

Espíritus de los mercados como determinantes de la libertad económica

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Revista Cultura Económica

Año XXXVII • N°98

Diciembre 2019: 45-81

Resumen: Este artículo intenta contribuir a la comprensión de las formas en que las creencias de las personas sobre la economía de mercado configuran la libertad económica. El artículo integra la noción de cultura como "espíritus de los mercados" en la literatura cuantitativa entre países sobre cultura e instituciones, al modelarlo como un sistema multidimensional de creencias sobre la economía de mercado. Propone que es la consistencia de las creencias, no las creencias en sí, lo que puede estar "incrustado" en la cultura y, por lo tanto, la consistencia de las creencias puede considerarse como un determinante de la libertad económica. Con creencias distribuidas más consistentemente, un aumento constante en la libertad económica creará más "perdedores ideológicos" en el electorado, lo que crea una posibilidad política empresarial para compensarlos. Como tal compensación generalmente toma la forma de una reducción en la libertad económica, la implicación es que aquellas áreas de libertad económica que se ven afectadas por esta compensación reflejarán menos libertad en países libres. Esta propuesta está respaldada por algunos análisis estadísticos con las áreas de libertad económica como variables dependientes y las medidas de (in) consistencia de las creencias del mercado que forman la Encuesta Mundial de Valores (*European Values Study*) como dependientes.

Palabras clave: libertad económica; cultura; instituciones

Spirits of markets as determinants of economic freedom

Abstract: *This paper attempts to contribute to the understanding of the ways people's beliefs about the market economy shapes economic freedom. The paper integrates the notion of culture as 'spirits of markets' into the cross-country quantitative literature on culture and institutions by modelling it as a multi-dimensional system of beliefs about the market economy. It proposes that it is the consistency of beliefs, not the beliefs themselves, that may be 'embedded' in culture, and therefore the consistency of beliefs may be considered as a determinant of economic freedom. With more consistently distributed beliefs a consistent increase in economic freedom will create more 'ideological losers' in the electorate, which creates a political entrepreneurial possibility to compensate them. As such compensation usually takes the form of a reduction in economic freedom, the implication is that those areas of economic freedom that are affected by this compensation will reflect less freedom in otherwise free countries. These proposition is supported by some statistical analyses with the areas of economic freedom as dependent variables and the measures of (in)consistency of market beliefs form the World Values Survey (*European Values Study*) as dependent ones.*

Keywords: *economic freedom; culture; institutions*

I. Introduction: values or beliefs or neither?

As economic freedom is one of the fundamental determinants of economic development (Hall and Lawson, 2014), it is little wonder that asking what determines economic freedom seems to be a fruitful way of future research (Bologna and Hall, 2014). Economic freedom is just a way to evaluate a subset of institutions and policies of a country. We can see the question about its determinants as a part of a broader question that concerns the roots of good institutions. The authors of this broader literature have pointed out, however, that ‘values and beliefs’ make up one of such roots. This thick economic, theoretical as well as empirical, literature on ‘culture and institutions’ (Alesina and Guiliano, 2015) have identified several ways in which culture (or values and beliefs) shapes market institutions and therefore economic performance.

Addressing the question of how culture affects economic freedom, this paper tries to contribute to this literature in two ways. The first is to point out that it has neglected two aspects of this question so far. One of them is the observation that values and beliefs may not be the same. Values are deeper and more “hard-wired”. Beliefs are more “superfluous” and might be changed more easily by reason. The other neglected aspect of market beliefs is that they might not be one-dimensional. Such beliefs are usually considered as being more or less anti- or pro-market but people can easily be pro-market on one issue and anti-market on another. I will use the concept of the “spirits of markets” (Storr, 2013) to argue that it is not enough to think of beliefs as being pro- or anti-market because they may not be consistently so. By applying the “spirits of markets” I will argue that what is culturally determined may not be the extent to which public opinion is pro-market. Rather it may be the (in) consistency of the cross-individual distribution of beliefs: whether an individual who is pro-market in one sense tends to be pro-market in another.

The other contribution of this paper is to show that the idea of multidimensional beliefs lends itself to statistical inquiry. By examining data on market beliefs from the World Values Survey and European Values Study, the paper develops a cross-country measure of the (in) consistency of market beliefs and shows that it is one of the factors that shapes the areas of economic freedom.

The question is how to understand the relation between “deeper” culture, not-so-deep beliefs, and economic freedom. In section II, I

will introduce the difference between these two elements of culture and show that there is even an implicit debate in economics concerning the role of these two. In section III, I will show why the “spirits of markets” approach is useful to understand the meaning of more or less consistent market beliefs and the way this (in) consistency can lead to cross-country differences in areas of economic freedom. In section IV, I use some statistical tools and cross-country regressions to give empirical support of what I propose in section III, which will allow me to draw some conclusions in section V.

II. Values and beliefs as determinants of institutions and policies of economic freedom

1. The importance of “deep” culture

“Culture” as discussed in the literature that I am about to summarise briefly includes different elements. For the purpose of examining “culture” as a possible determinant of economic freedom, we should differentiate between at least two groups of these elements. One of them I will call values and the other I will call beliefs. By values I mean the deep-seated parts of culture. Those “traits” that are socially inherited, as several definitions of culture (Guiso *et al.*, 2006 and Mokyr, 2017), emphasize¹. Values refer to what is called internal and informal institutions by Kasper *et al.* (2012). They are deep because they are learnt unintentionally², and they influence choices because they constrain actions (Voigt 2017, 2018).

I call those elements of culture “beliefs” that usually are learnt deliberately, or intentionally, and they provide guidance (or even constraints) for thoughts and not for actions³. They are not deep because persuasion which requires deliberation by both can change them, those persuading and those being persuaded. They are not constraints on actions, and yet they appear to shape institutions. Adam Smith’s ideas, for example, as Mises (2007/1953: 132) says, “presented the essence of the ideology of freedom, individualism, and prosperity” and they “blew up the institutional barriers to the display of the individual citizen’s initiative and thereby to economic improvement”, and “paved the way for the unprecedented achievements of laissez-faire capitalism”.

At first sight, it is not at all obvious that any element of culture is among the determinants of economic freedom. Since institutions and policies made up economic freedom that public players planned and run, it seems to be natural to apply interest group logic to explain its determinants (Grubel,

2015). According to this argument, economic freedom results from force and counter-force in politics: an equilibrium situation between the vote-buying interest group and those groups that are against. The institutional, cultural and ideological environment of this political battle determined the equilibrium level. This argument, however, does not tell apart the theory of the origin of certain institutions and policies from the theory of the origin of economic freedom.

Economic freedom is itself an output of many institutions and policies, and it is a special public good. However, there are two problems with the interest group logic. The first one is theoretical. As Clark and Lee (2015) explain, economic freedom differs from any other “ordinary” public good because there is no interest group which is privately gained by an increase in economic freedom, as opposed to, for example, defence spending⁴. This, I think, implies that explaining cross-country differences in economic freedom as differences in equilibrium outcomes of interest group activity is insufficient. It seems that there is no private material interest that directly benefits more from an increase of economic freedom than from a marginal decrease of it. Even if an interest group logic explains the decrease in economic freedom, explaining its increase, and its long-run level, needs culture.

“Culture and institutions” has been a fruitful research topic for at least two decades in economics (Alesina and Giuliano, 2015), the results show that it is difficult to omit culture when accounting for the evolution of institutions⁵. According to their literature review, “culture”, among many other things, includes collectivist or individualist values, social trust, political attitudes, religious norms, patience and work ethic, beliefs and preferences with a focus on people’s views about the role of the state, preferences for redistribution. It has also shown other parts of culture to be among the determinants of institutions or those of economic development. Tabellini’s (2010) paper became seminal in the field even before being published. He identifies four cultural traits, trust, respect (tolerance and respect for other people), obedience, and control (over one’s life), and condenses them into one principal component. He shows that this culture matters for regional development for Western Europe and that this culture is historically determined.

These cultural elements are thought to be important determinants of contemporary institutions and policies. Their importance is shown, for example, by the evidence that the evolution of the policies and institutions

even in the (old) EU are influenced by culture and cultural heterogeneity (Alesina, Tabellini and Trebbi, 2017; Guiso, Sapienza and Zingales, 2009; Guiso, Herrera and Morelli, 2016). Elements of deep culture are thought to be persistent, too. They have changed little within the EU (Alesina, Tabellini and Trebbi, 2017), and religion, a hard-to-change factor is seen as part of such elements (Arruñada 2010, Arruñada and Krapf, 2018, Nelson, 2012). Religion (Protestantism) has even been shown to have a direct effect on economic freedom (Hillman and Potrafke, 2016).

2. The implicit debate about the deepness of beliefs

There is an implicit debate in the literature on “culture and institutions” about values and beliefs as I understand these terms. Most authors emphasize the deepness of the cultural determinants of institutions. Alesina, Tabellini and Trebbi (2017:5) contrast the “deep cultural traits” they examine with the less deep and “contingent ideas about the appropriate macroeconomic policy framework” which are given a strong emphasis by Brunnermeier, James and Landau (2016). The latter authors’ main concern is the difference between “French” and “German” tradition of economic thinking, which are different as regards the role of the state, but first about the emphasis they place on individual responsibility and the importance of moral hazard.

Realizing that there are not-so-deep cultural determinants of institutions are important to understand that changes in institutions might also be explained by changes in culture. Acemoglu and Robinson (2012), for example, refuse the cultural explanation of institutions as one of the “theories that don’t work” because “those aspects of culture often emphasized – religion, national ethics, African or Latin values – are just not important (...) Other aspects, such as the extent to which people trust each other or can cooperate, are important but they are mostly an outcome of institutions, not an independent cause” (Acemoglu and Robinson, 2012: 57). Zamagni (2013), however, criticizes Acemoglu and Robinson’s book for paying no attention to the role of humanism and renaissance, to the emergence of the ideological foundations of the market economy.

This debate about deepness is also implicitly present in the literature on the determinants of economic freedom. First, there is direct and indirect evidence on the effects of deep cultural traits on economic freedom (Williamson, 2009; Williamson and Kerekes, 2011; Williamson and Mathers, 2011; Williamson and Coyne, 2014), although it is not clear whether culture

is a substitute or complement to formal institutions (Williamson and Mathers, 2011; Williamson and Coyne, 2014). Some other results suggest, indirectly, that values and beliefs may matter. First, changes in economic freedom are very difficult to explain (in the statistical sense) with the traditional variables, especially among the rich countries or among those with a high level of initial economic freedom (March, Lyford and Powell, 2017). Otherwise, some variables that are traditionally considered as determinants of institutions, such as energy export or ethnic fractionalization are found by March, Lyford and Powell (2017) to matter. The time series property of economic freedom shows (Sobel, 2017) that the relatively fast declines of economic freedom are in line with the crisis or “ratchet theory” of government growth, but improvements seem to be much more difficult to understand suggesting hard-to-grasp determinants such as beliefs.

Second, there are differences in the path of economic freedom that seems to be determined culturally. Heckelman (2015) looks at cross-country differences in economic freedom for a period between 1995 and 2014 looking for signs of convergence. He shows that overall there is no sigma-convergence in economic freedom, only club convergence in some regions (Europe and MENA). The evidence is mixed with the convergence of different components in economic freedom. This shows that factors that are more permanent determined some components of economic freedom, while fewer stick factors changed others.

Besides these results about how deep the cultural roots of economic freedom may be, there are other results showing the importance of less deep cultural factors – those I called beliefs above. First, economic history of the rise of the West allows the conclusion that although it is the culture that matters, it is not a “deeply European” culture that does. McCloskey (2006, 2010, 2016) shows that a change in “sociological beliefs” (McCloskey, 2016:503) started economic growth. This change, however, must have been preceded, argues Mokyr (2017), by a change in the way (educated) people thought about science. Since the idea of the desirability of progress cannot be accepted without accepting the possibility of progress, an advent of a “culture of progress” in early modern Europe (Mokyr, 2016: 267) was necessary for sociological change and economic development.

Political ideology might be considered as part of culture but definitely not as part of the deep culture the literature referred to above alludes to. Yet, political ideology of the government has been repeatedly shown to influence economic freedom. Higgs (2012, 1987) concluded that the increase of state

intervention in the US resulted from a change in the ideology of those in power. Using econometrics, Jäger (2017) shows that political ideology matters even among such relatively homogenous countries such as the members of the OECD, despite the claims about the constraining role of globalization. In his study of the OECD, Osterloh (2012) also shows that there has been an impact of ideology on economic growth, just as do Facchini and Melki (2014) for France. In a cross-country setting Murphy (2017) shows that one can find a freer economy (measured by the index of economic freedom) in those countries where a right-wing government was more frequent in the past, but this effect does not last longer than 20 years.

There are two conclusions from this short review leading me to the question concerned with the relationship between values and beliefs in determining economic freedom. One is that those papers that are concerned with the way public beliefs, shape economic freedom are relatively rare. The other is that those papers that are concerned with the role of culture in shaping economic freedom (or some of its particular institutions) do not make a difference between values and beliefs; they are usually concerned with the former. My claim is that the "spirits of markets" approach to culture combined with a public choice approach to beliefs helps us connect the two.

III. Spirits of the markets and market beliefs

My argument is that the literature on culture and institutions suggests three interpretations, a mainstream, "spirits of markets", and a public choice one, concerned with the difference between values, beliefs and their relation to institutions. The literature review in section II suggests a mainstream interpretation which emphasises the deepness of "culture" understood as a mix of values and beliefs (often called informal institutions) and see their roles as incentivising actions. In this view, beliefs and values are not fundamentally different; they both provide incentives for action and they have an influence on whether or not actions are productive.

In what follows, I will argue that there are two other interpretations of either values or beliefs: the "spirits of markets" interpretations of values emphasize that culture provides a framework to understand the world, not instructions to behave in a certain way, while the public choice interpretation emphasizes the difference between the ways beliefs influence public

(political) action as compared to private action. I will also argue that it can merge these two interpretations.

1. The “spirits of markets” interpretation of values

The understanding of “culture” as one of the different possible “spirits of markets” differs from the mainstream view. A good starting point to show this seems to be Lavoie and Chamlee-Wright (2001) who refuse “ranking” national cultures on a scale. Also, Lavoie and Chamlee-Wright (2001) or Storr (2013) do not talk about culture as informal constraints. They see cultures as different ways of looking at the world, not as a set of rules determining the payoffs of individuals. It does not mean, however, that culture does not have any effects on what people think are worth doing; but this effect is much more indirect. Culture influences human actions, in this view, because people with different cultures look at the same payoffs and at the same actions to realize those payoffs in different ways.

This departure from the mainstream view does not necessarily mean that there is no meaning in talking about national cultures. What it suggests is that “culture” cannot be characterized by a point of view about one (or any) question (s). Rather, “culture is a framework of thought that allows us to attach meaning to the world around us” (Chamlee-Wright 2017: 185). It is the “how” not the “what”: it describes the possible ways people usually think and talk about the market, not what they think about it.

The reason is that culture is a system of meanings, not a bunch of ready-made answers shown by the idea of “culture as a constitution” (John, 2015). Those people who do not think the same about a question but use the same “shared patterns of meanings” (John, 2015: 234) to describe what they do not agree on belong to the same culture. Just like a constitution, culture represents an agreement concerning what means what, although this agreement is mostly not the result of a conscious choice. Culture is therefore a framework for human interaction because it makes the meaning of interests, intentions, and beliefs a public good. Such frameworks make up the spirits of the markets (Storr, 2013) or “competing economic spirits”, one of which is dominant.

That is to say, there are different competing frameworks within the same society. “Any sets of attitudes, beliefs and norms found in a particular society is likely to be competing against each other and even opposite sets of attitudes, beliefs and norms” (Choi and Storr, 2018: 20). Which set of view

prevails is a function of institutions. Although, culture changes slowly, the dominant views within a culture can change somewhat faster but the initiators of this change must be cultural or political entrepreneurs. The essence of Kirznerian entrepreneurship (Kirzner, 1973) lies exactly in the change of an end-means framework, in discoveries. Such a "[d]iscovery amounts to a shift in such perspectives, a fundamental change in the way the opportunities and constraints are seen" (Lavoie, 1991: 42).

In sum, in what I call the "spirits of markets" interpretation values are to be seen as a framework of meaning with the help of which people understand society around them. With those values in mind people form beliefs making up different "spirits of the markets". "Culture" measured as an aggregation of views cannot really reflect culture, which may not be quantified at all.

But if our aim, as that of this paper, is to understand the connection between culture and economic freedom, questions remain. If it is not the culture that is manifested in certain views and opinions you can usually find in surveys, then what is it? How should we understand the results that use these survey results? What to make of those results that say that there is a significant and robust cross-country relationship between such views and the quality of institutions or the standard of living? After all, it is McCloskey (2010), one of the proponents of the "interpretation" view of culture, who suggests using the "Values Survey" in accounting for the role of culture. The question is how.

2. The public choice interpretation of beliefs

If a culture is like a constitution, it seems natural to apply some arguments for constitutional political economy to analyse it. Constitutional political economy and public choice provide some useful insights to understand the role of values and beliefs in shaping institutions and policies. Taking such an approach Vanberg and Buchanan (1989) argue that the concept of preference blends the evaluative and the cognitive components of choice, where the former is "a person's evaluations of potential outcomes of choice" (Vanberg and Buchanan, 1989: 50), while the latter is "his theories about the world, in particular, what these outcomes are likely to be" (Vanberg and Buchanan, 1989: 50). To put it differently, "How a person chooses between potential alternatives is not only a matter of 'what he wants' but also of 'what he believes'" (Vanberg and Buchanan, 1989: 51). This formulation of how values differ from beliefs are in line with other authors' definitions. Shepsle (2010)

defines a belief as "a probability statement relating the effectiveness of a specific action (or instrument) for achieving various outcomes" (Shepsle, 2010: 30). Caplan (2000) differentiates between preferences and beliefs similarly by identifying preferences as that which shows "how he would behave" and beliefs as that which shows "what probability he would assign to any conceivable situation actually being the case"⁶.

Vanberg and Buchanan (1989) adds that when choosing about rules, theories are more important:

Compared to ordinary market-choice, there seems to be a dramatic shift in relevance from the interest component to the theory component when choices among alternative rules are concerned. Persons' preferences over alternative rules or systems of rules do not simply reflect "basic values", they are largely a product of their constitutional theories, and, therefore, may be changed through information that impacts on their theories (Vanberg and Buchanan, 1989: 60).

There are three reasons why the choice between rules causes theories more than does ordinary choice. The first reason is that motivations are different at the constitutional level because the information about their particular circumstance of those who choose is more limited (Brennan and Hamlin, 2001). Second, "[w]hat may be called the natural way of observing phenomena fades away" (Buchanan, 1990:17) at the complex level of choice, such as the choice between rules. Interpreting reality must then be based on more or less explicit theories, those who choose must share the fundamentals of which. A third reason comes from the motivations of voting. Because of the well-known result that the probability of voting decisively is actually zero, voters have an incentive to express their ideology in voting (Brennan and Lomasky, 1993). Or they may have an incentive to follow their irrational beliefs because doing so is not as costly as it is on private markets (Caplan's 2001a, b, 2007).

In sum, what I call the public choice interpretation of beliefs says that values and beliefs are different because values in part determine interests and, therefore, private action. Beliefs, however, are "theories" about how society works or should work, and they are like public goods which makes

them especially important in political actions, and much less so in a private action.

3. Consistency and inconsistency of market beliefs

The two approaches I presented in section III.1. and III.2., I argue, complement each other in a way that helps us see the connection between values and beliefs and their effects on economic freedom. The "spirits of markets" approach to culture summarised in section III.1. does not consider public choice mechanisms through which culture affects institutions and policies. In addition, it does not explain the difference between values and beliefs, and does not provide a reason that these two are not equally deep. The public choice view, on the other hand, offers more than just one mechanism to understand the effects of beliefs on policies and institutions but does not explain cross-country differences, and it does not really account for the effect of values. A simple theory that combines these two approaches to account for cross-country differences of economic freedom can be summarized by the following four assumptions.

First, there are different "spirits of markets" (Storr, 2013) or systems of beliefs in a society. This means that there might not be a clear-cut scale which runs between pro-market and anti-market extremes and which can easily describe the distribution of people's beliefs. These beliefs, for reasons analysed in the public choice literature and briefly mentioned above, can be irrational. The ideas that drive people's political actions can be, and they often are infeasible or against what is possible.

Second, spirits of capitalism or belief systems can be imagined as combinations of beliefs about the different aspects of the way the market economy actually works. For example, as we will see in section 4, people might think something of the beneficial nature of private property and something else about the beneficial nature of market competition. As a result, such systems of beliefs can be distributed consistently or inconsistently among the members of the electorate. When the distribution is consistent, then someone who has a better opinion about one aspect of the market economy will have a better opinion of another aspect of it, too. For example, if someone has a higher opinion of private property than does another person, then he or she will have a higher opinion on market competition, too. Systems of beliefs can easily be distributed inconsistently, however. For example, it is possible that those who value private property more value market

competition less compared to others. In this case, there is no clear pro-market – anti-market scale on which the views are distributed.

Third, political entrepreneurship will deviate somewhat from public opinion (Caplan, 2007) mainly because the voters would not like the consequences of their (inconsistent) beliefs. On the other hand, political entrepreneurship can use the redistribution of income as a tool of pleasing the majority (Holcombe, 2002). Political entrepreneurs are creative in gaining the support of a majority of those who feel being political losers by coming up with newer schemes of redistribution of income.

Fourth, not every area is subject to political change as a reaction to a simple change in the majority's opinion. First, some institutions that determine economic freedom are not resulted from a deliberate (majoritarian) political choice. Some institutions result from a long-run evolution (Hayek, 1988), some are shaped by international treaties or organizations (e.g., monetary policy of a Eurozone member country), some are determined by “aristocratic” or bureaucratic traditions of checks on the majority.

In addition, economic freedom, as it is measured, is a mix of the result of public (political) and private (market) choice. The security of property rights depends, for example, not just on legislation but on the action of judges and private players. The area of freedom of international trade includes the share of ‘revenue from trade taxes’ compared to the value of international trade that happens (Gwartney, Lawson and Hall, 2017). Not every area reflects to the same extent, therefore, the intention of the political entrepreneur to please the majority by redistribution. Following a similar line of argument, Jäger (2017) argues that it is mainly two areas, size of government and regulation, that are substantially affected by national governments and party politics.

The conclusion implied by the five propositions above is that in the countries with consistently distributed beliefs an institutional change toward higher economic freedom will more probably imply an increase in redistribution than in those with inconsistently distributed beliefs. The reason is that a pro-market institutional change might not be in contradiction with the voters’ ideology if the beliefs are distributed inconsistently and the institutions themselves do not exactly reflect the median voter’s position. Although the institutional change must be consistent, such a consistent institutional change might be preferred by the majority, even by everyone, if

the beliefs are *inconsistently* distributed. If, however, beliefs are *consistently* distributed, such a change will create ideological losers and a political entrepreneurial opportunity to compensate them.

These propositions are illustrated on Figure 1 and 2. Supposing that there are two dimensions of beliefs and institutions: the scope of private property and freedom of competition, the institutional change must be consistent. The consistency of institutional change is shown by the northeast direction of the arrow that represents it. The assumption that people's beliefs are inconsistently distributed are shown on Figure 1 by a 'cloud' of dots representing the beliefs being scattered around a line with a negative slope. Therefore, a move from 'institutional mix' A to 'institutional mix' B will be preferred by the voters because point B is closer to everyone's ideal belief system than is point A.

Figure 2 shows the case with consistently distributed beliefs. The institutional move towards a higher economic freedom must push the institutional structure farther away from some people's belief, who thus become "ideological losers" of the change.

The conclusion is that with more consistently distributed beliefs an institutional change toward higher economic freedom will create more opportunities to use redistribution to compensate the disappointed voters. A change toward higher economic freedom in institutions leads to higher "political pressure" toward compensating those who "lose" (at least ideologically). The prediction, therefore, is that countries with more consistent distribution of beliefs will have a higher government (and redistribution) when they are freer economically, than do countries with an equally free economy but inconsistently distributed market beliefs.

Another implication is a new way of understanding the relation between "deep" culture and more "superficial" beliefs. The distribution of the economic spirits is a cultural (deeper) factor, while the position of a person on the distribution is the "superficial" part.

IV. A quantitative cross-country approach to the 'spirits of markets'

Below I will attempt to integrate the above concept of different "spirits" of markets into the cross-country statistical literature. Spirits of capitalism is the underlying structure of beliefs, which suggests an interpretation

according to which we should make a difference between the distribution of beliefs and the beliefs themselves.

This means we have to focus on cross-individual data and look at the way individuals differ for their combinations or systems of beliefs. This requires a somewhat different approach than what is usual in the empirical literature I briefly reviewed above. It is one thing to say what percentage of the people asked thinks competition is important and what percentage of them thinks private property must be secured. It is another thing to ask whether those who agree with the first proposition are the same who agree with the second. This latter approach is the one I take to measure the spirits of markets.

1. Sprits of markets in the World Values Surveys (European Values Study)

Following the approach started by Newland (2018) and developed further by Czeglédi and Newland (2018) I will use four beliefs from the combined dataset of the World Values Survey (WVS, 2015) and European Values Study (EVS, 2011):

Property: “Private ownership of business and industry should be increased” vs “government ownership of business and industry should be increased”.

Responsibility: “People should take more responsibility to provide for themselves” vs “the government should take more responsibility to ensure that everyone is provided for”.

Competition: “Competition is good. It stimulates people to work hard and develop new ideas” vs “competition is harmful. It brings out the worst in people”.

Wealth: “Wealth can grow so there’s enough for everyone” vs “people can only get rich at the expense of others”⁷.

All four questions are rescaled so that 10 means the most pro-market position and 1 means the least pro-market position. Principal components analysis is then run with the observations of individual respondents in order to arrive at the main principal component alongside which the combinations of beliefs are distributed. That is, the “loadings” of the first principal component describe the “typical” combinations of the four beliefs above.

The row “Full sample” in Table 1, for example, describes the first principal component run with the four beliefs above for the “whole world” (meaning 257,935 respondents from different countries all over the

world). All the four loadings are positive so alongside the most important "dimension" of beliefs, which accounts for 30.9 percent of the total variation of the four beliefs, those who answer one of the questions with a higher number will also answer the other three questions with a higher number. The first principal component is, however, not perfectly consistent, shown because the loadings are not equal: the property question is more important than the wealth question. This means that people are much more different in their view on private property than in their view on wealth creation. Usually, those having a much more positive view on private property have only a somewhat more positive opinion on wealth creation.

This consistency or inconsistency of the system of beliefs is seen here as a cross-country measure of the way the spirits of markets differ country by country. In the following two subsections I will present some cross-country statistics that show that (1) the consistency of beliefs are strongly connected to the usual cross-country measures of deep culture, and that (2) it is also related in some areas of economic freedom in line with the theoretical conclusions of section III.3.

2. The inconsistency of market beliefs and culture

Looking at the cross-country pattern of the system of market beliefs derived from principal components analysis explained above shows that it is strongly associated with cross-country measures of culture.

Table 1 gives us an impression about that. In that table, the Inglehart-Welzel cultural map (WVS, 2018) is used to derive principal components by culture. Table 1 therefore presents how the spirits of markets differ by cultural regions, as shown by the loadings of the four market belief variables in the first component. As seen, for the English speaking, Catholic and Protestant Europe, and the Baltic regions, similar loadings are derived, but the other regions are different. In the African-Islamic region, for example, two loadings are negative. It means that the stronger belief in private property and competition is associated with weaker beliefs in individual responsibility and wealth creation. It seems that the extent to which beliefs are consistent deepens on culture.

To better see the association between culture and the spirits of markets, we need a cross-country measure of the inconsistency of belief systems. Since the consistency was defined above by the loading of the first principal component, we can define this consistency by how "far" the actual

loadings are from the consistent one which would be 0.5 for each variable⁸. Therefore, we can introduce the measure of inconsistency as the distance of the loadings from complete consistency:

$$\text{inconsistency}_i = (\alpha_{\text{prop}}^i - 0.5)^2 + (\alpha_{\text{resp}}^i - 0.5)^2 + (\alpha_{\text{comp}}^i - 0.5)^2 + (\alpha_{\text{wealth}}^i - 0.5)^2$$

where subscript and superscript *i* denotes a country, and the α 's are the loadings of the variable in the subscript of the α 's. The inconsistency measure has an obvious minimum: 0 with complete consistency (when all the α 's are 0.5). It has a maximum, too, when three of the α 's are negative and has a value of $-1/\sqrt{3}$, while the fourth one is zero. The inconsistency measure in this case is about 3.73. In practice, for those 101 countries I could calculate it⁹ inconsistency runs between 0.007 and 1.995.

The inconsistency index is meant to measure the difference of the spirits of markets across countries by quantifying the distance between the actual system of beliefs and the ideal, completely consistent one. Being a cross-country measure, it is possible to compare it with well-known cross-country measures of culture. A simple version of such an exercise can be found in Table 2. It shows the correlations between the cross-country inconsistency measure, the country means of the four beliefs (property, responsibility, competition, wealth) mentioned above, and different measures of culture. The variable called 'culture index' is a composite measure from Williamson and Kerekes (2011) which follows the concept and method of Tabellini (2010). Embeddedness, egalitarianism, and intellectual autonomy are cross-country measures of culture that follow the concept and method of Schwartz (2008), and are from Licht, Goldschmidt, and Schwartz (2007).

There are at least two implications we can draw from Table 2. First, the inconsistency index is correlated with market beliefs but not strongly. The strongest correlation is found to be with the variable property: the higher the importance given to private property on average, the less inconsistent with the system of beliefs is. This is also true, but with a weaker correlation, for responsibility. Surprisingly, it is not true for the two other variables, competition and wealth, with which the correlation of the inconsistency index is not only a small but positive. People in countries with more consistent spirits of capitalism are more supportive of private property and individual

responsibility but less supportive of the idea of wealth creation by market exchange and of a beneficial competition. Second, all the measures of culture show a relatively high correlation (about 0.5) with the inconsistency index. The signs of these correlations show that the more individualist culture (higher culture index, lower embeddedness, higher egalitarianism and intellectual autonomy) of a country has, the more consistent are its market beliefs.

3. Spirits of markets and economic freedom

The patterns uncovered above are, I think, in line with the "spirits if markets" view of culture. In this subsection I will show some further, and admittedly simple, results to carry the argument further, and show that the spirits of markets as measured above might be seen as one of the determinants of economic freedom, or at least some of its areas.

Table 3 gives an initial impression about this. It presents average value of economic freedom and its areas (Gwartney, Lawson and Hall, 2017) for the country groups in question. Economic freedom and its areas are measured as an average value for those years in which EFW observations are available and which is within the interval over which the market beliefs are measured in the WVS-EVS combined file.

There are three groups of countries in Table 3. The "consistent" group includes those countries in which the first principal component run with the four beliefs are all positive. The weakly inconsistent group includes those countries in which only one loading is negative, while in the inconsistent group there are the countries with two negative loadings [i]. In addition to economic freedom summary and area ratings for these country groups, the table presents the country averages for the four market beliefs, too, in its right-hand section.

Table 3 suggests some patterns for the relation between consistency and economic freedom and for the relationship between consistency and market beliefs. First, there is not much difference in total economic freedom between the three groups in the summary index (efw), sound money (money), or regulation (reg). At the same time, there are differences in the size of government (gov), legal system and property rights (legal), and freedom to trade internationally (trade). The size of government is higher (the freedom measure is lower) in the consistent group while the legal system and property rights are more secure and international trade is freer. Market beliefs about

private property and individual responsibility are also somewhat different across the three groups of countries. Ideas about wealth creation and the beneficial effects of competition are not much different across the groups.

Table 4 shows the correlations between the economic freedom area “size of government” with the other four areas by the same consistency groups of countries as in Table 3. In line with the argument in section III.3, the size of government is negatively correlated with other areas of economic freedom among the consistent group but not in the two other groups as shown in Table 4.

To examine the same in a cross-country setting, Table 5 and 6a,b present the results of regressions with economic freedom and its areas (Gwartney, Lawson and Hall, 2017) as the dependent variables. Table 5 includes only those two independent variables that reflect some aspects of market beliefs: the inconsistency index explained above and “market beliefs”, which is the mean of a country average of the four market belief variables. Table 6a,b add some other controls.

The main focus is the inconsistency index. As shown in Table 5, the inconsistency index is found to significantly (at least at the ten percent level) affect economic freedom in three cases: when the dependent variable is the size of government, the legal system and property rights, or the freedom of international trade. The sign of the effect is in line what was drawn from Table 3: more inconsistent market beliefs are associated with freer (smaller) governments, but a less free legal system and international trade.

That is, the inconsistency of belief systems does not change economic freedom because a more consistent beliefs system leads to a larger government but a better rule of law and a freer international trade; it is the composition of economic freedom, it seems, that is changed by an increase or decrease in the inconsistency of beliefs. Surprisingly, the average of market beliefs is significant only in the case of the legal system and the regulation area¹⁰. One standard deviation change (0.715) in the inconsistency index – which is roughly as large as the difference between the United States (0.479) and Indonesia (1.221) – is associated with 0.374 of a standard deviation (1.382) change in the size of government, which, again, is about as large as the difference between the US and Indonesia in the “size of government” area of economic freedom (6.950 and 7.62). The same one standard deviation increase in the inconsistency index is associated with 0.453 standard

deviation decrease in the legal system and property rights area and 0.263 standard deviation decrease in the international trade area.

In Table 6a,b, three control variables are added in two steps. In columns 1, 3, 5, and 7 of Table 6a and columns 1 and 3 of Table 6b, it is a measure of education (school) and the dummy variable for English legal origin that are added. The school variable is from Barro and Lee (2013) and measures the average years of education for a country in 1985. The year is chosen as the most recent one for which data are available but, preceding the years, economic freedom is measured in. The aim of choosing an early year is to reduce the chance of reverse causality. Education may be a determinant of economic freedom by being a proxy of development and, therefore, that of the demand for good institutions. The other variable that is added in columns 1, 3, 5, and 7 is the dummy for having an English legal origin from La Porta *et al.* (2008). These authors show that legal origin is among the possible determinants of institutions.

In columns 2, 4, 6, and 8 of Table 6a and columns 2 and 4 of Table 6b, the variable called culture index is also added as a determinant. The culture index is from Williamson and Kerekes (2011) and, as I mentioned before, it includes four dimensions that are thought to measure “deep culture” following the ideas of Tabellini (2010), which is probably the most widely accepted concept of culture in the mainstream literature. The idea behind including this variable is to see whether the inconsistency index is only a “proxy” for culture or something more.

After adding these controls, there are some changes in the variable's significance of our interest. First, it's now in three cases of the five, size of government, legal system and property rights, and regulation that the inconsistency index has a statistically significant effect on the area of economic freedom in question.

Second, with government size and regulation, the effect is positive even after controlling for human capital and the culture index. This suggests that an increase in human capital has two opposing effects on the regulation area: more human capital creates a demand for less regulation but it also creates more consistently distributed spirits of markets which creates a possibility for political entrepreneurs to increase regulation to change income redistribution as explained in section III.3. With government size, however, the effect of inconsistency seems to be independent of human capital and even of the culture index.

Third, the effect of inconsistency on the legal system and on international trade is substantially reduced by adding human capital and culture suggesting that a better legal system and a freer trade are not the result of a more consistent distribution of spirits. Rather, it seems, they result from a better culture and higher human capital, which also implies a more consistent distribution of spirits of markets.

4. Results with an alternative measure of (in)consistency

The above is not the only way of measuring the inconsistency of beliefs. One of the widely used one of such measures is the so-called Cronbach's alpha or coefficient alpha (DeVellis, 2003). Cronbach's alpha is based on the covariance matrix of the answers given to the survey questions and compares the sum of covariances to that of all covariances and variances. The simplest formula to calculate the alpha is:

$$\text{alpha} = \frac{Nc}{v + (N-1)c},$$

where c is the average covariance and v is the average variance, while N is the number of survey questions. Cronbach's alpha is zero if there is no covariance between the answers, and it can even be negative if the covariances are negative enough. Maximum consistency means an alpha with a value of 1.

Cronbach's alpha is a measure of consistency because it quantifies the extent to which the total variance of the answers is from one common source. As a result, it is used to check whether respondents are consistent when they answer different questions concerned with the same topic, but its use is sometimes extended to other areas. Ott (2018), for example, uses it to check out whether different areas of economic freedom are concerned with the same concept.

Cronbach's alpha seems to be a good alternative measure to be used in checking the results above. There is one difference to the theory explained in this paper and to my first measure of inconsistency of market beliefs. The theory suggests that there should be different beliefs in society, and my original question and original measure were concerned with the dominant belief. Using Cronbach's alpha means, therefore, investigating the consistency of "average belief", or all the beliefs as a whole, not just the dominant one. The results I will present now should be interpreted carefully with this notional difference in mind.

Table 7 and Table 8a and b repeat the results of Table 5 and 6a and b with the alpha as a measure of consistency of market beliefs, instead of the inconsistency index of the previous section. Comparing Table 7 to Table 5 gives the impression that the results are the same in general, although the details are not. This means that the signs of the coefficients are in the line across the two tables. Cronbach's alpha has a negative effect on the economic freedom area on which the inconsistency index has a positive one, and vice versa. The only exception is the overall index on which both measures are predicted to have a negative, although insignificant, effect. The inconsistency index, however, has a little bit more explanatory power. The areas of economic freedom that are affected are different, however. Now it is sound money and regulation that are significantly affected but several relevant explanatory variances might be missing in Table 7.

Additional explanatory variables are added in Table 8a and Table 8b. It is worth again comparing these tables to their counterparts. The signs of the coefficients are now in line in each case. The significance of the two different measures of (in)consistency are not exactly in line but the main conclusion of the previous subsection is not undone: government size and regulation are those areas which are affected by (in) consistency of market beliefs and affected they are in a way that a higher inconsistency of beliefs are associated with more freedom of these areas.

It seems to be important, too, that the effect of Cronbach's alpha is more sensitive to the inclusion of the culture index than is the inconsistency index. This is again, I argue, is in line with the approach to culture I discussed before. Cronbach's alpha is a measure of the consistency of all the beliefs, whereas my inconsistency index measures that of the dominant beliefs. Deep culture has a stronger effect on what are the beliefs on the menu than on which is the dominant one, the latter resulting from entrepreneurial discovery.

5. Conclusions

Once it is accepted that the quality of (market) institutions is a determinant of the economic development of a country, the next obvious question is what determines these institutions. One answer to which economic research has given substantial support in the past 20 years is culture, the "values and beliefs" people hold. Within this strand of the economic literature this paper has addressed a question about the relation between culture, the beliefs people have about the market economy, and economic freedom which is a

way to describe the economic institutions and policies in a country: How cultures affect economic freedom through market beliefs? The usual way of thinking about this question is to say that culture includes the attitude towards markets which will determine, to some extent, the institutions and policies people choose to live under. This paper has proposed a different answer based on two observations. One is that values and beliefs are not the same: values guide our actions while beliefs guide our thinking. It is more difficult to change our religiosity, or trust toward strangers than to learn to look at the market economy in a different way. The other observation is that market beliefs are not one-dimensional; they have several aspects: opinion on private property, competition, the fairness of government redistribution, etc. People may be more or less consistent in their thinking about these issues.

These two observations suggest that research should pay attention to a feature of market beliefs that has not been addressed so far in the literature: their (in) consistency, which might be a deeper characteristic than the extent to which they are pro- or anti-market on average. The proposition is therefore that culture is rather a determinant of this (in) consistency of market beliefs than the extent to which people are friendly towards a market economy. That is to say, culture is the how, not that what: it is rather a determinant of the ways people think about the market economy than what they think about them. The idea that culture sets the dimensions alongside which people think about the market is in line, it has been argued, with the "spirits of markets" approach to culture in economics, which is an alternative to the mainstream approach.

The paper has also argued that such inconsistency or consistency of beliefs will shape the institutions and policies people make a political choice about. With more consistently distributed beliefs a consistent increase in economic freedom will create more "ideological losers" in the electorate, which creates a political entrepreneurial possibility to compensate them. As such compensation usually takes the form of a reduction in economic freedom, the implication is that those areas of economic freedom that are affected by this compensation will reflect less freedom in otherwise free countries.

This more-than-one-dimensional approach to market beliefs can be translated into the language of statistics by running a principal component analysis with the individual data on market beliefs. Using the opinions on four different aspects of the market economy makes it possible to derive the 'principal component', that combination of these opinions which may be

identified as the most typical. The information in the principal component has been used to derive the extent to which differs from a perfectly consistent one, which gives us a measure of (in) consistency to be used in cross-country econometric investigations. These investigations suggest a story of economic development, economic freedom, and spirits of the market as follows. As the economy develops and people become more educated, they demand and sustain a more secure legal system. An increase in the size of government and regulation will partially offset this increase in economic freedom depending on the consistency of the distribution of market spirits. Paradoxically, a higher inconsistency of the distribution will reduce this off-setting effect.

These results are preliminary because the theory is yet sketchy, and the statistical methods that have been used may be too simple. A more careful look will have to be taken at the relation between economic development and at the change in the systems of beliefs, which might be a further step to take in this quantitative research of the spirits of the markets.

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¹ This emphasis on deepness is also confirmed by some widely used definitions of culture. Guiso et al. (2006) say that culture is a set of “those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation” (italics deleted) (Guiso et al. 2006: 36). Although Mogyk’s (2017) definition emphasizes the social as opposed to genetic transmission, and even pure social transmission does not necessarily suggest a “superficial” nature of those beliefs and values, Spolaore and Wacziarg (2013) argue that the nature vs nurture dichotomy is outdated.

² “[I]nternal institutions are not subject to deliberate change” (Voigt and Kiwit 1998: 104), which is the same as to say that “people do not choose their culture” (Lavoie and Chamlee-Wright 2001: 42).

³ They are not, therefore, even informal institutions (Voigt, 2018).

⁴ Mises (1981) also put forward this argument when he writes: “there are no individuals and no classes whose particular interests would lead them to support capitalism. The policy of Liberalism is the policy of the common good, the policy of subjecting particular interests to the public welfare – a process that demands from the individual not so much a renunciation of his own interests as a perception of the harmony of all individual interests” (Mises, 1981: 456-457).

⁵ Harrison and Huntington (2000) provided an early review of the topic. A more recent one is Beugelsdijk and Maseland (2011). Grube and Storr (2015) provided an alternative approach to culture. Mogyk (2017), for example, gave a more concise review, focused on the role of culture in economic development.

⁶ Olson (1996), too, suggests implicitly a criterion that differentiates between values and beliefs: marketability. Olson (1996) distinguishes between private good and public good human capital, two categories which, according to him (Olson 1996), include cultural traits, too. The first type of culture is marketable: a stronger work ethic, for example, has its value for an employer. The second type of culture includes answers to the question as to “what public policies will be successful”.

⁷ The wording of the questions is from the official questionnaire of wave 6 and wave 5 of the World Values Survey (Inglehart *et al.*, 2014a, b).

⁸ To be consistent, the loadings must only be equal, not equal to 0.5. But the sum of the squares of the loadings must be equal to one by construction. This means that with four variables, the complete consistency would be all four loadings being 0.5.

⁹ Table 9 provides the descriptive statistics of the variables.

¹⁰ The regressions of Table 5 and 6a,b have been repeated with only the market belief about individual responsibility as a dependent variable instead of the mean of the four market beliefs. This variable is more often significant, but the conclusions about the inconsistency index do not change.

Figures

Figure 1. Institutional change toward higher economic freedom with inconsistently distributed market beliefs

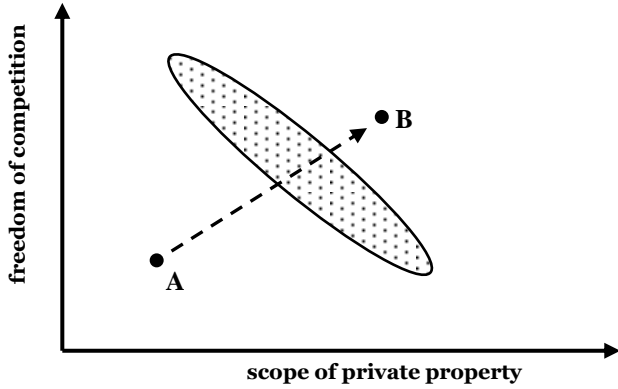
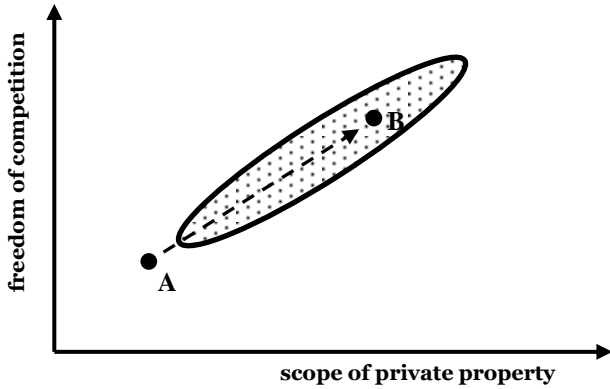


Figure 2. Institutional change toward higher economic freedom with consistently distributed market beliefs



Tables

Table 1. First principal components of the four beliefs by cultural regions

Region	Beliefs				variance explained	obs.
	prop.	resp.	comp.	wealth		
Full sample (world)	0.686	0.388	0.592	0.170	0.309	257,935
English speaking	0.576	0.505	0.569	0.299	0.413	20,134
Catholic Europe	0.625	0.519	0.541	0.217	0.370	31,684
Protestant Europe	0.600	0.538	0.556	0.203	0.394	24,083
Baltic	0.616	0.486	0.556	0.273	0.388	6,519
African-Islamic	0.422	-0.582	0.653	-0.239	0.314	71,423
Confucian	-0.452	0.443	0.263	0.728	0.296	19,550
Latin American	0.673	0.066	0.721	0.151	0.287	35,245
Orthodox	0.659	0.438	0.589	0.160	0.331	35,557
South Asian	0.587	-0.368	0.537	-0.481	0.302	13,740

Notes: Prop., resp., comp., and wealth are the four questions from the WVS-EVS project (WVS 2015, EVS 2011) as indicated in section IV.1. Regions are the cultural areas identified by the Inglehart-Welzel cultural map (WVS 2018).

Table 2. Correlation between the measure of inconsistency, culture, and market beliefs

	inconsist..	prop.	resp.	comp.	wealth	culture index	embed.	egalit.	int. aut.
inconsist.	1 (101)								
prop	-0.525 (101)	1 (110)							
resp.	-0.452 (101)	0.483 (110)	1 (111)						
			-						
			0.30						
comp.			1 (109)	1 (109)					
	0.102 (101)	0.057 (109)	-	0.15					
wealth	0.025 (101)	0.207 (101)	2 (101)	0.019 (101)	1 (101)				
			0.38						
culture index	-0.422 (75)	0.339 (80)	9 (81)	-0.151 (80)	-0.048 (75)	1 (81)			
			-						
			0.58						
embed.	0.532 (46)	0.597 (47)	2 (48)	0.322 (47)	0.096 (46)	-0.594 (41)	1 (48)		
			0.42						
egalit.	-0.430 (46)	0.416 (47)	4 (48)	-0.407 (47)	-0.177 (46)	0.344 (41)	-0.620 (48)	1 (48)	
			0.47						
int. aut.	-0.501 (46)	0.493 (47)	3 (48)	-0.354 (47)	-0.100 (46)	0.523 (41)	-0.897 (48)	0.545 (48)	1 (48)

Notes: *inconsist.*: measure of inconsistency as defined in the text. *Prop.*, *resp.*, *comp.*, and *wealth* are the four questions from the WVS-EVS project (WVS 2015, EVS 2011) as indicated in section IV.1. Culture index is from Williamson and Kerekes (2011). Embeddedness (*embed.*), egalitarianism (*egalit.*), and intellectual autonomy (*int. aut.*) are from Licht, Goldschmidt, and Schwartz (2007).

Table 3. Inconsistency of spirits, economic freedom, and market beliefs

group\ variable												
	efw	gov	legal	money	trade	reg	obs	prop.	resp.	comp.	wealth	obs
consist.	6.741	5.473	6.484	7.529	7.470	6.527	36	6.051	5.439	7.283	6.346	36
weakly incons.	6.647	5.918	5.752	7.835	7.248	6.543	24	5.901	5.056	7.278	6.537	24
incons.	6.516	6.965	4.800	7.403	6.740	6.686	31	5.247	4.741	7.304	6.311	27
Total	6.640	6.099	5.717	7.567	7.163	6.585	91	5.760	5.116	7.288	6.388	87

Notes: *efw*: summary index of economic freedom, *gov*: size of government (area 1), *legal*: legal system of property rights (area 2), *money*: sound money (area 3), *trade*: freedom to trade internationally (area 4), *reg*: regulation (area 5) (Gwartney, Lawson, and Hall 2017). *Prop.*, *resp.*, *comp.*, and *wealth* are the four questions from the WVS-EVS project (WVS 2015, EVS 2011) as indicated in section IV.1.

Table 4. Correlations between area ‘size of government’ and the other four areas of economic freedom in three country groups

	legal	money	trade	reg.	obs.
consistent	-0.477	-0.330	-0.460	-0.034	36
weakly incons.	0.083	0.200	0.163	0.333	24
inconsistent	0.058	0.231	0.270	0.178	31

Notes: *legal*: legal system of property rights (area 2), *money*: sound money (area 3), *trade*: freedom to trade internationally (area 4), *reg*: regulation (area 5) (Gwartney, Lawson, and Hall 2017). Consistent, weakly inconsistent, and inconsistent are country groups as explained in section IV.3.

Table 5. Market beliefs and their inconsistency as determinants of economic freedom areas

	dependent variable					
	efw	gov	legal	money	trade	reg
constant	4.704*** (1.732)	8.69*** (2.537)	1.841 (2.248)	3.385 (3.341)	5.339*** (1.801)	3.069 (1.917)
inconsistency index	-0.094 (0.152)	0.722*** (0.186)	-0.919*** (0.174)	0.055 (0.328)	-0.440** (0.173)	0.292 (0.180)
market beliefs	0.328 (0.274)	-0.522 (0.408)	0.758** (0.364)	0.670 (0.518)	0.357 (0.292)	0.536* (0.306)
R ²	0.039	0.217	0.341	0.021	0.114	0.038
adj. R ²	0.016	0.199	0.326	-0.002	0.093	0.016
obs.	90	90	90	90	90	90

Notes: *efw*: summary index of economic freedom, *gov*: size of government (area 1), *legal*: legal system of property rights (area 2), *money*: sound money (area 3), *trade*: freedom to trade internationally (area 4), *reg*: regulation (area 5) (Gwartney, Lawson, and Hall 2017). The inconsistency index is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as

explained in section IV.2; market belief is the country average of the four market beliefs. Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Table 6a. Market beliefs and their inconsistency as determinants of economic freedom areas with control variables

	dependent variable:							
	EFW summary index		size of government		legal system and prop. rights		sound money	
constant	4.431*** (1.678)	4.626** (1.978)	10.158*** (2.552)	8.148*** (2.932)	0.986 (2.278)	2.361 (2.246)	3.027 (3.415)	3.358 (3.966)
inconsistency index	0.260 (0.176)	0.187 (0.228)	0.627*** (0.239)	0.706*** (0.261)	-0.441* (0.224)	-0.441 (0.273)	0.492 (0.384)	0.371 (0.521)
market beliefs	0.112 (0.261)	0.024 (0.313)	-0.723 (0.407)	-0.317 (0.469)	0.551 (0.373)	0.195 (0.376)	0.409 (0.541)	0.186 (0.637)
school	0.182*** (0.042)	0.155*** (0.057)	-0.044 (0.070)	-0.001 (0.095)	0.249*** (0.063)	0.148* (0.086)	0.225*** (0.073)	0.132 (0.101)
English legal origin	0.414** (0.208)	0.413** (0.295)	0.799*** (0.283)	0.987*** (0.372)	0.255 (0.307)	0.256 (0.415)	0.488 (0.353)	0.540 (0.443)
culture index		0.129 (0.064)		-0.200** (0.086)		0.359*** (0.072)		0.393*** (0.115)
R ²	0.236	0.315	0.312	0.360	0.454	0.626	0.094	0.233
adj. R ²	0.198	0.256	0.278	0.306	0.427	0.594	0.050	0.167
obs.	86	65	86	65	86	65	86	65

Notes: the inconsistency index is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as explained in section IV.2; market belief is the country average of the four market beliefs; school: average years of education in 1985 (Barro and Lee 2013); the dummy for English legal origin is from La Porta, Lopez-de-Silanes, & Shleifer (2008), the culture index is from Williamson and Kerekes (2011). Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Table 6b. Market beliefs and their inconsistency as determinants of economic freedom areas with control variables

	dependent variable:			
	freedom to trade internationally		regulation	
constant	4.166** (1.824)	4.646** (2.037)	2.630 (1.794)	3.492 (1.963)
inconsistency index	0.126 (0.292)	0.012 (0.348)	0.712*** (0.212)	0.546** (0.260)
market beliefs	0.196 (0.305)	0.096 (0.323)	0.254 (0.276)	0.050 (0.299)
school	0.261*** (0.085)	0.290** (0.113)	0.243*** (0.056)	0.224*** (0.069)
English legal origin	-0.072 (0.301)	-0.361 (0.435)	0.682*** (0.287)	0.775* (0.432)
culture index		0.005 (0.074)		0.122 (0.088)
R ²	0.298	0.347	0.274	0.314
adj. R ²	0.263	0.292	0.238	0.255
obs.	86	65	86	65

Notes: the inconsistency index is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as explained in section IV.2; market belief is the country average of the four market beliefs; school: average years of education in 1985 (Barro and Lee 2013); the dummy for English legal origin is from La Porta, Lopez-de-Silanes, & Shleifer (2008), the culture index is from Williamson and Kerekes (2011). Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Table 7. Market beliefs and their inconsistency measured by Cronbach's alpha

	dependent variable					
	efw	gov	legal	money	trade	reg
constant	3.752*** (1.579)	11.283*** (2.505)	-1.579 (2.423)	2.223 (2.785)	3.097 (1.915)	3.157* (1.778)
alpha (consistency)	-0.137 (0.126)	-0.508 (0.395)	0.605 (0.500)	0.488*** (0.204)	0.090 (0.260)	0.522*** (0.114)
market beliefs	0.473* (0.260)	-0.838** (0.415)	1.181*** (0.407)	0.875* (0.455)	0.662** (0.317)	0.570* (0.293)
R ²	0.039	0.137	0.217	0.037	0.060	0.058
adj. R ²	0.017	0.117	0.199	0.015	0.039	0.037
obs.	90	90	90	90	90	90

Notes: *efw*: summary index of economic freedom, *gov*: size of government (area 1), *legal*: legal system of property rights (area 2), *money*: sound money (area 3), *trade*: freedom to trade internationally (area 4), *reg*: regulation (area 5) (Gwartney, Lawson, and Hall 2017). The variable *alpha* is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as explained in section IV.3; market belief is the country average of the four market beliefs. Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Table 8a. Market beliefs and their inconsistency measured by Cronbach's alpha

	dependent variable:							
	EFW summary index		size of government		legal system and prop. rights		sound money	
constant	4.904*** (1.498)	4.215** (1.941)	12.586*** (2.498)	7.350** (2.998)	-0.341 (2.249)	2.224 (2.304)	3.546 (2.952)	2.621 (3.693)
alpha (consistency)	-0.262* (0.137)	-1.024 (0.672)	-0.171 (0.339)	3.146*** (0.889)	0.258 (0.236)	1.355* (0.784)	0.632*** (0.268)	-1.959 (1.418)
market beliefs	0.101 (0.260)	0.116 (0.323)	-0.942** (0.420)	-0.074 (0.490)	0.647 (0.390)	0.132 (0.391)	0.446 (0.516)	0.358 (0.633)
school	0.159*** (0.038)	0.177*** (0.060)	-0.128*** (0.058)	0.050 (0.099)	0.300*** (0.049)	0.143* (0.083)	0.187* (0.072)	0.173 (0.112)
English legal origin	0.392* (0.226)	0.397 (0.302)	0.868*** (0.294)	0.947*** (0.353)	0.243 (0.316)	0.262 (0.399)	0.409 (0.355)	0.510 (0.464)
culture index		0.139** (0.066)		-0.173** (0.086)		0.349*** (0.070)		0.411*** (0.117)
R ²	0.230	0.332	0.260	0.407	0.435	0.622	0.098	0.246
adj. R ²	0.192	0.275	0.223	0.356	0.407	0.590	0.054	0.182
obs.	86	65	86	65	86	65	86	65

Notes: (Cronbach's) *alpha* is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as explained in section IV.3; market belief is the country average of the four market beliefs; school: average years of education in 1985 (Barro and Lee 2013); the dummy for English legal origin is from La Porta, Lopez-de-Silanes, & Shleifer (2008), the culture index is from Williamson and Kerekes (2011). Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Table 8b. Market beliefs and their inconsistency measured by Cronbach's alpha

	dependent variable:			
	freedom to trade internationally			regulation
constant	3.989** (1.778)	4.252** (1.936)	4.247** (1.658)	3.414* (1.905)
alpha (consistency)	-0.273* (0.152)	-0.416 (0.989)	-0.604** (0.246)	-1.915** (0.873)
market beliefs	0.252 (0.324)	0.153 (0.324)	0.176 (0.289)	0.163 (0.306)
school	0.257*** (0.061)	0.307*** (0.111)	0.171*** (0.050)	0.241*** (0.068)
English legal origin	-0.122 (0.303)	-0.373 (0.434)	0.652** (0.314)	0.759 (0.456)
culture index		0.010 (0.073)		0.137 (0.096)
R ²	0.306	0.350	0.224	0.319
adj. R ²	0.271	0.295	0.186	0.261
obs.	86	65	86	65

Notes: (Cronbach's) alpha is calculated from the WVS-EVS data (WVS 2015, EVS 2011) as explained in section IV.3; market belief is the country average of the four market beliefs; school: average years of education in 1985 (Barro and Lee 2013); the dummy for English legal origin is from La Porta, Lopez-de-Silanes, & Shleifer (2008), the culture index is from Williamson and Kerekes (2011). Heteroscedasticity robust standard errors are in parentheses. *: statistically significant at the 10 percent level; **: statistically significant at the 5 percent level; ***: statistically significant at the 1 percent level.

Appendix

Table 7. Summary statistics of the variables used in section 4.

variable	obs	mean	sd.	min	max
efw	94	6.630	0.887	4.3	8.94
size of government	94	6.112	1.382	2.37	8.83
legal system and prop.	94	5.698	1.453	3.38	8.788
freedom to trade internationally	94	7.152	1.197	2.21	9.11
regulation	94	6.581	1.131	3.61	9.42
culture index	81	4.172	1.991	0	10
embeddedness	48	3.766	0.349	3.043	4.503
egalitarianism	48	4.819	0.300	4.249	5.388
intellectual autonomy	48	4.418	0.404	3.696	5.42
English legal origin	110	0.245	0.432	0	1
school	97	6.769	2.537	0.61	12.08
inconsistency	101	0.844	0.715	0.007	1.995
property	110	5.743	0.770	4.119	7.580
responsibility	111	5.081	0.944	2.794	7.109
competition	109	7.320	0.599	4.949	8.997
wealth	101	6.374	0.651	4.947	7.733
market beliefs	101	6.126	0.414	5.218	7.246
alpha	101	0.103	0.499	-3.997	0.672