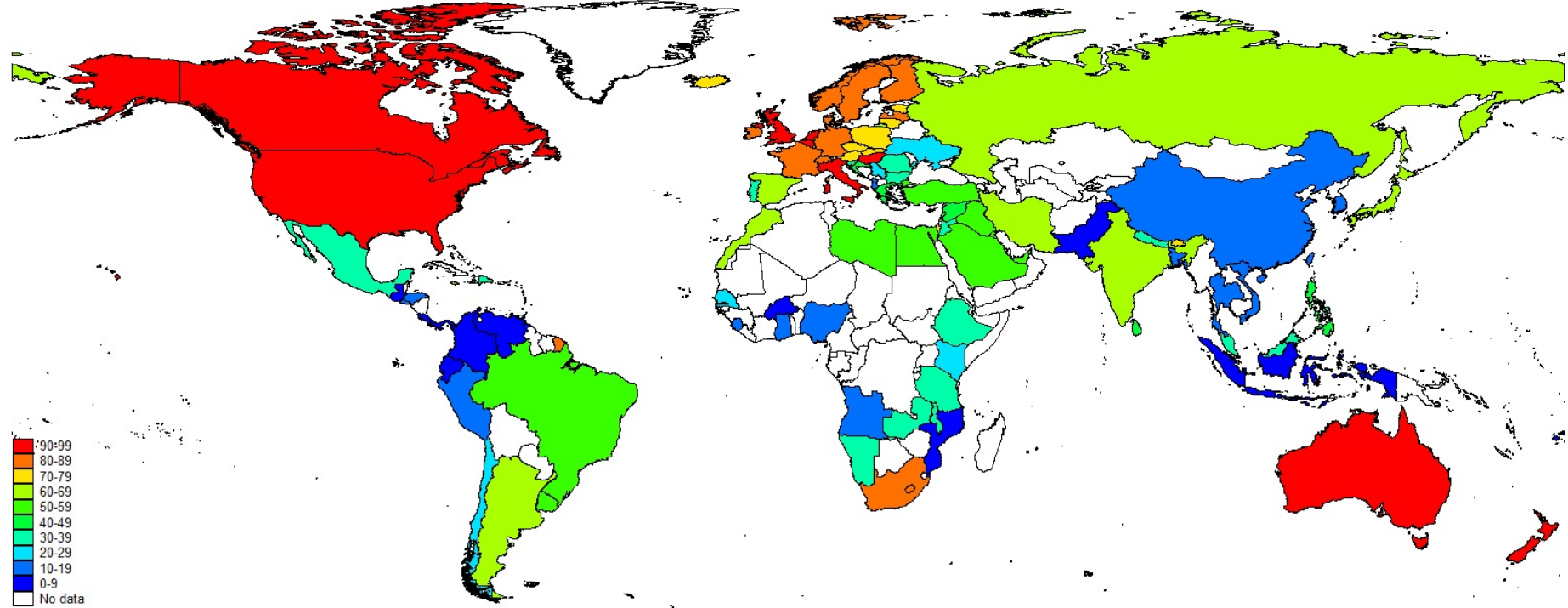# APPENDIX C

Questions from Hofstede's survey used to identify individualism (source Exhibit 5.11 in Hofstede (2001)):

1. Have challenging work to do – work from which you can get a personal sense of accomplishment [challenge].
2. Live in an area desirable to you and your family [desirable area].
3. Have an opportunity of high earnings [earnings].
4. Work with people who cooperate well with one another [cooperation].
5. Have training opportunities (to improve your skills and to learn new skills) [training].
6. Have good fringe benefits [benefits].
7. Get recognition you deserve when you do a good job [recognition].
8. Have good physical working conditions (good ventilation and lighting, adequate work space, etc.) [physical conditions].
9. Have considerable freedom to adapt your own approach to the job [freedom].
10. Have the security that you will be able to work for your company as long as you want to [employment security].
11. Have an opportunity for advancement to higher level jobs [advancement].
12. Have a good working relationship with your manager [manager].
13. Fully use your skills and abilities on the job [use of skills].
14. Have a job which leaves you sufficient time for your personal or family life [personal time].
15. Have the security that you will not be transferred to a less desirable job [position security].
16. Work in a department which is run efficiently [efficient department].
17. Have a job which allows you to make a real contribution to the success of your company [contribute to company].
18. Work in a company which is regarded in your country as successful [successful company].
19. Work in a company which stands in the forefront of modern technology [modern company].
20. Work in a congenial and friendly atmosphere [friendly atmosphere].
21. Keep up to date with the technical developments relating to your work [up-to-dateness].
22. Have a job on which there is a great deal of day-to-day learning [day-to-day learning].
23. Have little tension and stress on the job [stress-free].
24. Be consulted by your direct supervisor in his/her decisions [consulted].
25. Make a real contribution to the success of your company or organization [contribute].
26. Serve your country [country].
27. Have an element of variety and adventure in the job [variety].
28. Work in a prestigious, successful company or organization [prestige].
29. Have an opportunity for helping other people [helping].
30. Work in a well-defined job situation where requirement are clear [clear job].

Appendix Figure D2. Map of individualism scores.

Source: Hofstede (2001).

Appendix Figure D3. Map of the Mahalanobis distance of frequency of blood types A and B relative to the UK.

Legend:
- 2.81 - 3.59
- 2.37 - 2.80
- 2.20 - 2.36
- 2.07 - 2.19
- 1.98 - 2.06
- 1.72 - 1.98
- 1.51 - 1.72
- 1.32 - 1.50
- 0.93 - 1.31
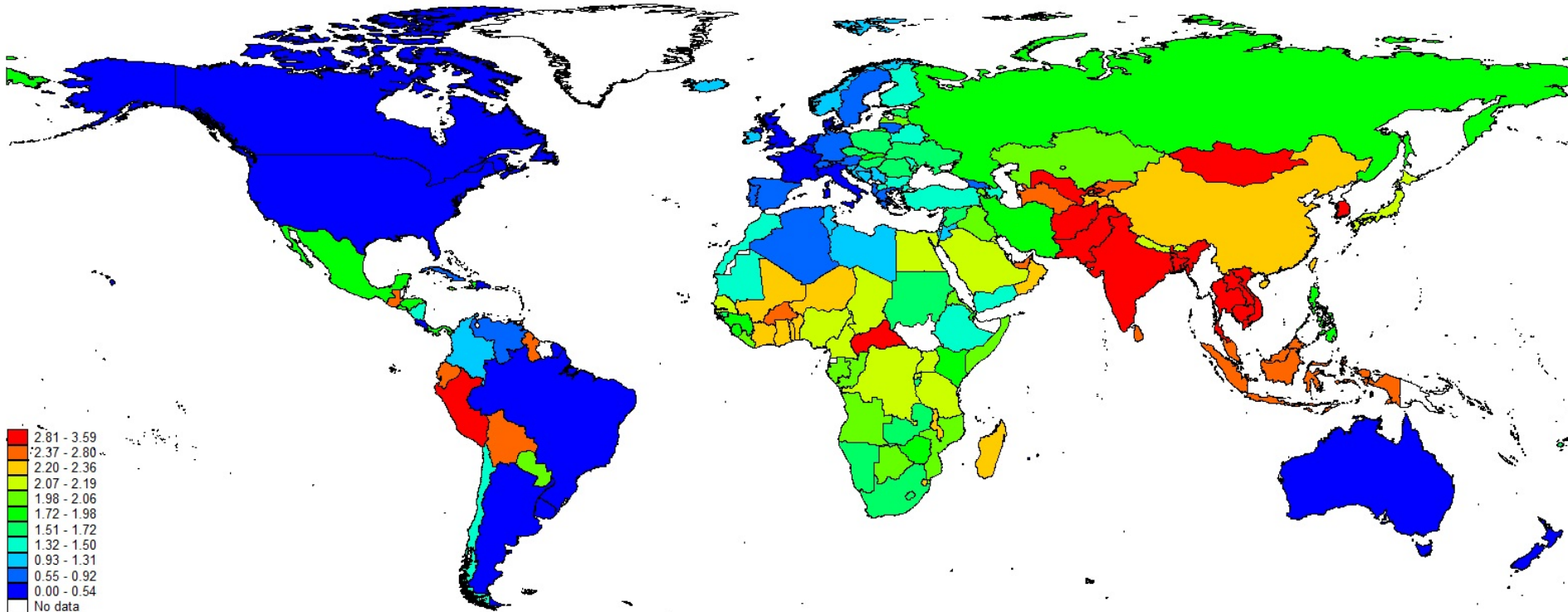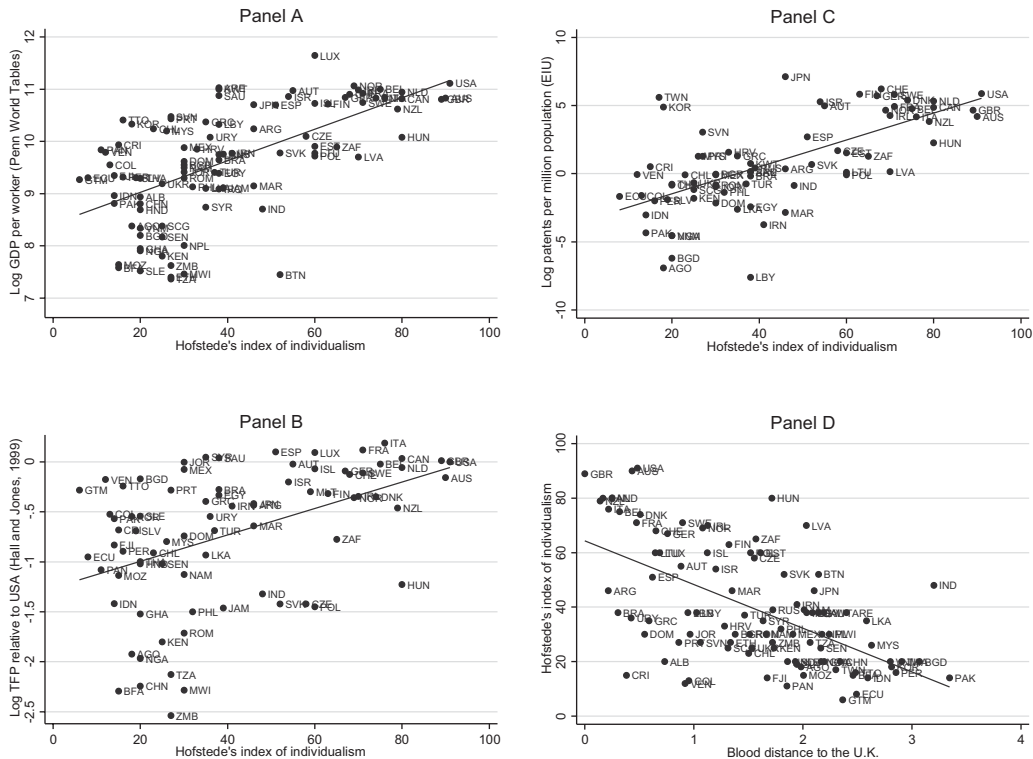- 0.55 - 0.92
- 0.00 - 0.54
- No data

FIGURE 1.—INDIVIDUALISM AND ECONOMIC OUTCOMES

Individualism is Hofstede's index of individualism. A larger value of the index corresponds to a greater level of individualism. Log income (at purchasing power parity) per worker is from the Penn World Tables. Log total factor productivity relative to the United States is from Hall and Jones (1999). Log patents per million population is taken from EIU (2007, 2009). Blood distance to UK is the Mahalanobis distance of frequency of blood types A and B in a given country relative to the frequency of blood types A and B in the United Knigdom.

TABLE 1—INCOME AND INDIVIDUALISM

		Instrumental Variables						
	OLS	Blood Distance from the United Kingdom	Frequency of Short (S) Allele in the Polymorphic Region 5HTTLPR of Serotonin Transporter Gene (SLC6A4)		Frequency of G Allele in Polymorphism A118G in μ-Opioid Receptor Gene		Historical Pathogen Prevalence Index	
			Separate	Combined with Blood Distance	Separate	Combined with Blood Distance	Separate	Combined with Blood Distance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Second stage: Regression of log income per worker on individualism								
Individualism	0.030***	0.046***	0.022**	0.035***	0.020***	0.026***	0.050***	0.050***
	(0.003)	(0.007)	(0.010)	(0.008)	(0.006)	(0.006)	(0.006)	(0.006)
First stage: Regression of individualism on IV								
Alternative IV			−1.027***	−0.445	−1.494***	−0.690	−23.038***	−17.535***
			(0.223)	(0.300)	(0.312)	(0.480)	(2.138)	(2.239)
Blood distance		−15.929***		−13.051***		−13.452***		−8.461***
		(2.373)		(4.560)		(5.213)		(2.481)
Observations	96	96	43	43	34	34	96	96
R^2	0.377	0.277	0.475	0.324	0.507	0.540	0.178	0.215
First-stage F-statistic		45.04	21.18	21.46	22.97	25.56	116.1	66.53
Over-id test p-value				0.129		0.254		0.399

The dependent variable in the second stage is log income (at purchasing power parity) per worker in 2000 from the Penn World Tables. *Individualism* is Hofstede's index of individualism. The instrument in column 2 is the Mahalanobis distance of frequency of blood types A and B in a given country relative to the frequency of blood types A and B in the United Kingdom. The instrument in columns 3 and 4 is from Chiao and Blizinsky (2010) and Inglehart et al. (2014), in columns 5 and 6 from Way and Lieberman (2010), and additional sources (see appendix F) in columns 7 and 8 from Murray and Schaller (2010). In columns 3, 5, and 7, the set of instrumental variables does not include blood distance from the United Kingdom. In columns 4, 6, and 8 the set of instrumental variables includes the blood distance from the United Kingdom and an alternative instrumental variable shown in the heading of the column. *Over-id test p-value* reports the *p*-value for the overidentifying restriction tests that instruments are correctly excluded. Columns 1–6 do not include controls. Columns 3 and 4 exclude Trinidad and Tobago, which is identified as an outlier in the first-stage regression. Columns 5 and 6 exclude Nigeria, which is identified as an outlier in the first-stage regression. Robust standard errors in parentheses. Significant at ***0.01, **0.05, *0.10.

TABLE 2—INDIVIDUALISM AND ECONOMIC OUTCOMES

	OLS				IV			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Continent dummies	No	Yes	No	Yes	No	Yes	No	Yes
Controls	No	No	Yes	Yes	No	No	Yes	Yes
A. Log Income per Worker								
Individualism	0.030***	0.025***	0.017***	0.018***	0.046***	0.041***	0.027***	0.029***
	(0.003)	(0.003)	(0.004)	(0.004)	(0.007)	(0.008)	(0.009)	(0.009)
Observations	96	96	96	96	96	96	96	96
R^2	0.377	0.631	0.707	0.753	0.277	0.557	0.690	0.734
First-stage F-statistic					45.04	22.69	14.31	13.35
First-stage partial R^2					0.341	0.234	0.192	0.181
B. Total Factor Productivity from Hall and Jones (1999)								
Individualism	0.013***	0.012***	0.012***	0.014***	0.023***	0.027***	0.030***	0.031***
	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.007)	(0.008)	(0.007)
Observations	77	77	77	77	77	77	77	77
R^2	0.202	0.402	0.595	0.666	0.087	0.247	0.465	0.551
First-stage F-statistic					49.48	21.34	18.91	20.77
First-stage partial R^2					0.417	0.290	0.289	0.273
C. Log Patents per Capita								
Individualism	0.099***	0.091***	0.071***	0.074***	0.129***	0.145***	0.130***	0.130***
	(0.012)	(0.012)	(0.016)	(0.016)	(0.023)	(0.030)	(0.037)	(0.035)
Observations	72	72	72	72	72	72	72	72
R^2	0.438	0.566	0.734	0.782	0.397	0.482	0.690	0.744
First-stage F-statistic					39.92	17.90	12.69	11.55
First-stage partial R^2					0.345	0.217	0.238	0.212

In panel A, the dependent variable is log income (at purchasing power parity) per worker in 2000 from the Penn World Tables. In panel B, the dependent variable is log total factor productivity relative to the United States from Hall and Jones (1999). In panel C, the dependent variable is log patents per million population taken from EIU (2007, 2009). Individualism is Hofstede's index of individualism. A larger value of the index corresponds to a greater level of individualism. The instrument is the Mahalanobis distance of frequency of blood types A and B in a given country relative to the frequency of blood types A and B in the United Kingdom. Controls include a dummy for landlocked countries, the percentages of population practicing major religions in a country, and absolute values of country longitude and latitude. Robust standard errors in parentheses. Significant at ***0.01, **0.05, *0.10.

	Asia	Europe	Africa	America	Africa, Asia, and Europe	Africa and Asia	OECD	Non-OECD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. OLS								
Individualism	0.040**	0.025***	0.039**	0.018***	0.030***	0.040***	0.016***	0.027***
	(0.015)	(0.005)	(0.015)	(0.003)	(0.005)	(0.010)	(0.005)	(0.007)
Observations	22	34	18	19	74	40	30	66
R^2	0.227	0.444	0.306	0.465	0.639	0.490	0.295	0.478
B. IV								
Individualism	0.050**	0.061**	0.098**	0.024***	0.063***	0.065***	0.040***	0.058***
	(0.025)	(0.025)	(0.046)	(0.007)	(0.017)	(0.024)	(0.014)	(0.022)
Observations	22	34	18	19	74	40	30	66
R^2	0.214	−0.471	−0.358	0.413	0.439	0.420	−0.354	0.300
First-stage F-statistic	4.879	4.649	4.815	8.448	11.46	8.171	8.409	8.004
Partial R^2	0.262	0.131	0.179	0.335	0.150	0.204	0.267	0.118

TABLE 3—INCOME AND INDIVIDUALISM BY REGION

The dependent variable is log income (at purchasing power parity) per worker in 2000 from the Penn World Tables. Individualism is Hofstede's index of individualism. A larger value of the index corresponds to a greater level of individualism. The instrument is the Mahalanobis distance of frequency of blood types A and B in a given country relative to the frequency of blood types A and B in the United Kingdom. The specification in columns 1–4 does not include controls. The specification in columns 5–8 includes continent dummies. Robust standard errors in parentheses. Significant at ***0.01, **0.05, *0.10.