the effect of perceived influence on (log) exports. First, I regress log exports on the regressors of equation (1), omitting only the effect of influence. Next, I regress influence on the same set of regressors. I then plot the influence residual (on the y-axis) against the export residual (on the x-axis). There are three different scatter-plots, one for each of the three measures of influence (log mainly positive, log mainly negative, and net), each with the corresponding least squares fitted line. The effect of influence is visible, though not overwhelming; the effect does not appear to be driven by outliers.

Robustness

Table 3 provides sensitivity analysis. The objective is to check if the baseline results of Table 2 – in particular, the estimates of γ, the effect of perceived world influence on exports – are robust to small changes in the underlying methodology. For convenience, the default estimates from Table 2 are tabulated in the first row of Table. Each subsequent row presents estimates of γ derived with some change to the methodology (summarized in the column at the extreme left).

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The first check concerns changing the dependent variable; I replace exports from 1 to 2 with exports from 2 to 1. I expect this placebo experiment to fail; indeed the γ coefficients are reassuringly small and insignificantly different from zero.

The next set of checks concerns changes to the default measure of the key regressor, the BBC/GlobeScan question on whether the exporter is perceived by the importer to have a mainly positive or negative influence in the world. My default specification transforms percentage points of perceived positive/negative influence by taking logs; the first perturbation shows the estimates when I leave perceived influence in levels. Happily, the sign and significance of the estimates remain unchanged. The same is true if I lag the influence regressor by a year. A more demanding test is to use a completely different measure altogether. I take advantage of the fact that the Pew Research Center conducts research broadly comparable to the BBC/GlobeScan survey. Pew asks participants "Do you have a favorable or unfavorable view of the US?" and tabulates percentages in their Global Indicators Database.[15] Pew began to survey participants in up to 57 countries in 2002, but asks for favorable/unfavorable views about only five countries (Brazil, China, Iran, and Russia as well as the USA). This results in a total of 844 (exporter x importer x year) observations, in contrast to the 2730 observations available from BBC/GlobeScan. Still, even with this much smaller span of data, the effects of favorable/unfavorable perceptions are comparable to those of positive/negative influence in both economic and statistical terms. The estimates have lower precision (presumably because of the smaller sample size), but remain significantly different from zero at reasonable confidence levels.

A third set of experiments checks the results when I alter the sample in a number of ways. I drop six different sets of observations from the data set: a) the early years of 2006-09; b) the middle years of 2007-2012; c) all years except for (the cross-section of) 2013; d) observations on industrial-country exporters; e) observations on industrial-country importers; and f) observations with residuals

that are more than two standard deviations from zero.[16] None of these changes alters the essential

thrust of the results.

Finally, I change the technique used to estimate the key parameter of interest, γ, in six different

ways. First, I drop the covariates in equation 1, setting $\beta_1 = \beta_2 = \ldots = \beta_6 = 0$. Second, I replace robust

standard errors with conventional ones. Next, I add a lagged dependent variable to the right-hand side

of (1); I tabulate both the (short-run) estimate of γ (along with its standard error), and the long-run

estimate of influence, $\gamma/(1-\rho)$ where ρ is the coefficient estimated on the lagged dependent variable.

Fourth, I substitute a set of year-specific dummy variables for the exporter/importer x year dummy

variables, thus essentially simply pooling across observations. Fifth, I use three sets of dummy variables

in place of the exporter/importer x year dummy variables; one set of dummies for each of years,

exporters, and importers. None of these robustness checks destroys the fundamental and strong effect

of global influence.

However, my results are sensitive to at least one perturbation of the estimation technique.

Replacing exporter/importer x year dummy variables with separate dyadic (country-pair) and

(separately) year-specific dummy variables reduces the coefficient estimates to insignificance; indeed,

the sign of the negative effect reverses. That is, relying on time-series variation around dyadic averages,

instead of around country-year averages, essentially eliminates the economic and statistical significance

of γ. There are 630 dyadic fixed effects (instead of 310 country-year fixed effects), so the

observations/coefficients ratio falls to just over four; dyadic fixed effects may be extravagant over-

parameterization. The span of time is limited, so there may simply be too little time-series variation

around dyadic means. No matter what the reason, the dyadic results add a strong note of caution; it is

clear my results are not completely robust with respect to plausible estimation alternatives.

I have checked the sensitivity of my key results in a number of different ways. The effect of perceived global influence on exports remains significant and sensible across most of these experiments. But not all; adding dyadic fixed effects eliminates the key effect. This sensitivity makes me cautious, and reluctant to over-interpret my results.

Instrumental Variables

The importer's perception of the exporter's global influence is probably measured imperfectly by the BBC/GlobeScan survey; this measurement error may be an issue. It is possible that one reason why importers think more or less highly of a particular exporter's global influence is because the importers consume the exporter's products; that is, causality could flow both ways between trade and perceived influence.[17] Most worryingly, some third factor could be driving both perceptions of influence and trade simultaneously. For all these reasons, estimating (1) with instrumental variables is warranted.

For my default instrumental variable, I average the views of a particular exporter's influence in a given year across all *other* countries, excluding only the importer. Consider American exports to Canada in 2006. From a statistical viewpoint, I am interested in whether these exports are determined in part by Canadian perceptions about whether American global influence was mainly positive (in 2006, 30% agreed in practice), ceteris paribus. As an instrumental variable, I exclude Canadian perceptions and average the views of all other countries concerning perceived (mainly positive) American global influence in 2006 (the non-Canadian average turned out to be 40%). This instrumental variable – the log of average non-importer perceived influence – is strongly correlated with (log) actual perceptions, as can be seen from the scatter-plots of Figure 5.[18] I construct instrumental variables for mainly negative and net perceptions of global influence similarly; each is displayed in Figure 5.

My instrumental variable estimates are tabulated in Table 4. At the top-left corner of the table, I show that the estimate of γ rises slightly to .58 for mainly positive perceived influence, remaining

economically large and statistically significant.[19] Similarly, the estimates for negative and net influence are little changed from Table 2.[20] This result does not appear because the instrumental variable is weak; the tabulated results indicate that the hypothesis of weak instrumental variables can be rejected at any reasonable confidence level.

I check this strategy by changing my instrumental variables in three ways. First, instead of computing the mean (non-importer perceptions of the) exporter's influence, I use the median instead (the non-Canadian median perception of American influence in 2006 was 36%). As can be seen from the second set of results in Table 4, this is also a strong instrumental variable which delivers economically and statistically significant results, albeit with lower precision. Second, I compute the mean exporter's influence as perceived by third countries, but exclude not only the importer but also any other third countries that receives a significant share (5% or more) of its imports from the exporter in question (in 2006, this implied an average perception of mainly positive American influence of 37%). This perturbation leads to similar results.[21] Finally, I use the Pew measure (of favorable/unfavorable views) as an IV for the BBC/GlobeScan measure. This strategy is likely to work only for the case of measurement error. Despite the fact that it reduces the sample size by a factor of five, the resulting IV estimates of γ remain economically and statistically significant.

<u>Summary</u>

Succinctly, countries which are seen to be exerting a more positive influence in the world tend to sell more exports to their admirers, holding a host of other phenomena constant through the workhorse gravity model of trade. This result is economically and statistically powerful, and reasonably (though not completely) robust to a wide variety of potential econometric challenges.

4. Conclusion

In this paper, I have demonstrated that a non-standard, non-economic determinant of trade –

soft power – seems to matter quantitatively in an otherwise conventional empirical model of exports. In

particular, countries that are admired for their positive global influence reap the benefit of higher

exports, holding other things constant. This result is economically and statistically significant,

reasonably (but not completely) robust to a variety of potential econometric issues, and seems intuitive.

It may also be important; if the benefits of soft power include an unappreciated export boost, too little

soft power may be generated. Countries like Iran, North Korea, Pakistan and Israel that are maligned as

a mostly negative influence in the world suffer lower exports than they otherwise would.

I don't want to over-state my confidence in these conclusions for at least two reasons. First,

considerably more data is needed to be really sure of this result; I have a small number of observations

for my proxy for soft power spanning a short period of time and few countries (for my purposes, the

problem is further complicated by the fact that I need intrinsically bilateral measures). Second,

including dyadic fixed effects reduces the economic size of the effect and, more importantly, eliminates

its statistical significance; this makes me nervous about making any strong claims. That said, I

tentatively conclude that countries exerting soft power seem to receive an unexpected benefit in the

form of higher exports.

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Table 1: Descriptive Statistics of Global Influence

	Log Positive	Log Negative	Net (÷100)
Observations	2728	2730	2730
# Years	8	8	8
# x Countries asked about	17	17	17
# y Countries surveyed	46	46	46
Mean	3.4	3.3	.0
Std. Dev.	.7	.7	.4
Min	0	0	-.95
Max	4.5	4.6	.85
Mean Level	37.5	33.2	n/a
Std. Dev. Level	20.0	20.0	n/a
AR(1) Coefficient, FE	.85	.82	.86
AR(1) Coefficient, no FE	.91	.90	.93

Simple Bivariate Correlations	Log Positive	Log Negative	Net (÷100)
Log Positive	n/a		
Log Negative	-.65	n/a	
Net	.90	-.87	n/a
Log Distance	.07	-.05	.05
Common Language	.10	-.01	.08
Land Border	-.02	.02	-.01
Regional Trade Agreement	.12	-.07	.11
Currency Union	.14	-.14	.17
Colonial Relationship	.13	-.09	.14

BBC/GlobeScan question: "Please tell if you think each of the following are having a mainly positive or mainly negative influence in the world …"

Table 2: Effect of Perceived Global Influence of Exporter by Importer on log Exports

	Log Positive	Log Negative	Net (÷100)
Global Influence,	.50**	-.28**	.80**
BBC/GlobeScan	(.07)	(.05)	(.12)
Log	-.90**	-.93**	-.91**
Distance	(.04)	(.04)	(.04)
Common	.48**	.51**	.49**
Language	(.08)	(.08)	(.08)
Regional Trade	.34**	.37**	.36**
Agreement	(.07)	(.07)	(.07)
Land	-.04	-.03	-.04
Border	(.14)	(.15)	(.15)
Currency	-.18	-.13	-.21
Union	(.13)	(.13)	(.13)
Colonial	.52**	.54**	.50**
Relationship	(.08)	(.08)	(.08)
Exp./Imp. x Year FE	310	310	310
Observations	2664	2665	2665
R^2	.86	.86	.86
RMSE	1.05	1.07	1.06

Least squares estimation: regressand is log exports. Coefficients on regressors (by row); robust standard errors recorded parenthetically. BBC/WorldScan question: "Please tell me if you think each of the following are having a mainly positive or mainly negative influence in the world …" Coefficients significantly different from zero at .05 (.01) significance level marked by one (two) asterisk(s).

Table 3: Effect of Global Influence of Exporter perceived by Importer: Sensitivity Analysis

Default	Log Positive	Log Negative	Net (÷100)
Log Exports 1 → 2	.50** (.07)	-.28** (.05)	.80** (.12)

Placebo: Different Regressand			
Log Exports 2 →1	.07 (.07)	.01 (.05)	.01 (.12)

Different Measure of Positive/Negative View			
Levels (not logs) of positive/negative	.015** (.002)	-.015** (.002)	n/a
Lag of Perceived Influence	.54** (.09)	-.37** (.06)	.94** (.14)
Pew measure, not BBC/WorldScan	.75** (.15)	-.27* (.14)	.79** (.21)

Different Samples			
Drop 2006-2009 (only 2010-2013)	.67** (.10)	-.40** (.07)	1.18** (.17)
Drop 2007-2012 (only 2006, 2013)	.67** (.15)	-.27* (.11)	.92** (.24)
Only 2013 (cross-section)	.83** (.17)	-.46** (.15)	1.48** (.32)
Drop surveys about industrial countries	.73** (.10)	-.55** (.11)	1.45** (.21)
Drop surveys about industrial countries	.73** (.10)	-.55** (.11)	1.45** (.21)
Drop surveys in industrial countries	.61** (.09)	-.28** (.07)	.70** (.15)
Drop >2σ outliers	.38** (.05)	-.17** (.03)	.46** (.07)

Different Estimators			
Drop covariates	.74** (.08)	-.40** (.06)	1.22** (.13)
Conventional (not robust) standard errors	.50** (.05)	-.28** (.05)	.80** (.10)
Add lagged dependent variable Long Run: [γ/(1-ρ)]	.14** (.03) [2.3**]	-.06** (.02) [-1.1*]	.20** (.06) [3.3**]
Time FE (drop exp./imp. x time FE)	1.47** (.08)	-.62** (.07)	2.12** (.14)
Time, exp., imp. FE (drop exp./imp. x time FE)	.44** (.07)	-.22** (.05)	.68** (.11)
Dyadic, time FE (drop exp./imp. x time FE)	.14 (.08)	.05 (.04)	.04 (.11)

Coefficients on regressors named in column header; robust standard errors recorded parenthetically. Coefficients significantly different from zero at .05 (.01) significance level marked by one (two) asterisk(s). Regressors included but not recorded: log distance; dummy variables for currency union, common language, land border, RTA, colonial relationship, importer x year fixed effects, exporter x year fixed effects.

Table 4: Effect of Global Influence of Exporter perceived by Importer: Instrumental Variables

Instrumental Variable	Log Positive	Log Negative	Net (÷100)
Log Average, excluding importer	.58** (.08)	-.36** (.06)	.83** (.12)
Weak IV? (p-value)	.00**	.00**	.00**
Log Median, excluding importer	.92** (.14)	-.33** (.10)	1.05** (.21)
Weak IV? (p-value)	.00**	.00**	.00**
Log Average, excluding Importer/strong ties	.59** (.10)	-.45** (.08)	.99** (.17)
Weak IV? (p-value)	.00**	.00**	.00**
LS, IV sample	.50** (.08)	-.30** (.05)	.82** (.12)
Observations	2588	2589	2589

 Instrumental variable is log average/median/average for countries with less than 5% import shares (from exporter), of perceptions of exporter by other countries (excluding importer).

	Log Positive	Log Negative	Net (÷100)
Pew Favorable/ Unfavorable	.91** (.21)	-.64* (.30)	1.43** (.42)
Weak IV? (p-value)	.00**	.00**	.00**
LS, Pew sample	.30 (.18)	.02 (.21)	.38 (.35)
Observations	454	454	454

Instrumental variable is (log) importer's favorable/unfavorable/net opinion of exporter, Pew survey.

Coefficients on regressors named in column header; robust standard errors recorded parenthetically. BBC/GlobeScan question: "Please tell me if you think each of the following are having a mainly positive or mainly negative influence in the world …" Coefficients significantly different from zero at .05 (.01) significance level marked by one (two) asterisk(s). Regressors included but not recorded: log distance; dummy variables for currency union, common language, land border, RTA, colonial relationship, importer x year fixed effects, exporter x year fixed effects.
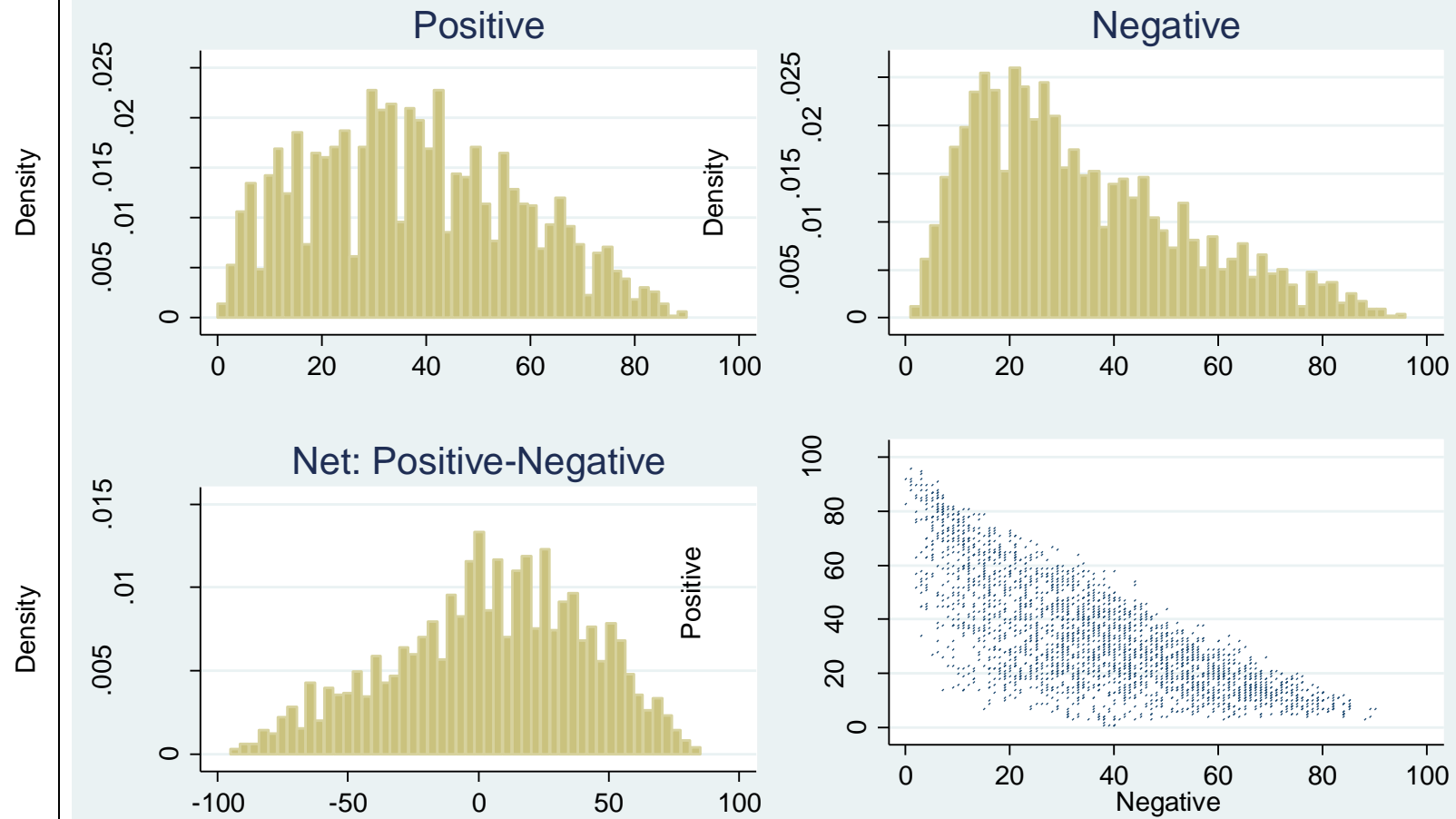
Figure 1: Raw Data

BBC GlobeScan

Perception of Mainly Positive or Negative Influence in the World
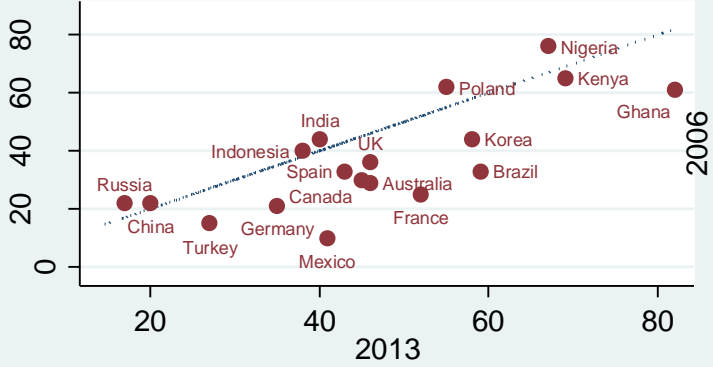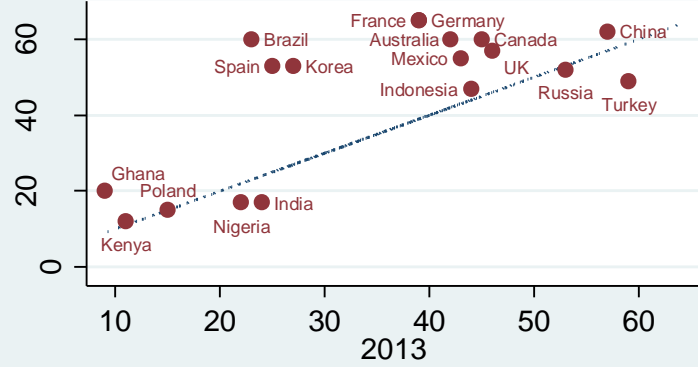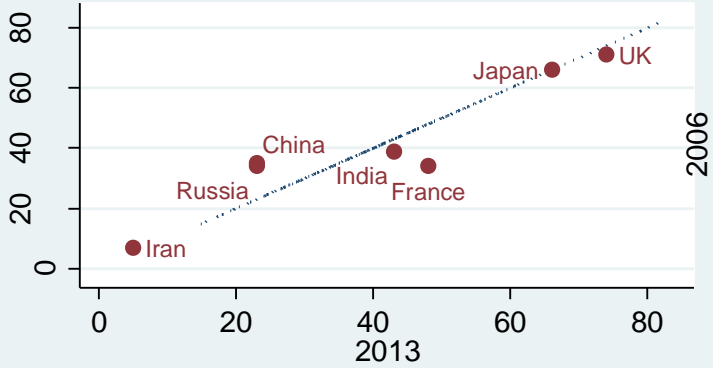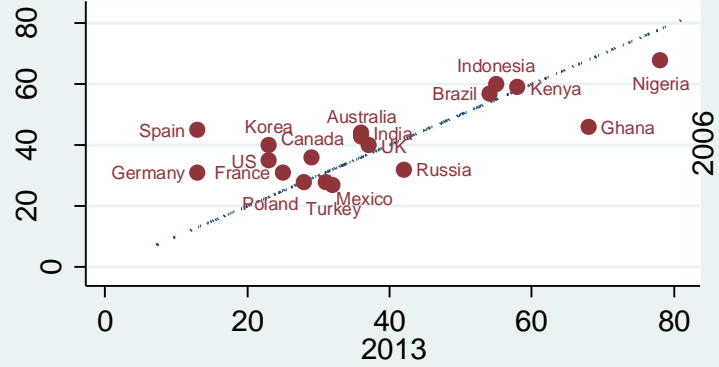
Figure 2: American Examples

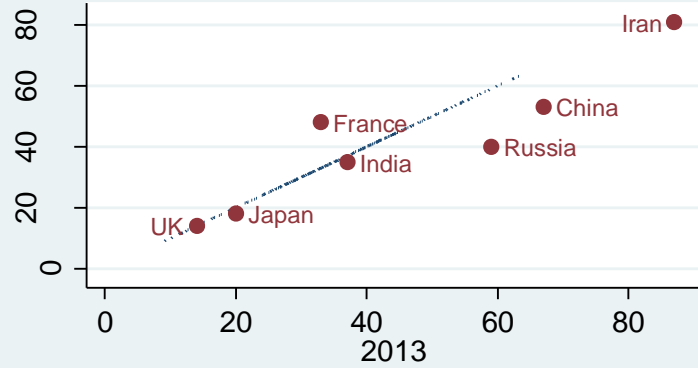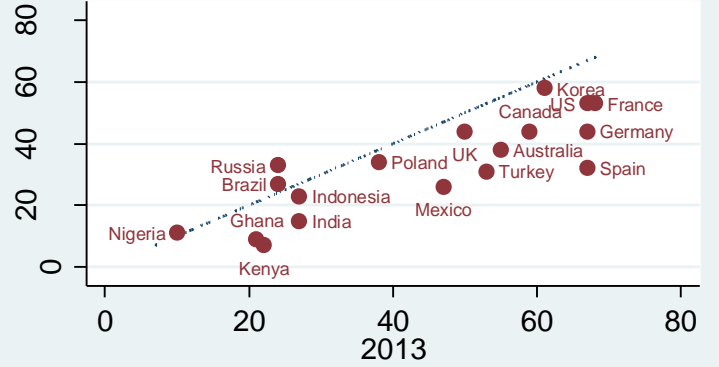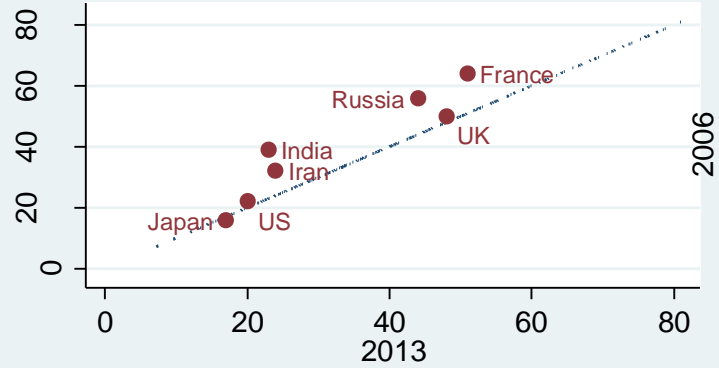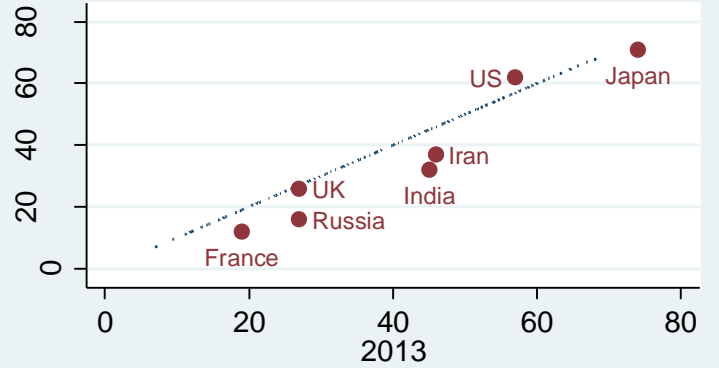Figure 3: Chinese Examples
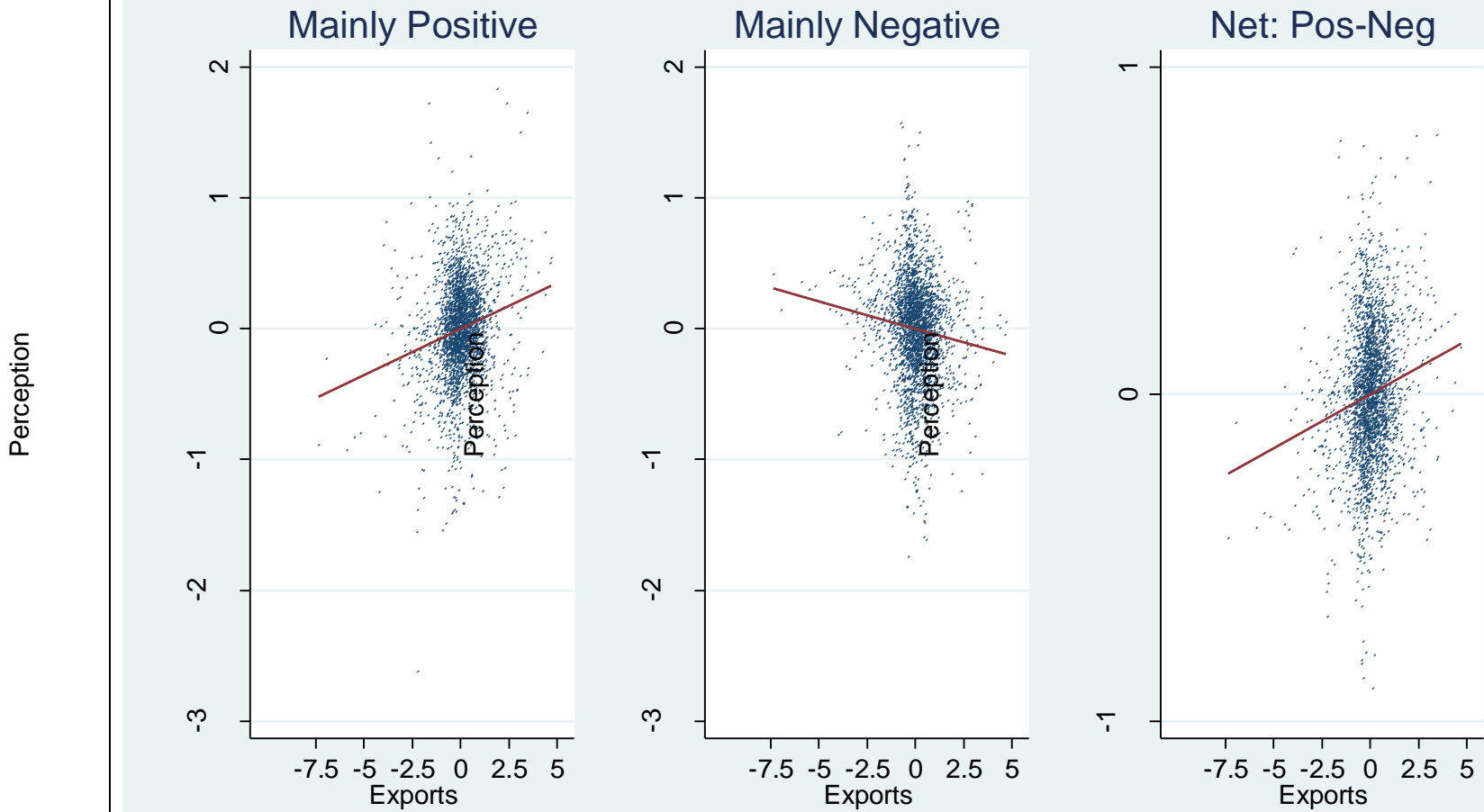
Figure 4: Scatterplots of Exports against Perceptions

Figure 5: Scatterplots of Instrumental Variables against Actual Perceptions

Appendix 1: Years and Countries in Sample

Years (number of observations in parentheses)
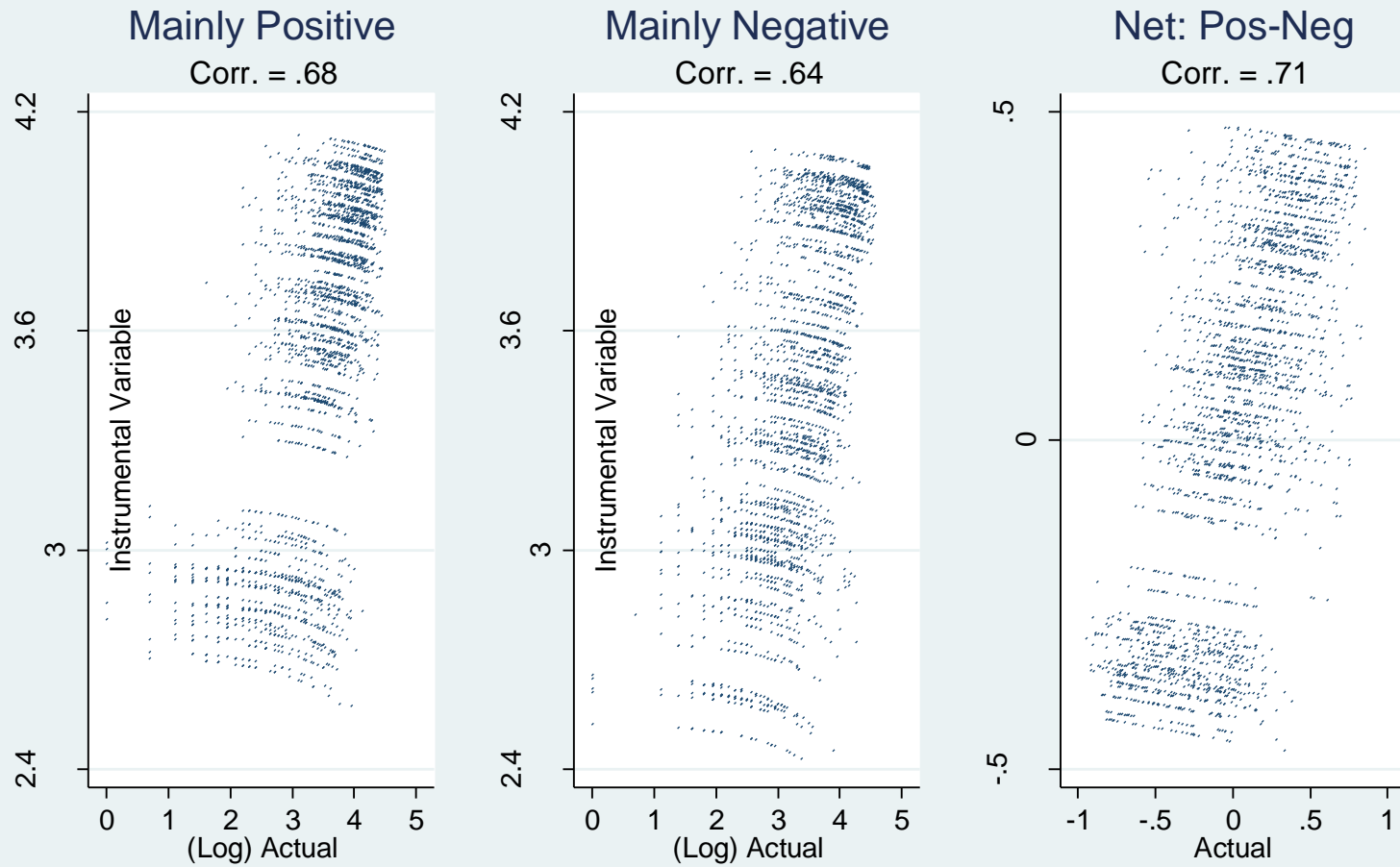
2006 (256)	2008 (325)	2010 (420)	2012 (340)
2007 (291)	2009 (291)	2011 (419)	2013 (388)

Countries whose Influence was Asked About (number of observations in parentheses)

Brazil (144)	Germany (142)	Japan (175)	S Africa (120)	Venezuela (27)
Canada (116)	India (200)	N Korea (176)	S Korea (97)	
China (201)	Iran (208)	Pakistan (145)	UK (201)	
France (201)	Israel (175)	Russia (201)	USA (201)	

Countries Surveyed (number of observations)

Afghanistan (8)	Finland (8)	Israel (11)	Poland (35)	Thailand (16)
Argentina (31)	France (102)	Italy (78)	Portugal (55)	Turkey (94)
Australia (109)	Germany (104)	Japan (86)	Russia (102)	UAE (23)
Azerbaijan (16)	Ghana (99)	Kenya (95)	S Africa (23)	UK (101)
Brazil (90)	Greece (27)	Lebanon (23)	Saudi Arabia (8)	USA (101)
Canada (105)	Hungary (11)	Mexico (110)	S Korea (91)	Zimbabwe (8)
Chile (102)	India (102)	Nigeria (110)	Sri Lanka (8)	
China (102)	Indonesia (110)	Pakistan (60)	Senegal (8)	
DR Congo (8)	Iran (7)	Peru (48)	Spain (99)	
Egypt (102)	Iraq (8)	Philippines (78)	Tanzania (8)	

GDP and GDP per capita Comparison between Countries inside and outside BBC/GlobeScan Survey

	Influence Ever Asked About		Countries Ever Surveyed	
	GDP	GDP per capita	GDP	GDP per capita
Average, Included	$2.7 billion	$19,766	$1.2 billion	15,071
Average, Others	$.1 billion	$11,905	$.1 billion	11,766
t-test for equality	490	95	290	61
p-value (t=0)	.00**	.00**	.00**	.00**

GDP and GDP per capita from Penn World Table.

Appendix 2: Mean Values of Perceived National Positive/Negative Influences

Attitudes Towards:	2013 (25 countries surveyed)		2006 (32)	
	Positive	**Negative**	**Positive**	**Negative**
Brazil	44.4%	21.3		
Canada	54.8	13.1		
China	40.3	39.9	44.4	27.6
France	48.3	21.8	47.3	21.3
Germany	57.5	16.5		
Iran	14.7	58.6	17.9	46.6
India	33.0	34.7	34.8	24.9
Israel	19.7	52.4		
Japan	51.5	26.3	54.3	17.4
N Korea	18.1	54.4		
Pakistan	14.4	54.9		
Russia	30.3	39.5	29.4	33.4
S Africa	33.8	29.8		
S Korea	34.7	31.5		
UK	53.8	19.3	46.8	25.3
USA	44.2	35.1	39.7	40.9

Mean percentage (across countries surveyed) of response to BBC/GlobeScan question: "Please tell me if you think each of the following are having a mainly positive or mainly negative influence in the world …"

Endnotes

[1] http://www.bdsmovement.net/ .

[2] http://www.globescan.com/clients/case-studies/bbc-world-service.html .

[3] The Program on International Policy Attitudes (PIPA) is a joint program of the Center on Policy Attitudes and the Center for International and Security Studies at the University of Maryland (http://www.globescan.com/news_archives/bbc06-3/); more details are available at http://www.pipa.org/ .

[4] http://www.globescan.com/news_archives/bbc06-3/demoquest06-3.html .

[5] Nye and others sometimes refer to soft power as "co-optive power."

[6] Nye writes: "Broadly speaking, power is the ability to affect the behavior of others to get the outcomes you want, and there are three basic ways to do that: You can coerce them with threats. You can induce them with payments. Or you can attract and co-opt them… The ability to establish preferences tends to be associated with intangible assets such as an attractive personality, values, institutions, and a vision that are seen as legitimate or having moral authority. If a leader represents a vision and values that others want to follow, it will cost less to lead. Soft power often allows a leader to save on costly carrots and sticks. Simply put, in behavioral terms, soft power is attractional power." http://www.hks.harvard.edu/netgov/files/talks/docs/11_06_06_seminar_Nye_HP_SP_Leadership.pdf .

[7] Nye (1990, p 168).

[8] Nye (1990, p 166) writes:"A state may achieve the outcomes it prefers in world politics because other states want to follow it … this [soft] power – which occurs when one countries get other countries to *want* what it wants – might be called co-optive or soft power in contrast with the hard or command power of *ordering* others to do what it wants."

[9] There are almost no quantitative measures of soft power; the only exception I have found is a three-year panel of 40 countries constructed by the Institute of Government in conjunction with Monocle; http://www.instituteforgovernment.org.uk/node/136 . This is a multilateral measure; each country is judged to have a certain amount of soft power in a given year. The BBC/GlobeScan measure, when aggregated across countries surveyed to create a multilateral measure, is highly, positively, and significantly correlated with the Institute of Government/Monocle measure, both in a bivariate sense and after accounting for the effects of country size, GDP, and military spending (traditional measures of hard power).

[10] It is possible to overstate the importance of this critique. Most countries on the list are not known for hard power, and those that are (e.g., the United States) are not at the top of the list; survey participants do not begin by answering about countries known for hard power. Further, it is hard to understand why hard power might result in higher exports. This is especially true since the country-year fixed effects should account for hard power.

[11] Simple t-tests tabulated in the appendix provide overwhelming evidence that countries in the sample (either being asked about or being surveyed) are both richer and bigger than those outside the sample. Still, the fact that only larger and richer countries enter the sample has its advantages; this panel of data only has a small number of missing/zero trade values (some 2.3% of the sample), thereby essentially eliminating the general issue raised by Santos Silva and Tenreyro (2006) and the need for Poisson partial maximum likelihood estimation with a large number of fixed effects.

[12] Cross-country averages of the mostly positive/negative world influences are tabulated in an appendix for both 2013 and 2006.

[13] Since two of the positive observations are zero, there are only 2728 observations on log positive.

[14] My measures of soft power are less persistent than exports. After taking out country-year fixed effects, an AR(1) of log exports has an autoregressive coefficient of .96, implying a half-life of 17 years; without the fixed effects, the coefficient is .996. The analogous coefficients for the BBC/GlobeScan measures are tabulated in Table 1 and are much smaller; with fixed effects, the half-lives are less than five years.

[15] Results available at http://www.pewglobal.org/database/indicator/1/ .

[16] I define a country as industrial if its IFS country code is less than 200.

[17] This argument seems more plausible in the cross-section that in it is in the time-series.

[18] Naturally, the instrumental variables are less volatile than actual perceptions, since the former are cross-sectional averages of the latter.

[19] To ease comparison, least squares estimates are presented in the bottom row of the panel. The sample size is a little lower than Table 2, since observations are lost because of inadequate sample size required to construct the instrumental variable.

[20] If I had used conventional rather than robust standard errors, the Hausman tests would not reject the null hypothesis that least squares is consistent and efficient at any reasonable significance level. I prefer to act conservatively and stick with robust standard errors.

[21] I choose 5% because it implies dropping about a quarter of the observations from the sample used to construct the average; changing this threshold has little effect on the results.