Chapter 12

THE SUSTAINABILITY CHALLENGE

Table 12.1: The Impact of the Components of Human Empowerment on Different Aspects of Ecological Sustainability

	DEPENDENT VARIABLES (2010):								
PREDICTORS (2005):	Environmental Impact[1)]			Environmental Quality[2)]			Ecological Sustainability[3)]		
Technological Advancement	.37 (6.22)***		.39 (8.30)***	.21 (3.10)***		.34 (5.83)***	- .46 (-2.87)**		- .23 (-1.66)†
Emancipative Values	.18 (1.46)†	.61 (3.95)***		.31 (2.20)**	.83 (5.94)***		1.00 (2.99)***	.33 (0.94)†	
Civic Entitlements		.09 (1.49)†	.07 (2.07)*		.07 (1.37)†	.01 (0.31)†		- .04 (-0.79)†	.17 (1.60)†
Constant	- .08 (-2.21)**	- .09 (1.83)*	- .04 (-1.98)*	.36 (9.40)***	.29 (6.61)***	.43 (15.3)***	.25 (2.80)**	.29 (2.69)**	.48 (7.16)***
Adj. R^2	.80	.64	.80	.62	.58	.55	.14	.00	.02
N	48	48	47	52	51	50	48	48	47

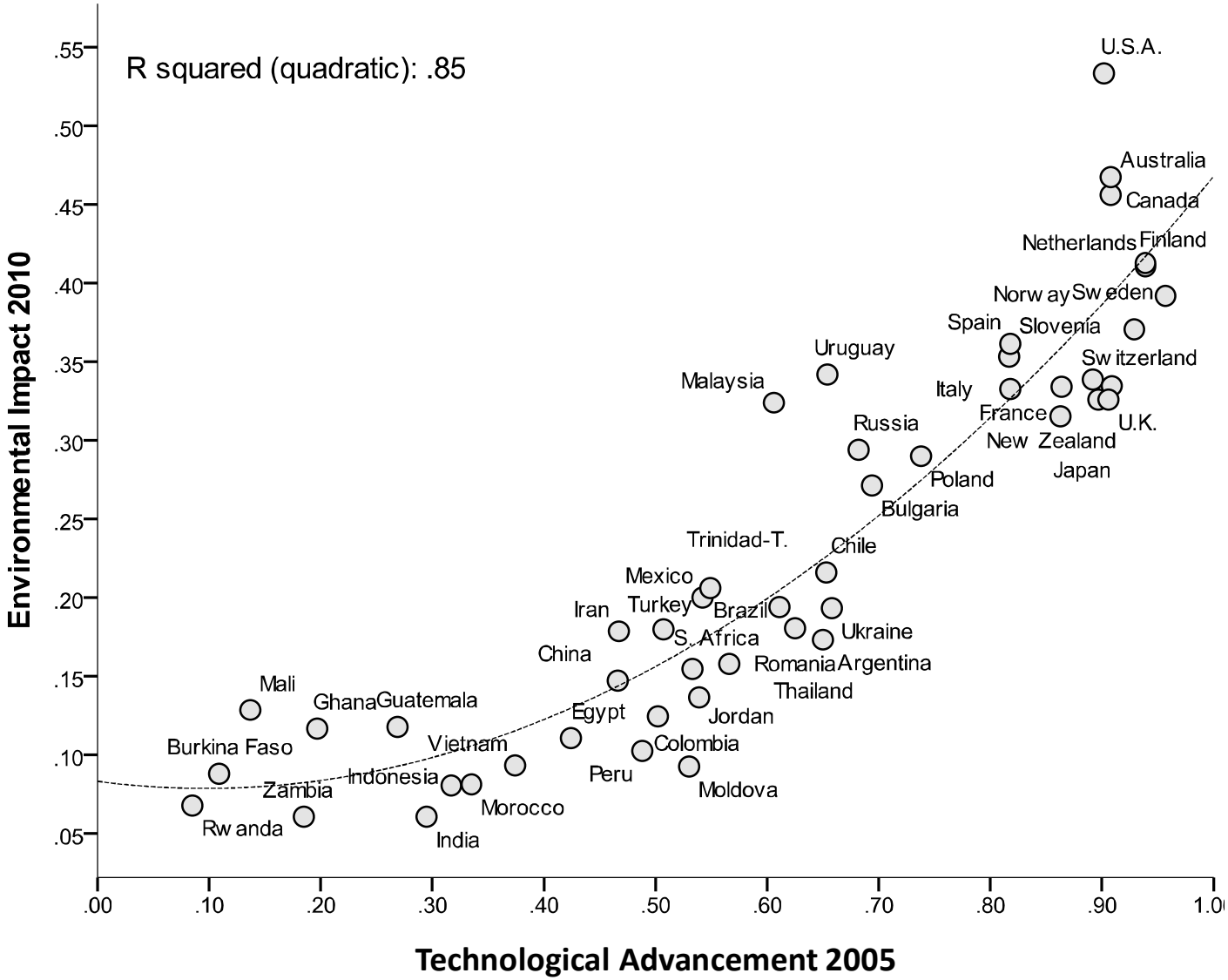
Note: Evidence limited to WVS round V. Test statistics of heteroskedasticity (White-test), mulitcollinearity (variance inflation factors) and influential cases (DFFITs) reveal no violation of OLS assumptions. Significance levels: * p<.050; ** p<.010; *** p<.001; † not significant (p>1.0).

[1)] Ecological Footprint in global hectares per capita, standardized into a theoretical range from 0 to 1.0 (Global Footprint Network 2012).

[2)] Environmental Performance Index, standardized into a theoretical range from 0 to 1.0 (Yale Center for Environmental Law and Policy 2012).

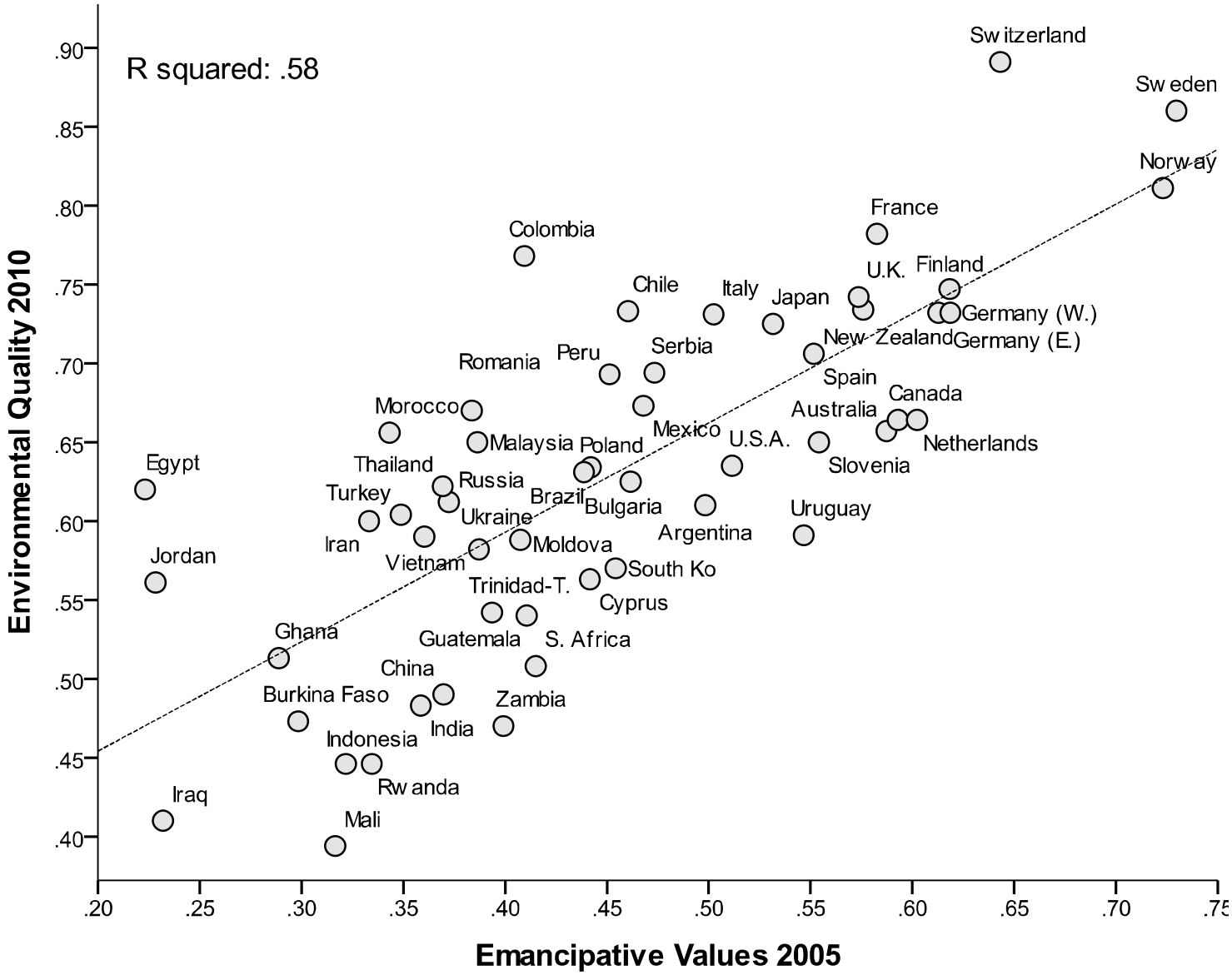
[3)] Ratio of Biocapacity/per capita to Ecological Footprint/per capita (in global hectares per capita), logged and standardized into a theoretical range from 0 to 1.0.

Figure 12.1: The Effect of Technological Advancement on a Society's Environmental Impact



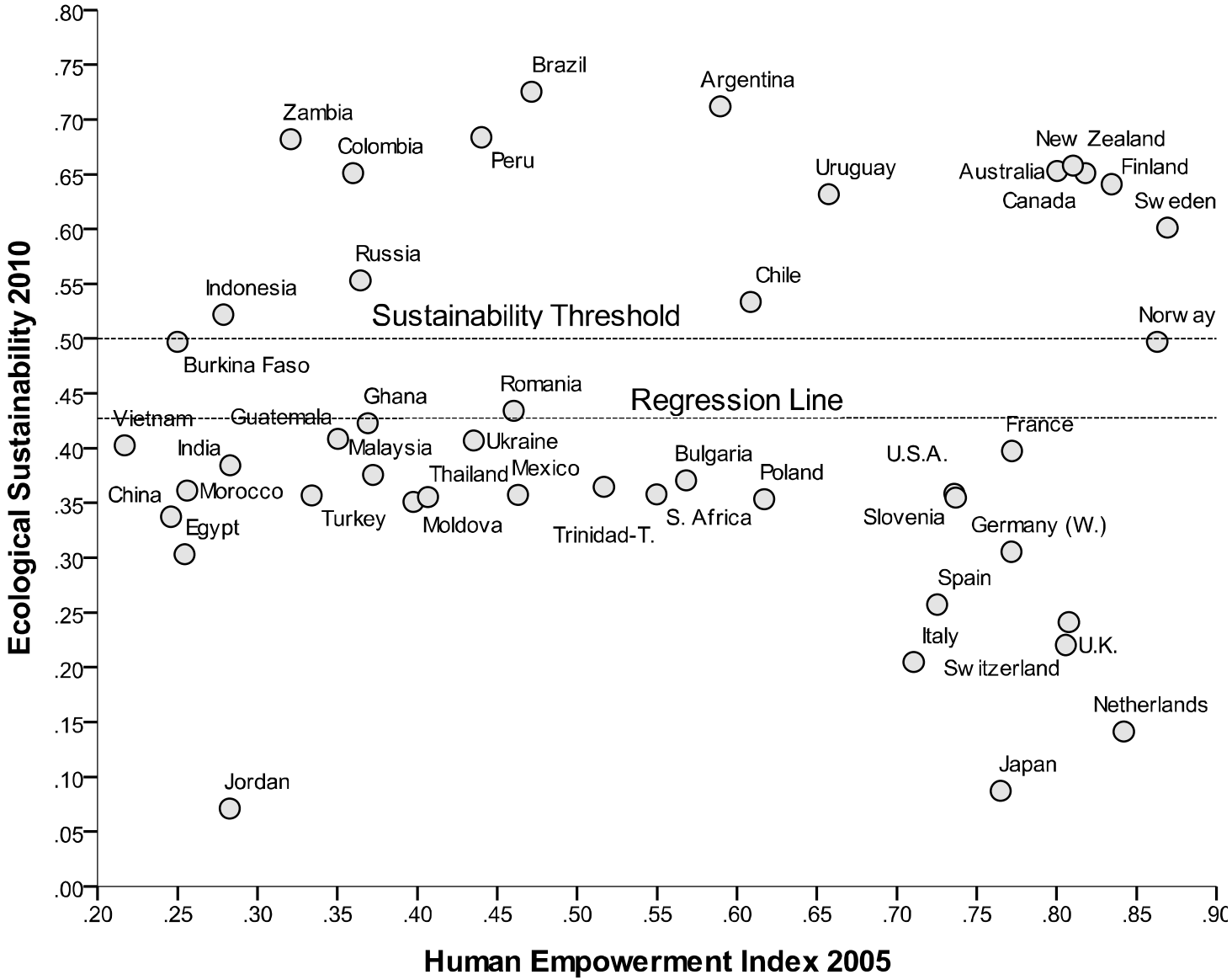
Data Coverage: All of the 50 societies with valid data surveyed in round five of the WVS.

Figure 12.2: The Effect of Emancipative Values on a Society's Environmental Quality



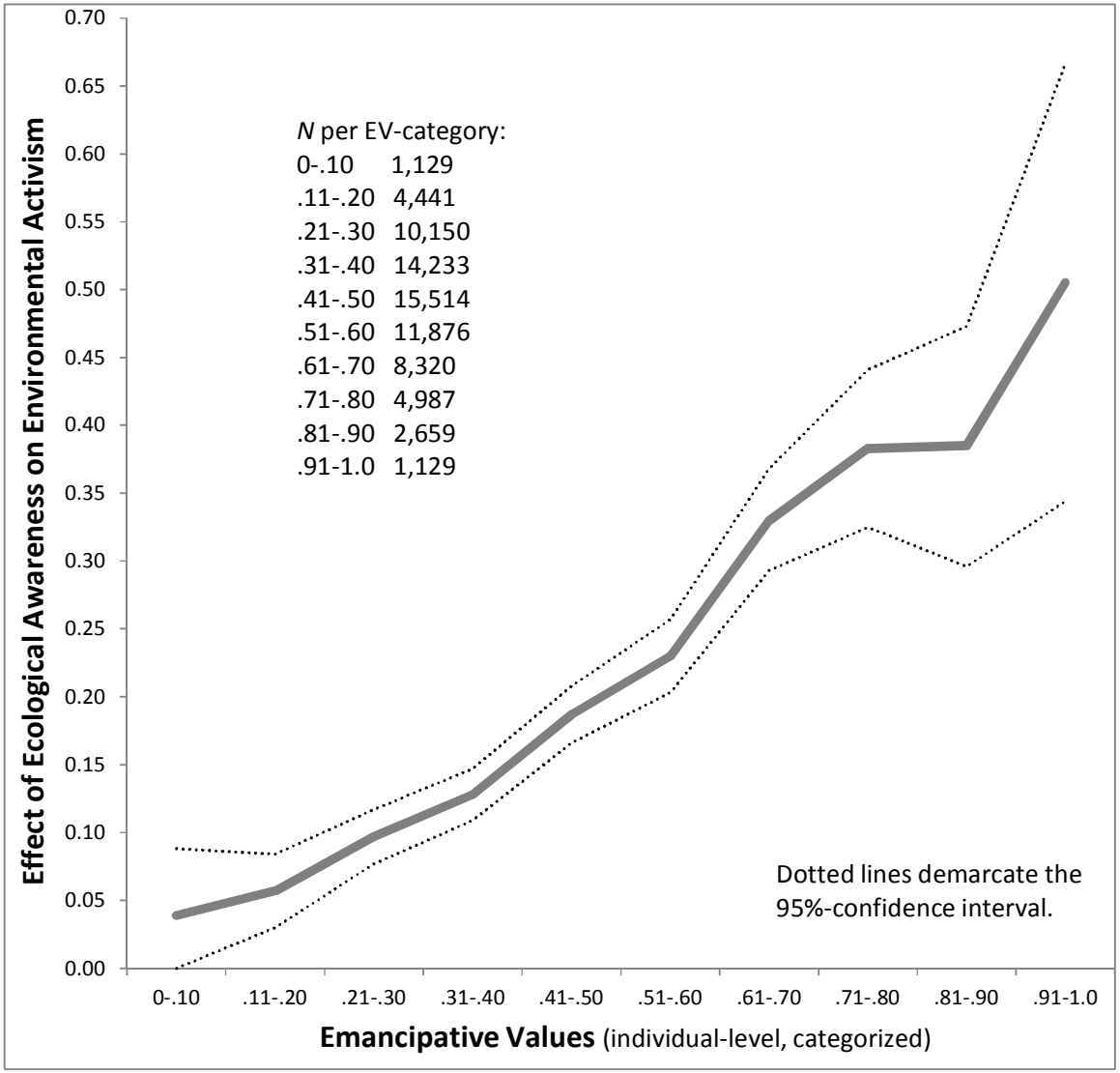
Data Coverage: All of the 50 societies with valid data surveyed in round five of the WVS.

Figure 12.3: The Effect of Human Empowerment on a Society's Ecological Sustainability



Data Coverage: All of the 50 societies with valid data surveyed in round five of the WVS.

Figure 12.4: Emancipative Values as an Amplifier of the Impact of Ecological Awareness on Environmental Activism



Note: Vertical axis shows the magnitude of the unstandardized regression coefficient of ecological awareness on environmental activism.

Data Coverage: Respondents with valid data from all of the 50 societies surveyed in WVS-round five. National samples are weighted to equal size.

Table 12.2: The Effects of Emancipative Values on Environmental Activism (multi-level models)

PREDICTORS:	DEPENDENT VARIABLE: Environmental Activism Values-Model	Technology-Model	Institutions-Model
• Constant	.20 (17.44) ***	.20 (14.38) ***	.20 (15.03) ***
Societal-level Effects:			
• EV[a)]-Prevalence	.39 (3.54) ***		
• Technological Advancement		.03 (0.33) †	
• Civic Entitlements			.04 (0.86) †
• Average 'Green' Concern	.08 (0.88) †	.08 (0.68) †	.06 (0.57) †
• Environmental Quality	.08 (0.61) †	.20 (1.13) †	.22 (1.86) *
Individual-level Effects:			
• Female Sex	- .02 (- 5.68) ***	- .02 (- 5.68) ***	- .02 (- 5.70) ***
• Birth Year (indexed)	- .05 (- 3.20) ***	- .05 (- 3.25) ***	- .05 (- 3.21) ***
• Formal Education	.13 (11.74) ***	.14 (11.80) ***	.14 (11.76) ***
• Income Egalitarianism	.01 (1.06) †	.01 (1.10) †	.01 (1.08) †
Cross-level Interactions:			
• Personal 'Green' Concern	.18 (10.61) ***	.18 (10.30) ***	.18 (9.84) ***
* EV[a)]-Prevalence	.69 (3.32) ***		
* Technological Advancement		.37 (2.50) **	
* Civic Entitlements			.12 (1.55) †
* Average 'Green' Concern	.03 (0.16) †	.07 (0.46) †	.03 (1.50) †
* Environmental Quality	.15 (0.70) †	- .15 (- 0.51) †	.35 (2.12) **
• EV[a)]-Preference	.25 (13.51) ***	.25 (13.31) ***	.25 (13.58) ***
* EV[a)]-Prevalence	.58 (2.49) **		
* Technological Advancement		.28 (1.78) *	
* Civic Entitlements			.15 (1.63) †
* Average 'Green' Concern	.52 (2.76) **	.56 (2.52) **	.45 (1.77) *
* Environmental Quality	.79 (3.54) ***	.57 (1.86) *	.91 (4.71) ***
Percent Error Reduction:			
Within-societal Variation in DV	14.2%	14.2%	14.2%
Between-societal Variation in DV	52.9%	28.6%	34.7%
Variation in Awareness Effect	66.4%	65.4%	65.5%
Variation in Value Effect	46.9%	44.8%	34.3%
N (number of observations)	42,505 respondents in 40 societies		

Notes: Entries are unstandardized regression coefficients with T-ratios in parentheses based on robust standard errors. Calculations with HLM 6.08. Respondents weighted to obtain equal sample size for each society (without changing the overall *N*). Individual-level variables are country-mean centered; societal-level variables are global-mean centered. All individual-level effects specified as random. Percent error reduction calculated relative to empty model. Significance levels: † $p \geq .100$, * $p < .100$, ** $p < .050$, *** $p < .005$. Replacing the emancipative values index with the voice-index at both levels of analysis, the error reduction in the between-societal variation of the DV is 20.8%, that in the within-societal variation 12.6% and 41.8% in the awareness effect and 46.1% in the values effect. *Source*: WVS, round V (ca. 2005).

[a)] EV – Emancipative Values