

# The Soft Stuff of Institutional Development: Culture, Cohesion, and Economic Freedom

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## Abstract

What are the effects of culture on economic institutions? Many see an essential role for culture in institutional development, a role that may be negative or positive. This paper systematically considers the effect of twelve dimensions of culture on economic freedom. No clear pattern emerges among the various dimensions of culture; adjacent dimensions of culture are shown to correlate quite differently with economic freedom. This analysis is partly framed in terms of the debate on the relationship between migration, culture, and institutions, and casts doubts on positions that these variables are as tightly or as consistently related as they are at times portrayed.

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## I. Introduction

Culture and institutions provide essential support for the superstructure of the modern world. Intuitively, they are so fundamentally connected that, from some perspectives, even drawing a distinction between them may be to create a distinction without a difference (Levy 2015, pp. 45–46). But one need not take that idiosyncratic position to recognize that institutions reflect the people they govern. A collectivist culture may agitate for more illiberal economic and political institutions, and on the margin, the vote-maximizing politician and the autocrat wishing to keep their positions (McGuire and Olson 1996) will facilitate coherence between institutions and cultural preferences to legitimize the polity. Social capital, social cohesiveness, and other cultural variables inevitably impact institutions in some way, although the relationships between them will not necessarily be straightforward or monotonic.

In what I call the culturalist-nativist paradigm, two disparate groups of scholars make similar arguments about the relationship between culture and economic institutions. The first group emphasizes the cultural foundations of good institutions in general terms. This literature is summarized by Alesina and Giuliano (2015) and includes work such as Knack and Keefer (1997), Tabellini (2010), Williamson and Kerekes (2011), and Michalopoulos and Papaioannou (2013, 2014). This work also includes, tangentially, the deep roots literature (see Spolaore and Wacziarg 2013). The second group of scholars, which advocates what Clemens and Pritchett (2019) call the “new case for migration restrictions,” includes Christensen (2012), Collier (2013), Borjas (2015, 2016), Jones (2018), and most controversially, Richwine (2009). These latter scholars perceive new migration flows, especially from developing countries, as inevitably shifting either the electorate or the culture of migrant recipient countries for the worse.<sup>1</sup>

The closest recent paper to the hypothesis and approach found here is Easterly, Ritzen, and Woolcock (2006), whose perspective on the nature of institutional development lies in the intersection of the culturalist-nativist and the new case for immigration restrictions camps, although its concerns pertain to the ability to implement institutional reforms in developing countries.

The culturalist-nativist position claims a close relationship between the quality of institutions and the many dimensions of culture, from social trust to fractionalization. This wide array of cultural variables I call the “soft stuff” of institutional development, and this paper considers the institutions of economic freedom in that context.

Other recent literature has had considerable difficulty linking any variables all that closely to the origins of economic institutions. In a literature review on the origins of liberal economic institutions, Lawson, Murphy, and Powell (2020) find that most hypotheses concerning the origins of liberal economic institutions yield weak or inconsistent findings, and those that withstand scrutiny tend to be modest in economic significance. Inequality is the closest to a cultural variable that has robust empirical support, although it is only tangentially related to culture.

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<sup>1</sup> One early work at the intersection of the two disparate literatures can be found in Sowell (1996).

One particular emphasis in this work is the possible presence of inverted *Us* or hump-shaped effects of cultural variables. In disparate contexts, from the deep roots literature (Ashraf and Galor 2013; Faria et al. 2016; Borcan, Olsson, and Putterman 2018; Spolaore and Wacziarg 2018) to the literature on social capital (Molina-Morales and Martinez-Fernandez 2009; Echebarria and Barrutia 2013 cf. Butler, Giuliano, and Guiso 2016) and informal institutions (Murphy 2018), the effects of culture have been shown to take an inverted-U shape, meaning its contribution to the dependent variable may be the most positive at a point before its maximal value. This paper intends to consider whether such disparate findings point to anything systemic. While such a question may appear arcane even among scholarly research questions, I would point out that even Robert Putnam (2000) devoted a chapter of *Bowling Alone* to “the dark side of social capital,” suggesting that there is reason to consider that these relationships are not monotonic.

While my approach may not be wholly satisfying for all readers, this paper neither develops a tightly defined model nor uses especially convincing methods of identification to test what is discussed. Rather, I provide a comprehensive literature review of the different variations on the hypothesis that migration and culture impact institutions—namely, economic freedom. This review demonstrates convincingly that the paradigm in question expects these variables to move together. I then show that in reduced-form specifications, the variables do not behave reliably in such a way. While narrow aspects of the hypothesis may have support in more rigorous attempts at identification, the broader culturalist-nativist hypothesis, which is actually championed in the scholarly context using casual empiricism, narratives, and rhetorical hypotheticals, is not supported by a cursory (if also in other senses comprehensive) examination of the data.

More specifically, I will use twelve variables related to different dimensions of this hypothesis: ancestry-adjusted state history, agricultural history, and technological history; genetic diversity; social trust; the importance of friends; individualism; informal institutions; ethnic, linguistic, and religious fractionalization; and foreign-born individuals as a percentage of the population. Section 3 orders these variables into the tacit model of the culturalist-nativist paradigm and describes the data sources. These twelve cultural variables are not exhaustive and leave out dimensions that are more tertiary to the hypothesis, such as masculinity (as in Johnson and Lenartowicz 1998) or Confucianism (as in Sala-i-Martin, Doppelhoffer, and Miller 2004).

Following this description is a lengthy description of previous work, such as it already exists, connecting these variables to economic institutions.

Prior to the explication found in section 3, section 2 will describe the cultural data and methodology that I use. Section 4 will execute that methodology, describing both the economic and statistical significance of the results for each set of institutions and each specification (linear and quadratic). I then appraise the results. Section 5 concludes.

## II. Data Description

Before I describe the cultural variables and their relationship with economic institutions in greater detail, I first will describe my measure of institutions. The *Economic Freedom of the World* (EFW) index (Gwartney et al. 2018) provides a quantitative summary of five “areas” of economic freedom: [limited] size of government, legal system and property rights, sound money, freedom to trade internationally, and regulation. It facilitates positive analysis of the economic institutions of classical liberalism, with data available once every five years from 1970 through 2000 and yearly from 2000 through the present.

The 2018 build of the index uses forty-three variables from a wide array of data sources to construct the five areas of economic freedom. Each variable is scaled from 0 to 10 such that 10 corresponds to “most free,” and each area is granted equal weight. De Haan, Lundstrom, and Sturm (2006) remains authoritative in connecting economic freedom and economic growth, while Hall and Lawson (2014) provide a literature review of other effects of economic freedom. Lawson, Murphy, and Powell (2020) review the literature on the causes of economic freedom.

Descriptive statistics for economic institutions can be found in table 1. Also in table 1 are the four geographical control variables I use, where I follow Putterman and Weil (2010). These are the absolute value of latitude, a dummy variable for landlocked countries, a measure of climate, and a dummy variable for Eurasia. The historical nature of Putterman and Weil’s (2010) deep roots variables make reduced form specifications for these variables more persuasive than would be typically concluded, from the standpoint of identification. For the purposes of clarity and consistency, all regressions that will subsequently be performed will follow this reduced form specification. The other benefit of using these controls

specifically is that they are rare controls in the context of cross-region comparisons where it is unreasonable to argue that they are colliders or “bad controls” (Fiszbein 2017, pp. 12–13; cf. Angrist and Pischke 2008). Ultimately, regardless of the quality of the identification, I am primarily interested in the descriptive patterns I will observe across the variables.

TABLE 1. Descriptive Statistics: Economic Institutions and Control Variables

Variable	n	mean	std. dev.	min	max
Economic Freedom	161	6.789	0.892	2.88	8.97
Absolute Value of Latitude	154	0.304	0.189	0	0.722
Landlocked	142	0.218	0.415	0	1
Climate	135	1.593	1.060	0	3
Eurasia	161	0.559	0.498	0	1

TABLE 2. Descriptive Statistics: Cultural Variables

Variable	n	mean	std. dev.	min	max
Ancestry Adj. State History	140	0.440	0.265	0	1
Ancestry Adj. Agricultural History	152	5.642	2.124	0	1
Ancestry Adj. Technological History	126	0.614	0.252	0.133	0.995
Genetic Diversity	156	0.709	0.053	0.572	0.774
Social Trust	68	27.296	14.774	5.77	68.08
Importance of Friends	75	2.338	0.208	1.771	2.753
Informal Institutions	89	4.380	1.955	0.589	10
Individualism	92	0.388	0.227	0.06	0.91
Ethnic Fractionalization	156	0.453	0.254	0.002	0.930
Linguistic Fractionalization	156	0.402	0.284	0.002	0.923
Religious Fractionalization	159	0.440	0.233	0.002	0.860
Immigrant Stock (Foreign Born)	109	0.074	0.124	0.000	0.769

Table 2 provides descriptive statistics of the twelve “soft” cultural variables, while figure 1 gives a more systematic description of each individual piece of data than is found in-text. Social trust data is from Berggren and Bjornskov (2017), who assembled it from several different sources. Data on linguistic, ethnic, and religious fractionalization is from Alesina et al. (2003). The standard source of individualism data from Hofstede, Hofstede, and Minkov (2010) is applied here. The percentage of individuals who are foreign born (i.e., immigrant stocks) is the same as that of Clark et al. (2015). Finally, “importance of friends” is used as a measure of social capital—closer to its conceptualization as social networks instead of social trust—with data from the most recent two waves of the *World Values Survey*. All variables are described at much greater length and systematically in figure 1.

FIGURE 1. Qualitative Description of Twelve Measures of Culture

Variable	Description	Source
Ancestry-Adjusted State History	The length of time the inhabitants of a country have had experiencing living under states, adjusted to reflect the current inhabitants of the country.	Putterman and Weil (2010)
Ancestry-Adjusted Agricultural History	The length of time the inhabitants of a country have had experience working with agriculture, adjusted to reflect the current inhabitants of the country.	Putterman and Weil (2010)
Ancestry-Adjusted Technological History	An index of technological adaptation within a country at 1500 AD, adjusted to reflect the current inhabitants of the country.	Comin et al. (2010); Putterman and Weil (2010)
Genetic Diversity	An estimate of the genetic diversity (the probability that two individuals in a country meeting randomly will share a gene) using migratory distance from East Africa.	Ashraf and Galor (2013); see the discussion of the “predicted” values in Ashraf and Galor (2013: 18, 26–29)
Social Trust	The percentage of people who will answer that most people can be trusted when asked, “In general, do you think most people can be trusted or you can’t be too careful?”	Bergh and Bjornskov (2011), who use a variety of sources
Importance of Friends	A weighted average of the responses, where “0” was assigned for “Not important at all,” “1” was assigned for “Not very important,” “2” was assigned for “Rather important,” and “3” was assigned for “Very important.”	<i>World Values Survey</i>
Individualism	“The degree of interdependence a society maintains among its members. It has to do with whether people’s self-image is defined in terms of ‘I’ or ‘We.’” <sup>8</sup>	Hofstede et al. (2010)
Informal Institutions	The first principle component of trust, respect, individual self-determination, and the negative of obedience.	Tabellini (2010); Williamson (2009)
Ethnic Fractionalization	One minus the Herfindahl index of the share of each individual ethnic group.	Alesina et al. (2003)
Linguistic Fractionalization	One minus the Herfindahl index of the share of each individual linguistic group.	Alesina et al. (2003)
Religious Fractionalization	One minus the Herfindahl index of the share of each individual religious group.	Alesina et al. (2003)
Immigration Stock	Foreign born as a percentage of the population	Clark et al. (2015); the World Bank

<sup>8</sup> Hofstede Insights website, “Country Comparison,” USA.

I should elaborate more on the “deep roots” literature (Spolaore and Wacziarg 2013) before continuing. This literature connects deep, historical elements of culture to present day socioeconomic outcomes. The three conventional deep roots variables I am considering are state history, agricultural history, and technological history. State history measures the length of time a culture has had experience under states; agricultural history is the length of time a culture has had with agriculture; and technological history is an index of technological adaptation as of the year 1500 AD. These variables exhibit better predictive performance if one focuses on the ethnic background of the country’s current inhabitants, rather than what took place within the geography historically. Following Putterman and Weil (2010), state history, agricultural history, and technological history are all ancestry-adjusted (see also Comin, Easterly, and Gong 2010). Finally, I also classify data on genetic diversity from Ashraf and Galor (2013) as another dimension of deep roots, although it could be argued it belongs with the cohesion variables instead.

### **III. Previous Literature on the Family of Theories**

Even as scholarship has found attempts at identifying the origins of economic institutions to be vexatious, proponents of the “new” rationale for migration restrictions treat the effects and relationships of culturally rooted variables to be obvious and self-evident. For instance, in making the new case for migration restrictions, George Borjas rhetorically asks a series of questions as if raising these questions is to answer them.

What would happen to the institutions and social norms that govern economic exchanges in specific countries after the entry/exit of perhaps hundreds of millions of people? Would the institutions that presumably led to efficient exchanges in the richer countries remain dominant and spread throughout the globe, or would these institutions be replaced by the political and cultural inefficiencies that may have hampered growth in the poorer countries? (Borjas 2015, pp. 961–62)

Later, after summarizing the results of three papers in the course of an essay making largely the same point, Jones (2016) states that “this literature suggests that migration from low-trust societies will tend to hurt long-run economic performance, partly because low-trust individuals demand more government regulation.” Later, he writes (in such a way that is difficult to excerpt),

If a country is choosing between high-SAT [i.e., high in state history, agricultural history, and technological history] and low-SAT immigration policies, the high-SAT approach will yield big benefits in the long run. Individual countries will always be exceptions to the rule, so some countries will still look pretty good. But wise citizens don't bet on the exception: they bet on being the rule.

If these arguments are read in conjunction with the literature covered by Alesina and Giuliano (2015) and the “mechanism” section of Putterman and Weil (2010, pp. 1652–55), it implies a model as conveyed diagrammatically in figure 2. At the bottom of the diagram are the deep cultural characteristics of different groups (i.e., deep roots) and the cohesiveness of each group. These cultural characteristics yield second-order cultural attributes that are more visible on this surface: that is, measures of social capital. These, in turn, are the soft stuff upon which economic institutions (here: economic freedom) are built, per this perspective.

**Figure 2. The Implicit Model of the Culturalist-Nativist Paradigm of Institutional Development**

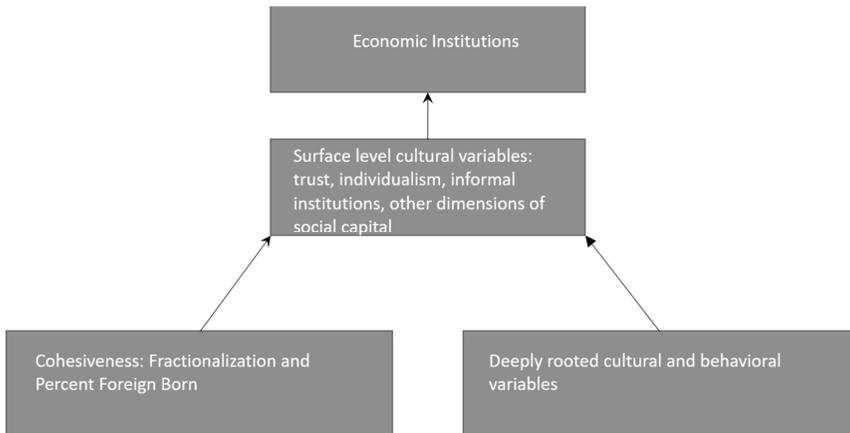


Figure 2 constitutes the theory implicit in Sowell (1996), Richwine (2009), Christainsen (2012), Collier (2013), Borjas (2015, 2016), and Jones (2016, 2018). Jones (2016) most emphasizes deep roots as the basis for the posited relationship between migration, culture, and institutions. Richwine (2009) and Christainsen (2012), all the more controversially, use the intelligence of migrants as their starting place. Sowell (1996), Collier (2013), and Borjas (2015, 2016) are somewhat vaguer on the cause of the posited differences.

Nonetheless, these scholars all fit in with the broad theoretical framework conveyed in figure 2. This framework is what is intended to be tested, along with, secondarily, the much weaker statement on culture and institutions, which is essentially encapsulated by Alesina and Giuliano (2015).

My intention here is not to provide a basis for building a formal structural model of these vectors of cultural variables (cf. Easterly, Ritzen, and Woolcock 2006), but to systematically consider how these variables relate to economic freedom. However, as we will see, the effects of the soft stuff of institutional development are often contradictory, and relationships are not always monotonic. While this position is unlikely to face strong opposition from those who merely see an important role for culture in institutional development, such as Alesina and Giuliano (2015), or perhaps Easterly, Ritzen, and Woolcock (2006), it would presumably contradict simple models advocated by immigration skeptics.

As one specific example, Borjas (2015) explicates his beliefs by introducing a simple formal model. He contends that framing the potential increase in world GDP via eliminating migration restrictions in terms of a modeled equilibrium condition is misleading. It is derived that the number of people who will migrate if open borders were to be enacted is defined in terms of equation 1.

$$\frac{\alpha_N(L_N + M)^\eta}{\alpha_S(L_S - M)^\eta} = 1 \quad (1)$$

$N$  denotes the global “North” (where migrants would be migrating to) and  $S$  denotes the global “South” (where migrants would be migrating from).  $L$  denotes initial levels of employment, and  $M$  denotes the amount of migration that takes place.  $\alpha$  represents the intercept of an inverse labor demand function and corresponds to “infrastructure” (broadly defined to include institutional quality), and  $\eta$  is the factor price elasticity of the inverse labor demand function. (Borjas 2015, pp. 962–64).  $\alpha$  differs across the two regions, while  $\eta$  is assumed to remain constant. Following this, the increase in world GDP would be given by equation 2.

$$\Delta Y = \int_{L_N}^{L_N+M} \alpha_N L^\eta dL - \int_{L_S-M}^{L_S} \alpha_S L^\eta dL \quad (2)$$

Analysis following Clemens (2011) and reproduced by Borjas would then imply that eliminating migration restrictions would constitute a free lunch of many trillions of dollars.

Borjas's argument is simply that following the migration event,  $\alpha_N$  would no longer be fixed. Following the event, the new level of (broadly defined) infrastructure in the North,  $\alpha_N^*$ , would be somewhere between  $\alpha_S$  and  $\alpha_N$  (Borjas 2015, p. 968). This small point is the crux of Borjas's argument. In other words, there isn't really anything deeper to the theoretical argument than what is already encapsulated in figure 2. Borjas's simple assertion, and other very simple assertions, constitute the core of what this family of theories is, in fact, arguing. While emphases differ, the heart of the culturalist-nativist positions boils down to these kinds of mechanisms.

The remainder of this section will evaluate previous literature on specific dimensions of culture and the soft stuff of institutional development. Deep narratives concerning the origins of a good institutional environment are countless, but importantly include Hayek (1960), Elster (1989), Olson (2000), Fukuyama (2011), Rothstein (2011), Acemoglu and Robinson (2019), and Powell (2019). The general question of the origins of institutional quality is too broad to cover in its entirety. Each of the cultural dimensions of the soft stuff of institutional development from the perspective of this paper is seen not as an independent hypothesis, but as pertaining to the same culturalist-nativist hypothesis, as in figure 2. I will now discuss the literature on the effects of these variables with respect to economic institutions, especially economic freedom.

### *Cohesion*

The natural starting point concerning cultural cohesion is the literature on fractionalization (Alesina et al. 2003), as well as the question posed by Alesina, Sacerdote, and Glaeser (2001): "Why Doesn't the United States Have a European-Style Welfare State?" (cf. Desmet Ortuno-Ortin, and Weber 2009). Most forcefully, this point has been made by the aforementioned Easterly, Ritzen, and Woolcock (2006), who find a positive relationship between cohesion, especially fractionalization, and an array of measures of institutional quality. Fractionalization in this frame is seen to erode social trust. There is some support that fractionalization reduces the effectiveness of property rights enforcement (Norton 2000) and economic freedom more generally (March, Lyford, and Powell 2017). In one recent working paper, Bournakis et al. (2018) find that ethnic fractionalization has negative effects when interacted with institutions (i.e., a common law legal system). By contrast, Leeson (2005)

contends that high fractionalization is actually an outcome of bad institutions. Finally, although deep roots are a part of the culturalist-nativist model, the analysis of Putterman and Weil (2010, pp. 1657–62) actually shows that a higher standard deviation of state history and agricultural history, which could be interpreted as a kind of fractionalization, is actually positively correlated with economic output, although they do not relate this finding to the institutional channel.

I will spend more time here, however, discussing the effects of immigration and institutional quality, because of the recent growth in this literature and its important role in motivating this paper. Baudasse, Bazillier, and Issifou (2018) provide a general literature review of broad findings on institutions and migration. In the culturalist-nativist framing, immigration stocks and flows are seen as impacting cultural norms and mores, impacting the sentiments of voters, and reducing trust and social capital. However, empirical research elsewhere has directly tested the relationship between immigration and economic freedom (Clark et al. 2015), finding, if anything, positive effects of immigration on institutional quality, with subsequent empirical work using more rigorous methodology upholding these findings (Powell, Clark, and Nowrasteh 2017; Padilla and Cachanosky 2018; Arif et al. 2020; Nowrasteh, Forrester, and Blondin 2020; Tuszynski and Stansel 2020). As concluded by Clemens and Pritchett (2019), the new case for immigration restrictions is very thin in comparison to the overwhelming evidence in favor of reducing migration barriers (cf. Murphy 2017; Powell 2018).

As argued by Alesina, Miano, and Stantcheva (2018), immigration reduces support for economic redistribution. It is disputed whether reductions in support can be observed in, for example, Germany (Schmidt-Catran and Spies 2016; Auspurg 2019). By definition, a reduction in redistribution would appear as an increase in economic freedom. Elsewhere, similarly, Brandt and Svendsen (2010) argue that that the key ingredient for maintaining Nordic welfare states is social trust.<sup>2</sup> They later develop a game-theoretic model showing that a robust welfare state would not withstand open borders (Brandt and Svendsen 2019). This argument echoes immigration concerns raised previously by Putnam (2007).

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<sup>2</sup> See also Jensen and Svendsen (2011).

Another mechanism by which immigration could impact economic freedom is through weakening the protection of property rights. The evidence, however, that this mechanism is largely a product of populist imaginations. There is little reason to believe that immigrants are disproportionately criminal in their behavior (Nowrasteh 2016; Landgrave and Nowrasteh 2017). Neither is there reason to believe that immigration will lead to more corruption (e.g., see Bologna Pavlik et al. 2019). In short, the social scientific literature provides little reason to believe that immigration reduces economic freedom.

### *Deep Roots*

Putterman and Weil (2010, pp. 1652–55) argue that ancestry-adjusted state history and agricultural history affect outcomes today through their effects on institutions and culture. Cultural knowledge of how to cooperate and utilize state institutions in a socially beneficial matter, as measured by the length of cultural familiarity with either states or agriculture (as well as technology), is thought to improve modern institutional quality. Putterman and Weil test this hypothesis by measuring the effects of deep roots on the institutions of executive constraint, expropriation risk, and government effectiveness, and the cultural attributes of trust, control, respect, obedience, and thrift.

Putterman and Weil's cultural attributes are from Tabellini (2010), which we will later conceptualize as informational institutions. Regarding the effects of deep roots on economic freedom, previous work is to be found in Gohmann (2019), who considered relationships between geographic conditions (e.g., landlocked) and biological conditions (e.g., domesticable animals) in conjunction with state, technological, and agricultural history. Gohmann compares them to EFW and components of the freedom index, finding the relationships to generally run in the expected, positive direction, although their relationships with the overall economic freedom index are not especially robust.

Murphy and Nowrasteh (2017) apply Putterman and Weil's methodology to profiles of individual US states, connecting state history and agricultural history cleanly to measures of social capital and quality of government measures, but weakly (if at all) to subnational economic freedom. Elsewhere, Ashraf and Galor (2013) frame the negative effects of genetic diversity as operating through the channel of diversity inhibiting social cooperation, in which case

negative effects of genetic diversity would be read similarly to the negative effects of fractionalization.<sup>3</sup> Faria et al. (2016) use genetic diversity and its quadratic term as instruments for economic freedom.

### *Surface-Level Cultural Variables*

Social capital as a concept is often blurry, variously defined as the interconnectedness of individuals within a society, generalized social trust, or a willingness to cooperate, not to mention other definitions. When I say “social capital,” I most often have social trust in mind, but in discussing previous literature, I will treat social capital uniformly. Later in the empirics, I will consider “importance of friends” alongside generalized trust as a means of capturing definitions of social capital closer conceptually to social networks or interconnectedness. For now, I will not further de-homogenize social capital, so as to ease the presentation of the data from the standpoint of narrative.

Discussion of social capital starting with Putnam, Leonardi, and Nanetti (1994) has focused on its role in determining institutional quality. Per this narrative and that developed by Putnam (2000) and Rothstein (2011), social capital is what allows communities to come together and make their political institutions work for their mutual benefit. I should also note that the work of Jacobs (1961) conceives of social capital as producing superior community governance. It is possible to even read Jacobs’ conception of community governance into de Tocqueville.

Literature on the effects of social capital and purely *economic* institutions is somewhat thinner. Berggren and Bjornskov (2017) connect it to improvements in components of economic freedom, namely regulatory policy and the quality of the legal system; previously, Berggren and Jordahl (2006) argue that the quality of the legal system improves social trust. Aghion et al. (2010) and Leibrecht and Pitlik (2015) find distrust to increase the demand for regulation. Jackson, Carden, and Compton (2015) do not find a strong relationship between economic freedom and social capital at the subnational level, while Jackson (2017) finds a somewhat mechanistic, negative relationship between them due to measures of social capital correlating with variables like labor union membership.

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<sup>3</sup> Tang (2016) finds that genetic diversity is not robust to the inclusion of a dummy for Eurasia, though I ultimately find evidence weakly supporting Ashraf and Galor (2013) even when including this Eurasian dummy variable.

Bergh and Bjornskov (2011) find that historical levels of social trust predict the size of the welfare state.

However, there are reasons for believing that social capital can have negative effects as well. Villalonga-Olives and Kawachi (2017) present a recent literature review, for example, on the negative health effects of social capital. But there is other direct evidence that social capital can impair institutional quality. The most striking example is that civil society organization density in interwar Germany was correlated with voting for the Nazi party, and such groups contributed to the rise of fascism (Berman 1997; Satyanath 2017). Social capital sometimes appears related to the ability of groups to seek rent (Chamlee-Wright and Storr 2011; Acemoglu, Reed, and Robinson 2014; cf. Jackson 2017), operating in a way that contradicts the hypothesis of Putnam (2000). The pernicious potential nature of social capital is perhaps best read in terms of Hargreaves Heap and Zizzo (2009), who find that highlighting group membership creates discrimination against outsiders; altruism within the group can occur at the expense of treating those outside the group with dignity.

While social capital may have an unambiguous effect on some sets of institutions, it is possible that it could have conflicting effects on economic freedom. This latter position is implied in Murphy (2018; cf. O'Reilly 2018). The relationship between social capital and other variables actually takes an inverted-U shape across several literatures (e.g., Molina-Morales and Martinez-Fernandez 2009; Echebarria and Barrutia 2013). Butler, Giuliano, and Guiso (2016) find such a relationship as holding for the individual, but not for societies as a whole. Another similar finding is from Peiro-Palomino and Tortosa-Ausina (2013), who use quantile regression and find that social trust is most positive in its effect on income at intermediate levels of income. The similarity of finding inverted Us in the disparate literatures of social capital and in research referenced earlier regarding deep roots and genetic diversity (Ashraf and Galor 2013; Borcan, Olsson, and Putterman 2018; Spolaore and Wacziarg 2018) was one of the bases for the explorations pursued in this paper.

Moving beyond social capital and onto other attributes of culture, individualism is a frequent focal point in the scholarly study of markets for positive, normative, philosophical, and methodological reasons (Schumpeter 1909; Hayek 1948; Boettke and Storr 2002). As such, we will consider individualism as it relates to economic institutions. Johnson and Lenartowicz (1998) find no relationship between individualism and economic freedom, but Nikolaev and

Salahodjaev (2017), with a more persuasive identification strategy, do. Similar analysis conducted by Gorodnichenko and Roland (2017) successfully connects individualism and democracy.

I should emphasize that while individualism can be interpreted as shorthand for an essential dimension of contemporary Western culture, the definition from Hofstede, Hofstede, and Minkov (2010) seems *negatively* related to social capital and social interconnectedness. “Individualism” in the Hofstede definition is almost phrased as being a kind of Banfieldian amoral familism: “In Individualist societies people are only supposed to look after themselves and their direct family.”<sup>4</sup> As a measure, it may actually be appropriate to consider it to be a *negative* measure of culture in the context of the other elements of the culturalist-nativist paradigm. The interpretation of my results in subsequent sections will therefore leave it somewhat ambiguous.

Finally, I make use of a combination of cultural variables from the *World Values Survey* assembled by Tabellini (2010). These cultural variables, or “informal institutions” as conceptualized in Williamson (2009) and Williamson and Kerekes (2011), consist of trust, respect, and individual self-determination entering positively, and obedience entering negatively. Williamson and Kerekes (2011) argue that these informal institutions are superior to formal institutions in protecting property rights, which would be observed as improving economic freedom. An issue with the application of this data is that it borders on tautology, although it is only one of twelve variables studied here.

In summary, a good deal of social scientific research has already considered the effects of these variables separately. At a superficial level, literature on fractionalization and social capital supports aspects of the culturalist-nativist position on the origins of institutions. But whether there is *any* such evidence is not quite the same question as what a reasonable expectation is for the generalized effects of cultural variables on economic freedom. Moreover, an uncomfortably large amount of research either simply contradicts the culturalist-nativist position or suggests that it may impact one dimension of institutions differently from another. We will now turn to analyzing the soft stuff of institutional development systematically and quantitatively.

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<sup>4</sup> Hofstede Insights website, “Country Comparison,” USA.

#### IV. Results

Tables 3–8 report the standard regression results. All regressions include the four geographic controls and robust standard errors, with asterisks corresponding to conventional 10 percent, 5 percent, and 1 percent levels of statistical significance. Each table contains regression results for two of the twelve cultural variables. The first specification of each variable in each panel is a linear specification, and the second is a quadratic specification. Also listed in the table is the position of the independent variable corresponding to the peak or the trough of the quadratic function. We start with the deep cultural variables, followed by surface-level cultural variables (e.g., social trust), and then the cultural cohesion variables.

To recapitulate, the motivation and focus of this paper are to examine these cultural variables in a systematic way to determine whether the culturalist-nativist paradigm is evident in a surface-level examination of the data, or whether the posited relationships are not evident. If better identification strategies for each linkage of the culturalist-nativist paradigm were to be offered, and then tied to economic freedom, so much the better.<sup>5</sup> Results in the remainder of this section will be sometimes described as if I mean them in causal terms, rather than descriptive terms, but this is done explicitly for expositional purposes. Caveats regarding better identification clearly remain.

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<sup>5</sup> With the closest previous analysis to this being Easterly, Ritzen, and Woolcock (2006).

TABLE 3. Adjusted State History and Adjusted Agricultural History (Controls Unreported)

	(1)	(2)	(3)	(4)
State History Adj.	0.304 (0.374)	0.159 (1.064)		
State History Adj., Squared		0.170 (1.226)		
Agricultural History, Adj.			0.052 (0.061)	0.497** (0.191)
Agricultural History Adj., Squared				-0.039** (0.017)
Constant	6.020*** (0.179)	6.035*** (0.197)	5.924*** (0.240)	4.880*** (0.426)
R <sup>2</sup>	0.216	0.216	0.207	0.252
n	118	118	125	125
Position of Independent Variable at Min/Max		-0.467 (6.385)		6.356*** (0.829)

TABLE 4. Technological History and Genetic Diversity (Controls Unreported)

	(5)	(6)	(7)	(8)
Technological History Adj.	1.397** (0.582)	-0.669 (1.712)		
Technological History Adj., Squared		2.008 (1.649)		
Genetic Diversity			-4.170** (1.872)	156.338** (62.067)
Genetic Diversity, Squared				-118.260** (45.647)
Constant	5.651*** (0.182)	6.132*** (0.410)	8.972*** (1.357)	-45.003** (20.937)
R <sup>2</sup>	0.244	0.253	0.260	0.311
n	109	109	121	121
Position of Independent Variable at Min/Max		0.167 (0.301)		0.661*** (0.010)

TABLE 5. Trust and Importance of Friends (Controls Unreported)

	(9)	(10)	(11)	(12)
Social Trust	0.029*** (0.008)	0.074*** (0.020)		
Social Trust, Squared		-0.0007*** (0.0002)		
Importance of Friends			0.945 (0.592)	-13.041 (8.463)
Importance of Friends, Squared				3.031 (1.840)
Constant	6.210*** (0.395)	5.665*** (0.509)	4.485*** (1.267)	20.406** (9.622)
$R^2$	0.278	0.317	0.165	0.197
n	58	58	60	60
Position of Independent Variable at Min/Max		56.353*** (8.426)		2.151*** (0.124)

TABLE 6. Individualism and Informal Institutions (Controls Unreported)

	(13)	(14)	(15)	(16)
Individualism	1.567*** (0.528)	-1.937 (2.407)		
Individualism, Squared		3.548 (2.237)		
Informal Institutions			0.181*** (0.062)	0.103 (0.223)
Informal Institutions, Squared				0.008 (0.020)
Constant	6.197*** (0.246)	6.707*** (0.491)	5.917*** (0.280)	6.052*** (0.386)
$R^2$	0.231	0.257	0.216	0.218
n	83	83	75	75
Position of Independent Variable at Min/Max		0.273 (0.174)		-6.644 (31.117)

TABLE 7. Ethnic Fractionalization and Linguistic Fractionalization (Controls Unreported)

	(17)	(18)	(19)	(20)
Ethnic Fractionalization	-1.003*** (0.360)	-0.170 (1.332)		
Ethnic Fractionalization, Sqrd.		-0.939 (1.532)		
Linguistic Fractionalization			-0.265 (0.320)	1.597 (1.140)
Linguistic Fractionalization, Sqrd.				-2.178 (1.314)
Constant	6.800*** (0.323)	6.683*** (0.331)	1.906*** (0.719)	6.088*** (0.291)
R <sup>2</sup>	0.245	0.248	0.224	0.244
n	124	124	121	121
Position of Independent Variable at Min/Max		-0.091 (0.853)		0.367*** (0.079)

TABLE 8. Religious Fractionalization and Immigration (Controls Unreported)

	(21)	(22)	(23)	(24)
Religious Fractionalization	0.722* (0.366)	2.074 (1.314)		
Religious Fractionalization, Sqrd.		-1.616 (1.527)		
Immigration Stock			2.530*** (0.900)	4.303** (2.110)
Immigration Stock, Squared				-3.557 (3.222)
Constant	5.776*** (0.250)	5.589*** (0.289)	6.102*** (0.180)	6.084*** (0.180)
R <sup>2</sup>	0.230	0.237	0.268	0.276
n	124	124	99	99
Position of Independent Variable at Min/Max		0.642 (0.243)		0.605** (0.273)

TABLE 9. Economic Magnitude of Results

	State History	Ag. History	Technological History	Genetic Diversity	Social Trust	Importance of Friends
Linear Specification, Economic Marginal Effects	0.091	0.124	0.395	-0.248	0.481	0.223
Quadratic Specification, Economic Marginal Effects	0.106	-0.026	0.651	-1.048	0.475	0.422
Min/Max Z-Score	-3.384	0.435	-1.775	-0.906	1.967	-0.908

TABLE 9. Economic Magnitude of Results, Continued

	Informal Institutions	Individualism	Ethnic Frac.	Linguistic Frac.	Religious Frac.	Immigration
Linear Specification Marginal Effects	0.406	0.399	-0.286	-0.084	0.189	0.349
Quadratic Specification Marginal Effects	0.418	0.413	-0.358	-0.246	0.071	0.461
Min/Max Z-Score	-5.493	-0.507	-2.136	-0.125	0.861	4.316

Table 9 can be read in conjunction with tables 3–8 to help contextualize the results. For each of the twenty-four regressions reported in tables 3–8, I calculate the marginal effect on the dependent variable of a one standard deviation increase in the independent variable, divided by a one standard deviation increase in the dependent variable. This is straightforward for the linear specification, but there is a small layer of nuance for calculating the magnitude of the effect for the quadratic specification.<sup>6</sup> I then list the position of the independent variable at the peak of the quadratic function in terms of the z-score for the independent variable to convey its relationship to the data.

Table 3 reviews results for state history and agricultural history. State history is either a null result or a very weakly positive result in its effects on economic freedom. Because the t-stat in the linear specification is only 0.81, calling this result ambiguous is generous for the hypothesis. Agricultural history once again performs weakly in its linear specification for economic freedom, but the regression picks up an inverted U in the quadratic specification. The peak corresponds

<sup>6</sup> It is not as simple as taking the derivative of the function. What needs to be done is to evaluate the function at the mean plus one standard deviation of the independent variable and evaluate the function at the mean. I subtract one from the other and divide the difference by the standard deviation of the dependent variable. In terms of the conventional  $ax^2 + bx + c$  quadratic function, this reduces to  $\frac{\partial_x(2ax + a\partial_x + b)}{\partial_y}$ .

to an agricultural history of 6.4 units, which is a z-score of 0.435. This outcome implies that agricultural history has a positive relationship to economic freedom until agricultural history is modestly above average, after which the relationship is negative. In table 9, where effect sizes are reported, the magnitude and sign of agricultural history in the quadratic specification reflect that going from the mean to one standard deviation plus the mean actually crosses the peak of the function.

Technological history is the one cultural-historical variable with a strong, positive relationship to economic freedom. There is little reason to prefer the quadratic specification over the linear specification in this case, but the effect size actually grows in the latter specification. If all three of the cultural-historical variables performed as well as technological history, it would be reasonably strong support for the culturalist-nativist position.

Genetic diversity differs in its interpretation from other variables in this paper, since Ashraf and Galor (2013) have already emphasized the inverted U-shaped relationship between the variable and development. Further evidence supporting this finding is therefore seen to support the culturalist-nativist position. While the linear specification finds a negative relationship between genetic diversity and economic freedom, an inverted U is found strongly in the quadratic specification, with its peak appearing at a genetic diversity z-score of  $-0.91$ . The magnitude of this effect is large. In the quadratic specification, a one standard deviation increase in genetic diversity corresponds to a 1.05 standard deviation decline in economic freedom. As we will later see, however, Ashraf and Galor's speculations of the mechanism by which this occurs (through trust or fractionalization) are not necessarily reflected elsewhere in the data, and it is unclear how to interpret it.

In table 5 are results for social trust and the importance of friends. While the data are consistent with a positive relationship between social trust and economic freedom, results found in regression 10 forcefully point to the inverted-U hypothesis, with the peak of the curve arriving at a z-score of social trust of 1.97. This level of social trust is substantially above average, but it is also not out of the realm of policy relevance. At the mean level of social trust, a one standard deviation increase in trust will increase economic freedom by a half standard deviation. For the importance of friends, results are much weaker and somewhat unclear. The t-stat in the linear specification is 1.60. Neither coefficient in the quadratic

specification is significant individually, but they are jointly significant at the 10 percent level.

In table 6, we find two cultural variables with results that are much less ambiguous. Individualism strongly relates to institutions, with a one standard deviation increase corresponding to a 0.40 increase in economic freedom; the data do not suggest a quadratic relationship. The informal institutions variable, which uses the elements of the *World Values Survey* that are supportive of the functioning of markets, also has a tight relationship with economic freedom. A one standard deviation increase in informal institutions corresponds to a 0.41 increase in economic freedom. Here, where the relationships between cultural attitudes are more concrete—though debatably almost tautologically so—culture and institutions show a much firmer relationship. However, given how the Hofstede data is defined, the results for individualism may detract from the culturalist-nativist position more than support it.

In table 7, we find the first two dimensions of fractionalization. Ethnic fractionalization has a clear, negative linear relationship with economic freedom, with little evidence of a quadratic relationship and no apparent relationship between linguistic fractionalization and economic freedom. In table 8, there is a weak, *positive* relationship between religious fractionalization and economic freedom. Neither individual coefficient in regression 22 is significant for the quadratic specification, but they are jointly significant at the 10 percent level, corresponding to an inverted U that peaks at a z-score of 0.86. The last variable of interest is foreign born as a percentage of the population (or “immigrant stock”). Its relationship with economic freedom is strongly positive, which replicates the result of Clark et al. (2015), but with a new set of control variables.

My own interpretation of the regression results is summarized in table 10. Four of the twelve variables went in the direction implied by the culturalist-nativist model found in figure 2: technological history, genetic diversity, informal institutions, and ethnic fractionalization. State history is one edge case, and individualism could also be charitably counted as one even though its definition contradicts the cohesion component of the culturalist-nativist paradigm. Immigration did not behave in the ways expected by the new rationale for migration restrictions. This finding is consistent with Brandt and Svendsen (2010, 2019) and Jensen and Svendsen (2011), but not with the broader culturalist-nativist position. Overall, the

results raise concerns that the findings of Easterly, Ritzen, and Woolcock (2006) are not particularly robust.

TABLE 10. Suggested Reading of Regression Results, with Economic Effects

	Expected Sign	Observed Direction	Size of Effect at Men
State History, Adj.	(+)	Null or Weak (+)	Null or +0.091
Agricultural History, Adj.	(+)	Inverted-U	-0.026
Technological History, Adj.	(+)	+	+0.395
Genetic Diversity	Inverted-U	Inverted-U	-1.048
Social Trust	(+)	Inverted-U	+0.475
Importance of Friends	(+)	Unclear	Unclear
Individualism	?	(+)	+0.399
Informal Institutions	(+)	(+)	+0.406
Ethnic Fractionalization	(-)	(-)	-0.286
Linguistic Fractionalization	(-)	Null	Null
Religious Fractionalization	(-)	Null or (+)	+0.189
Immigration Stock	(-)	(+)	+0.349

This assortment of cultural variables is much more consistent with the *general* idea that culture is relevant for economic institutions than with the narrow theory that institutional quality strictly requires cohesive societies with a deep, historical knowledge of how to make institutions work. But regarding individualism, its measured effects may go *against* the culturalist-nativist hypothesis because Hofstede's individualism appears to be defined as a lack of cultural cohesion. And while genetic diversity also behaves in the expected direction

(replicating previous research, finding an inverted U) for economic freedom, at least, measures of fractionalization and immigration (and perhaps of trust) do not lend credence to the notion that whatever effects are observed are running through the channel argued by Ashraf and Galor (2013). Lastly, social trust clearly relates to economic freedom, but its relationships are more complicated than other studies have portrayed.

#### **IV. Conclusion**

Culture and institutions will inevitably impact one another. But as both are slow moving and expensive to measure, social scientists have only gradually developed data sufficiently dense to assess them carefully. Many variables, such as those pertaining to the deep roots of economic development, are both academically interesting and monumental in their scope. However, the relative importance of these variables for institutional quality, and exactly *how* they relate to institutions, remain empirical questions apart from conjecture or circumstantial evidence. This paper has explicated how certain social scientists have conceptualized the interrelationships between migration, culture, and institutions, while also speaking to the broader question of culture and institutions. It has considered twelve variables relating in some way to the “soft” foundations of institutional development, allowing them to enter either linearly or quadratically into specifications that explain economic freedom.

The variables considered include four measures pertaining to the cohesiveness of a society (fractionalization and immigration), four variables corresponding to deep cultural elements of a society (three of the conventional deep roots, plus genetic diversity), and four measures pertaining to the more surface-level elements of culture (social trust, importance of friends, individualism, and informal institutions). These variables do not consistently run in the “expected” direction when basic geographical controls are included. From the standpoint of causality, the findings are most persuasive when analyzing the group of deep cultural variables. But while it’s possible that a perfect identification strategy would somehow fix the sign of every point estimate to its expected direction, with the desired number of statistical significance asterisks, the fact remains that, in rather unchallenging conditions for the hypothesis, the relationship between the cultural variables and economic freedom is inconsistent or even erratic.

The dimensions of culture that appear to most firmly support markets are those intuitively most related to the culture of markets: individualism and informal institutions, the latter measured in such a way that focuses on the cultural support for markets. The former may actually relate *negatively* to social cohesion. Variables concerning cohesiveness or deep roots are at best weakly supportive of and at worst in conflict with the hypotheses in question. Immigration, as has been shown recently elsewhere, mostly relates *positively* with economic freedom. This last result is not wholly unexpected, given the findings in Clark et al. (2015) and elsewhere.

Recent research has shown the difficulty in discerning the root causes of the development of economic institutions (Lawson, Murphy, and Powell 2020). If it were the case that culture underlies economic institutions as clearly as has been implied—most notably, though indirectly, by Borjas (2015)—it would be evident from a rather superficial inspection of the data. That is to say, casual empiricism ought to be robust to a line of best fit. While the focus of this analysis was to go broad in its empirical investigation, instead of closely examining any single variable, it has failed to uncover the kind of evidence that would support either the rhetoric of immigration skepticism or the more strident statements on the essential importance of culture in the development of institutions (as in Michalopoulos and Papaioannou 2013, 2014; cf. Alesina and Giuliano 2015). It should not be surprising that the relationship between culture and its adjacent concepts like fractionalization, cultural history, and social capital with economic freedom may be multifaceted, complex, and perhaps sometimes non-monotonic. If a simple theory of the development of economic freedom works, that will add to our scientific understanding, but positive evidence in favor of such a theory is yet to emerge.

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