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Should market liberalisation precede democracy? Causal relations between political preferences and development

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Summary

This paper is dedicated to the relationship between market development and democracy. We distinguish between contexts and preferences and ask whether it is true that the demand for democracy only emerges after a certain degree of market development is reached, and whether, conversely, democratisation is likely to be an obstacle to the acceptance of market liberalisation. Our study hinges on a new survey rich in attitudinal variables: the Life in Transition Survey (LITS) conducted in 2006 by the European Bank for Reconstruction and Development (EBRD) and the World Bank, in 28 transition countries. Our identification strategy consists of relying on the specific situation of frontier zones. We find that democracy enhances the support for market development whereas the reverse is not true. Hence, the relativist argument according to which the preference for democracy is an endogenous by-product of market development is not supported by our data.

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INTRODUCTION

One of the unexpected side-effects of China's spectacular emergence is the diffusion of a new conventional wisdom concerning the sequencing of political and economic reforms in developing countries. Essentially, the idea is that democratisation in the early stages of a country's economic development can be harmful. The continued hold of the Chinese Communist Party over political power is taken to be a positive ingredient in the construction of a viable market economy, as opposed to the erratic reform path experienced by the former communist countries in central and eastern Europe, which predominantly chose rapid economic and political liberalisation in the 1990s (Dewatripont and Roland, 1992; Godoy and Stiglitz, 2006; Roland and Verdier, 2003). Another example is Latin America, where pervasive economic crises seem to illustrate the danger that democracy can be an obstacle to the development of the market when leaders have to impose unpopular reforms while being responsible in front of their constituencies. It follows that the optimal route is to develop market institutions as a first stage and consider democratisation at a later stage.

Pushing the argument one step further, some authors have argued that the desire for political freedom and democratic institutions does not arise until countries reach a certain degree of material comfort and market liberalisation (Lipset, 1959; Miller et al., 1996). Hence the argument goes: not only is it preferable to postpone democracy until the advanced stages of a country's economic development, but this sequence also meets citizens' preferences.

Some observers may find it difficult to reconcile this relativist statement with the recent vivid public demonstrations in favour of democratisation the countries of the Commonwealth of Independent States (CIS), e.g. Belarus, Georgia and Ukraine, and in China. In terms of scientific evidence, the empirical literature devoted to the relationship between market and democracy remains rather inconclusive. Most studies are unable to draw a clear direction of causality because of the interdependent dynamics followed by the two variables along the history of any given country. Hence, in spite of the strong dynamism of this research field, the scientific consensus on these issues is still in the making.

This paper tries to contribute to the understanding of the relationship between political preferences and economic development. We exploit a new set of micro evidence from an original survey of 28 transition economies, the *Life in Transition Survey*, which was implemented mainly in September 2006.[1]

We first try to isolate the causal relationship running from actual democratisation to the demand for market liberalisation. Our empirical identification strategy relies on the specificities of frontier zones. Our main assumption is that people who live in an integrated frontier zone share the same experience of the market and, often, the same historically inherited "cultural attitudes" towards the market and democracy, on both sides of the frontier. This is particularly plausible for the (often artificial) frontiers of the former USSR and in some formerly integrated regions such as the Ottoman Empire or the Austro-Hungarian Empire. This assumption is tantamount to keeping constant the usually omitted variables that bias any estimation of the relation between market development and the support for democracy.

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[1] For a description of the survey and a summary of some of the main results, see EBRD, *Life in Transition, a Survey of People's Experiences and Attitudes*, May 2007.

Reciprocally, we try to assess the relationship between actual market development and popular demand for democracy. Here, we exploit within-country regional variations. We rely on the fact that the degree of market development is notoriously different across regions of the survey, whereas people who live in the same country share a common experience of democracy. Hence, we regress the preference for democracy on an index of regional market development, reflecting the share of the modern sector of the economy, which is composed of private and smaller-sized firms. We also compare the support for democracy in the various frontier zones inside a given country, on the grounds that market development at borders are partly exogenous, as it is influenced by the neighbouring region's market development.

The main result of this paper is that democracy appears to generate some popular support for the market, while economic liberalisation does not clearly enhance support for democracy. To be sure, this finding only suggests that democracy increases subjective support for the market; it does not mean that democracy does not complicate the task of reformers, with the risk of impeding market liberalisation. Our results also cast doubt on the idea that democracy would naturally emerge as a by-product of capitalism. Even if the demand for democracy increases with individual income, market liberalisation as such does not seem to be sufficient to trigger the demand for democracy. At the very least, the take-home message of this paper is that one cannot advocate the preferences of citizens to postpone the construction of democratic institutions.

Section 1 discusses the background literature in the reciprocal linkages between economic and political liberalisation. Section 2 presents the identification strategies, section 3 presents the data and section 4 discusses the results. Section 5 concludes.

1. BACKGROUND

The conventional wisdom concerning the linkages between political and economic systems has changed over time. While the early 19th century was predominantly skeptical about the compatibility between democracy and capitalism (see J.S. Mill or K. Marx[2]), today the consensus is that development leads to both a market economy and political democracy[3] with anteriority of the market. The idea that "modern democracy is a by-product of the capitalist process"[4] dates back to Toqueville (1839), who stressed that market development is conducive to democracy because it provides the "social space within which individuals, groups and entire institutional complexes can develop independent of state control".[5] Lipset (1959) claims that: "industrialization, urbanization, high educational standards and a steady increase in the overall wealth of society [are] a basic condition sustaining democracy".

Historically, market economies have existed in the contexts of democracy and autocratic regimes, but there is no example of a communist economy within a democratic regime. This observation lies at the foundation of a certain "instrumental" view of political regimes. In the context of the political economy of transition (Aslund et al., 2001; Dewatripont and Roland, 1992; Roland, 2001; Roland and Verdier, 2003), researchers have focused on the question of how to overcome political opposition to reforms, and in particular opposition to economic liberalisation. This literature discusses the relative pros and cons of democracy versus authoritarianism from the point of view of facilitating economic reforms and growth. Here, the causality runs from the political regime to the development of the market.

Beyond these theoretical models, what can we learn from empirical studies? To date, the existing empirical literature does not offer many reliable, clear-cut results.

Many studies focus on the aggregate relationship between democracy or economic liberalisation and economic growth. Concerning the relationship between political liberalisation and growth, Barro (1990) suggests that the relationship between GDP and democracy is curvilinear and Minier (2001) finds that the probability of a democratic movement emerging in an authoritarian regime increases as income per capita increases up to a level of approximately US$ 5,000. However, these results are contradicted by Przeworski (2004), who finds that transition from an authoritarian regime to democracy is not influenced by income levels, once initial conditions are controlled for.[6] Przeworski and Limongi (1993) review 18 studies and 21 findings concerning the impact of political systems on growth, among which eight are in favour of democracy, eight are in favour of authoritarianism and five conclude no difference. As underlined by Persson and Tabellini (2007b), "the findings

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[2] Mill, John Stuart. *Considerations on Representative Government. In Utilitarianism, Liberty, and Representative Government*, ed. H. B. Acton. London: Dent, 1860. Karl Marx (1867) *Capital*, Vol. 1 *A Critique of Political Economy*, ed. Penguin Classics London, 1990.

[3] Hence the concept of the "End of History" (Fukuyama, 1992).

[4] J.A. Schumpeter, Capitalism, Socialism and Democracy (New York, Harper and Bros., 1942).

[5] A. de Toqueville (1839), Democracy in America, vol. 2 (New York: Vintage: 1945).

[6] Przeworski argues that the observed relationship between national income and democratic regimes is an artefact; it is due almost exclusively to the higher durability of any political regime under a higher national income. Hence what is observed in richer countries is not more frequent transitions to democracy but more durable democratic regimes.

are essentially all over the place" with regards to whether democracy shapes economic development (see also, among many, Barro, 1990; Burkhart and Lewis-Beck, 1994; Helliwell, 1994; Leblang, 1997; Przeworski, 2004).

The study of the reverse causality is similarly unconvincing and Przeworski and Limongi (1993) argue that most of these empirical studies suffer from a simultaneity bias. Evidence based on cross-section aggregate data suggests that education and income are the strongest channels towards democracy (La Porta et al., 1999). However, in two related papers, Acemoglu, Johnson, Robinson and Yared (2004a, 2004b) invalidate this finding by showing that the impact of education and income becomes insignificant once within-country variation and endogeneity of income are taken into account. The authors conclude that cross-section correlations between democracy and education or income are due to an omitted variable bias. This omitted variable, they suggest, consists of the initial institutions that have presided over the country's development (Acemoglu, Johnson and Robinson, 2001). This problem of omitted variable is pervasive in this entire literature.

Some authors have tried to overcome this obstacle using matching, propensity scores and differences in differences methods, exploiting both the cross-country and time series variations in aggregate datasets. Persson and Tabellini (2007a) show that democratic regimes have an important impact on growth but that this relation is conditional on the heterogeneous characteristics of the countries under study. Persson and Tabellini (2007b) show that longer time spans of democracy are a factor of economic development. Persson and Tabellini (2006) suggest that some forms of democracy (presidential) are more development-friendly than others (parliamentary). Rodrik and Wacziarg (2005) find that democratic transitions have a positive effect on growth in the short term, especially in the poorest countries; it also reduces economic volatility. Other papers, e.g. Sachs and Werner (1995) or Wacziarg and Welch (2003), have tried to elucidate the relation from economic liberalisation to growth.

A few papers address directly the question of the interplay between democratisation and economic liberalisation using aggregate data. Among those, Giavazzi and Tabellini (2005) find that both kinds of reforms have mutual feedbacks on one another, although causality is more likely to run from democratisation to economic liberalisation. However, they conclude that a sequencing based on market liberalisation first, from the point of view of growth, is most favourable: "Countries that first liberalise and then become democracies do much better than countries that pursue the opposite sequence".

Another set of studies has focused on the support for democracy and market economy based on individual data. Surveys try to confirm the predictions that individuals who support a free market economy are more likely to embrace democratic principles (McIntosh et al., 1994). This can be because it is in the best interests of the wealthiest individuals to support democracy – as they benefit from market development they seek political representation to protect their new-found economic opportunities. Alternatively, attitudes towards the market can be determined by the political socialisation of individuals (Citrin et al, 1990; Easton, 1965). With the exception of Finifter and Mickiewicz (1992), most studies related to central and eastern Europe find evidence that the support for democratic institutions is highest among the better educated urban residents (Brym, 1996; Mason, 1995; McIntosh et al., 1992; Miller et al., 1994 and 1996;) and those most satisfied with the performance of the economy (Mishler and Rose, 1994). However, most studies based on individual data suffer from an identification problem. This is contained in the very idea of the modernisation theory that the same development dynamics favour both democracy and market development. Assessing the direction   of   causality   between   the advancement of economic freedom and the

degree of political freedom appears to be an almost impossible exercise in the absence of a valid exogenous instrument, which needs to be traced back as far as legal or colonial origins (Acemoglu et al., 2001).

In this paper, we try to overcome this simultaneity bias. We do not pretend to explain the long-term causality between democracy and market development; instead we restrict our interest to the short-term causality running from the state of market development to the demand for democracy, and, conversely, from political democracy to the support for the market. We ask whether it is true that the demand for democracy only emerges after a certain degree of market development is reached and whether, conversely, democratisation is more likely to be an obstacle or an ingredient to citizens' support for market liberalisation.

2. IDENTIFICATION STRATEGY

In order to discern the direction of causality between market and democracy, one would ideally need to rely on a situation in which one variable is exogenously "frozen" while the other randomly takes different values across countries. Of course, in the real world there are many reasons why this ideal setting could never exist. On the contrary, it is obvious that market liberalisation and democracy are processes that follow highly intertwined dynamic evolutions and depend on countries' historical backgrounds.

Even in the case of transition countries, where democracy and the market have both been abolished by the communist experience, the development and popular support for these institutions have evolved in parallel since 1989, probably under the influence of common factors. As an illustration, Figure 1 shows the strong general cross-country relationship between average support for a market economy and the average support for democracy in the 28 countries covered by the LITS. Regional differences are also visible. In particular, countries of central and eastern Europe and the Baltics, which are both the closest to a free market and a full-blown democracy, are the most supportive of the two processes. Identical factors, such as the prospect of accessing the European Union, are likely to have driven the two attitudes simultaneously.

Figure 1: Support for the market and democracy [7]
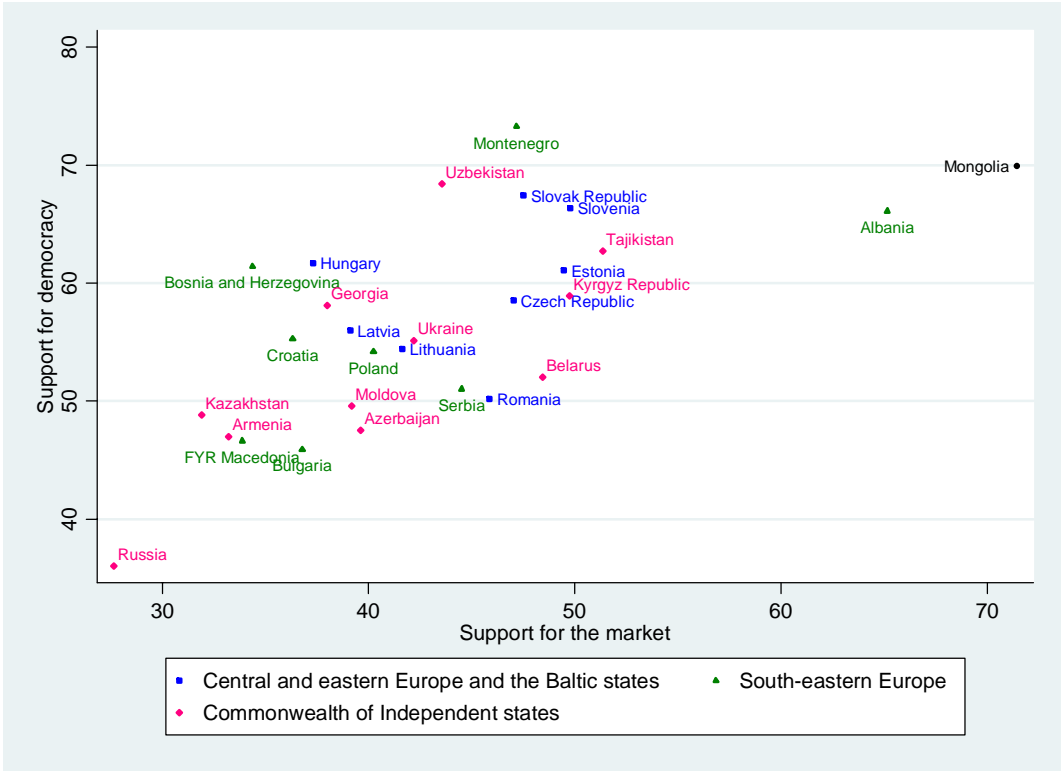
Source: LITS.

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[7] Percentage of respondents who chose a market economy (respectively democracy) as the best system of organisation of the economic (respectively political) system – see section 3 for more details.

Obviously, using the pooled cross-section data of LITS and running a naive regression of support for democracy on an index of market development, or of market support on a democratic index, would come across serious identification problems. The relation put in evidence would not readily be interpretable in terms of causality as it would be subject to the influence of omitted variables affecting both market development and democracy. We propose two different identification strategies in order to isolate the direction of causality from market development to the support to democracy and vice-versa.

Democracy and demand for the market

Is a higher degree of democracy an obstacle to reform, or does it increase support for market development? To address this question we need to overcome the problem that people's support for the market may be due to the degree of democracy and the degree of market development itself, both variables being likely to develop at a parallel pace. More generally, it can be suspected that common "cultural factors" influence the national attitudes towards both the market and democracy.

In other words, one would like to estimate the naive equation (1):

Support for market $_{ij}$ = a_0 + a_1 degree of development of democracy $_j$

+ $a_2 X_{ij}$ + $a_3 C_j$ + u_i   *(1),*

but suspects that the true relation is (1'):

Support for market $_{ij}$ = a_0 + a_1 degree of development of democracy $_j$ + a_2 degree of development of market $_j$ + a_3 cultural factors $_j$ + $a_4 X_{ij}$ + $a_5 C_j$ + u_i   *(1'),*

where X_{ij} stands for socio-demographic characteristics of the respondent i in country j, C_j is a vector of country dummies and u_i the error term.

Our strategy consists of trying to find a way of keeping the second and third terms of equation (1') constant. As our analysis is based on individual data, we need to find people who, in an exogenous way, are exposed to different levels of democracy but to the same degree of market development and who share the same "culture" regarding the politico-economic system.

The idea is to match observations in frontier zones. We make use of the spatial integration of regions that stand on both sides of a given frontier, in the immediate proximity of the border. We assume that people who live in open frontier zones share the same culture and the same perception of market development even though they live on both sides of the frontier.

This relies on three types of argument. The first is the well-documented high level of inter-regional trade in frontier zones. Secondly, it is well known that in such regions, when it is possible, people do not hesitate to cross the frontier for work, to go shopping or to buy cheaper appliances and cars. Hence regional integration is a fact of their everyday lives, which certainly influences their perception of the market. Thirdly, in the case of the 15 former Soviet republics, regional integration was a hard fact until the early 1990s: under the communist system, the economy of the Soviet republics was submitted to the centralised organisation of material resources by the Soviet plan based in Moscow. Many countries, particularly in Central Asia and the Caucasus, have inherited from the Soviet Union an integrated infrastructure network, which is a positive   factor   of   trade   and   regional

integration (Broadman, 2005). We thus assume that inhabitants of certain frontier zones share the same experience of the market even when they live in different countries with different political institutions.

Clearly, the validity of our assumption relies on the level of market integration across the borders of the surveyed countries. We thus distinguish open frontiers from those that are closed or restricted because of political conflicts or geographical obstacles. We also check that the degree of market development is more similar in adjacent frontier zones than it is in pairs of adjacent countries.

Market integration at frontier zones is useful to eliminate the risk that the support for market liberalisation that is measured reflects actual market development. But what about the "cultural" omitted variable? A first element is that the citizens of the former communist countries, and in particular the Soviet Union, have been living for 45 to 70 years in a common political system marked by strong official ideological values concerning the market. So we can assume that they have a common heritage in terms of attitudes towards the market (Alesina and Fuchs-Schündeln, 2005).

Beyond this remark, we rely on the fact that current frontiers of many transition countries, especially countries of the CIS, are more or less artificial divisions of formerly integrated jurisdictions, whose citizens have developed common attitudes concerning both market development and political freedom (e.g. the Austro-Hungarian Empire, the Ottoman Empire, etc.). The very idea of "culture" and more specifically "national culture" is that countries' past experiences continue to have long-term effects.[8] We therefore rely on the idea that citizens of countries that have belonged to formerly highly integrated zones have a common culture, i.e. common inherited general attitudes towards the market and democracy.

There are some sub-sets of the transition countries in which this assumption is particularly appealing. Countries that have belonged to the Ottoman Empire (Albania, Armenia, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Montenegro, Romania and Serbia) developed under the same rule for several centuries (1299-1922). The same can be said about countries of the Austro-Hungarian Empire (Croatia, the Czech Republic, Hungary, the Slovak Republic and Slovenia, 1867-1918), countries of the former Polish Empire (which included Poland, Ukraine, Lithuania, Belarus and parts of Russia, 1569-1795), countries of the USSR (1922-1991), or countries of the Former Yugoslavia (Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Slovenia) who shared the same rule for several decades (1918-1991). We thus retain these cultural groupings in order to deal with the potential impact of cultural factors on the demand for democracy.

In the dataset, we identify frontier zones with quasi-adjacent Primary Sample Units (PSUs) of the survey located on both sides of the frontier (less than 30 km from each other). For each couple of countries corresponding to a given frontier, we use the democracy score established by the Freedom House Nations in Transit 2006 survey (Freedom House, 2006a). In another specification, we use a dummy variable that indicates which of the two countries is "more democratic", according to this ranking.

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[8] In Bisin and Verdier (2000) or Fernandez and Fogli (2005), culture can be defined as long-term inertia in preferences.

Our test therefore consists, for all pairs of observations at frontier zones, of regressing individual support for the market on this index of democratic development, controlling for frontier zone dummies and other socio-demographic controls. The assumptions of (i) market integration and (ii) common culture at the frontier between two formerly integrated countries mean that the third and fourth terms of equation (1') are constant and so need not be included in the regression. We thus run the following regression on the sub-samples of frontier zones:

$$\textit{Support for market}_{ijk} = a_0 + a_1 \textit{ democracy level}_j + a_4 X_i + a_5 Z_k + u_i \qquad (1'')$$

where *democracy level j* corresponds to the democracy score of country *j*, X_i stands for socio-demographic characteristics of respondent *i*, Z_k is a vector of frontier zone dummies and u_i the error term. In an alternative specification, we run the same regression on a dummy variable indicating whether the country of residence of an individual is more democratic (or not) than the adjacent country.

Demand for democracy

To identify the determinants of the demand for democracy we need to overcome the symmetrical problem, i.e. isolate the causation running from market liberalisation to the support for democracy, avoiding the contamination of the actual degree of democracy already reached and the influence of "cultural factors", i.e. keeping the second and third terms of equation (2) constant.

$$\textit{Support for democracy}_{ij} = b_0 + b_1 \textit{ degree of development of market}_j + b_2 \textit{ degree of}$$

$$\textit{development of democracy}_j + b_3 \textit{ cultural factors}_j + b_4 X_{ij} + b_5 C_j + u_i \qquad (2)$$

where *Cj* is a vector of country dummies.

Here, we hinge on both frontier zones variations and regional and national variations. We rely on the fact that political institutions (and "culture") are by definition the same in a given country, whereas market development is highly uneven across the various regions of a given country (Zhuravskaya, 2006; EBRD, 2006). We thus build indices of market liberalisation at the regional level, and match individuals from the same country who live in regions that experience unequal degrees of market development. As explained in section 3, the constructed "industrial liberalisation score" reflects the regional development of private, small and medium enterprises and the formal sector, which are characteristics of market development.

We thus estimate the following equation:

$$\textit{Support for democracy}_{ijr} = b_0 + b_1 \textit{ degree of development of regional market}_{jr} + b_4 X_{ij} + b_5 C_j$$

$$+ u_i \qquad (2')$$

where index *r* refers to the administrative regions of country *j*.

This strategy relies on the admittedly strong assumption that the uneven development of the market across regions of a country is not due to some regional variable that would also influence the attitudes of the inhabitants of the region towards democracy. In order to lift this assumption, we use two strategies. First, we control for the type of residence of respondents (metropolitan, urban or rural areas). Secondly, we again rely on the specificities of the borders. We assume that in the context of high regional economic integration at borders, the

level of market development is strongly influenced by that of the adjacent country. Therefore, even inside a given country, we assume that market development at the borders vary in a way that is partly exogenous to citizens' preferences for politico-economic values. We thus match individuals of the same country, who live in different frontier zones, and we regress individual support for democracy on the level of market development in the different frontier zones. To go one step further, in an alternative specification, we use as a proxy for market development in the frontier zone zj of country j the industrial liberalisation score of the adjacent frontier zone zk across the border, in country k. We thus estimate the following regressions:

Support for democracy $_{ijk}$ = b_0 + b_1 degree of development of regional market$_{zl}$ + b_4 X_{ij} + b_5 C_j

+ u_i 							*(3')*

With $l=j,k$, and where z refers to the frontier zone of, alternatively, countries j and k.

Of course, even using these identification strategies we do not pretend to escape the influence of long-term determinants of economic and political development. Neutralising these long-term trends would imply finding an instrument that could approximate the exogenous ultimate origin of these differences. This limits the validity of our conclusions to short-term relevance.

3.   DATA

Our study hinges on the Life in Transition Survey (LITS), a survey conducted by the European Bank for Reconstruction and Development and the World Bank in 2006, in 28 transition countries and Turkey.[9] Respondents to the survey were drawn randomly, using a two-stage sampling method, with census enumeration areas as PSUs, and households as secondary sampling units. The survey includes 1,000 observations per country, making a total of 29,000 observations. The sample of respondents is equally balanced in terms of gender, but is biased in favour of older people. The age of the respondents varies from 17 to 97 years, with a mean of 46. All descriptive statistics are presented in the Annex.

Support for a market economy and for democracy

Support for a market economy was analysed using the following question:

Q3.10. *Which of the following statements do you agree with most?*

- *A market economy is preferable to any other form of economic system.*
- *Under some circumstances, a planned economy may be preferable to a market economy.*
- *For people like me, it does not matter whether the economic system is organised as a market economy or as a planned economy.*

We analyse the probability of choosing any of the three modalities of question Q3.10. Concerning the support for democracy, we analyse the probability of choosing either modalities of question Q.3.11:

Which of the following statements do you agree with most?
- *Democracy is preferable to any other form of political system.*
- *Under some circumstances, an authoritarian government may be preferable to a democratic one.*
- *For people like me, it does not matter whether a government is democratic or authoritarian.*

We also study the determinants of the demand for more specific aspects of democracy, such as a strong political opposition, freedom of speech, independence of the press or of the court system. Finally, we verify that support for democracy comes with trust in democratic institutions.

Frontier zones

The LITS is based on PSUs,[10] each containing 20 observations (surveyed persons). We use the geographical map of the survey to identify groups of PSUs that are located on both sides and in the immediate vicinity of a political frontier. We identified 37 frontier zones that

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[9] Turkmenistan was not included in the survey. We exclude Turkey from our sample because, unlike the other countries, it was never under communist control and therefore is not considered to be a "transition" country .

[10] PSUs were selected randomly, with probability proportional to size.

contain between 40 and 460 observations, concentrated in 2 (Slovak Republic-Ukraine) to 24 (Croatia-Slovenia) PSUs.

The validity of our identification assumption relies on the intensity of market integration on either side of borders. Market integration is a hard fact among the new 10 EU members, among which goods and persons are free to circulate. This is also true of many neighbouring countries in most parts of central eastern Europe and south-eastern Europe (for example the Slovak Republic and the Czech Republic; Albania, FYR Macedonia and Montenegro;[11] Bulgaria and FYR Macedonia or Moldova and Romania).

Many countries of the sample are integrated in "Euroregions", the purpose of which is to promote trans-frontier cooperation.[12] Even the relationships between countries of the former Yugoslavia have eased to a large extent in the last few years, with, for example, the relaxation of visa procedures between Serbia and Croatia in 2003. Two CIS countries, Belarus and Ukraine, are also integrated into Euroregions.[13] This implies deeper cross-border integration between these neighbouring countries, despite the relative economic closeness of Ukraine and Belarus. These countries are also largely integrated with Russia, historically and formally, in the Neman Euroregion that also includes Lithuania and Poland.

In the case of Central Asia and the Caucasus, patterns of trade have changed less rapidly than in eastern Europe (Babetskii et al, 2003; Broadman, 2005). While the costs of intra-regional trade have likely increased with the creation of independent countries (Djankov and Freund, 2000) and with the recent nationalist stance of some countries, such as Uzbekistan, these countries appear to be "overtrading" among themselves.[14]

We leave out of our sample frontiers that are impaired by geographical obstacles or either restricted or closed because of political tensions and disputed territories. We thus exclude the frontiers between Georgia and Russia, Armenia and Azerbaijan, Moldova and Ukraine, as well as all Uzbek borders.

We verify that the degree of market development is more similar between two adjacent frontier zones than it is, on average, between two adjacent countries. We calculate, for each frontier zone between two countries *i* and *j* of the survey, the index of market development (defined infra) of frontier zone *i* and frontier zone *j*, and of country *i* and country *j* on average. Table 1 shows that on average, the correlation between indices of industrial market development is twice as high concerning adjacent frontier zones of the sample as it is between adjacent countries of the sample. If one restricts the analysis to sub-sets of formerly more

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[11] As well as Kosovo, but Kosovo was excluded from our sample.

[12] For example, Albania, Bosnia and Herzegovina, Croatia, Montenegro and Slovenia are part of the Adriatic Euroregion; Latvia, Lithuania, Poland and Russia are part of the Baltic Euroregion (along with Sweden and Denmark); the Czech Republic, Poland and the Slovak Republic constitute the Beskydy Mountains Euroregion; and trade among Hungary, Romania and Serbia is facilitated in the Danube-Kris-Mures-Tisza Euroregion.

[13] Białowieża Forest Euroregion between Poland and Belarus, the BUG Euroregion between Belarus, Poland, Ukraine, or the Carpathian Euroregion between Hungary, Poland, Romania and the Slovak Republic.

[14] Using relative prices of a bundle of goods to complement official trade data, Grafe et al. (2005) show that the impact of borders on trade between Kazakhstan, the Kyrgyz Republic, Uzbekistan and Tajikistan is much smaller than what the view of cumbersome border-crossing procedures and licensing systems would imply. The authors attribute this result to the development of shuttle trade in this region.

integrated countries, the proximity between adjacent frontier zones appears even higher. For instance, in Central Asia, the correlation between two adjacent frontier zones is 0.78 against 0.34 in two adjacent countries (row 5 of Table 1).

Table 1: Industrial market development indices at frontier zones

Correlation between industrial market development indices	Adjacent frontiers	Adjacent countries
Whole sample	0.68	0.46
CIS	0.25	-0.02
Baltic countries	0.87	0.49
European Union	0.78	0.34
Central Asia	0.78	0.11
Former Yugoslavia	0.08	-0.28
Former Ottoman Empire	0.11	-0.31

Source: LITS

Notes: number of observations (frontier zones): whole sample: 65; CIS (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Russia, Ukraine and Tajikistan): 28; Baltic states: 8; European Union: 28; Central Asia (Kazakhstan, Kyrgyz Republic and Tajikistan): 5; Former Yugoslavia (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia): 12; Former Ottoman Empire (Albania, Armenia, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Montenegro and Serbia): 14. For each pair of frontier zones between two countries *i* and *j*, the average industrial indices of market liberalisation (cf infra) are calculated at the level of frontier zone *i* and frontier zone *j* and of country *i* and country *j*.

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Indices of market liberalisation

Using questions about the respondents' first, second and third jobs[15] we build a regional industrial score of market liberalisation. The score is the regional proportion of respondents who declare that they either:
- work in a small enterprise
- work in a medium enterprise
- work in a private firm
- work in a newly created enterprise (since 1989)
- are self-employed with more than five employees or
- have a formal labour contract.

During the communist era, Soviet economies were distinguished by their exceptionally low proportion of small and medium-sized enterprises (SMEs). The necessities of central planning favoured the organisation of production and distribution in large units. We thus interpret the presence of SMEs as an indicator of market development. The presence of private firms and newly created firms are also a sign of progress in the transition process, an essential aspect of which is the process of privatisation of the formerly dominant state-owned sector and the elimination of former monopolies under the pressure of new competitive firms (Berkowitz and Jackson, 2005). Self-employed persons with at least five employees are also part of this new economic pattern that is typical of a market economy and was absent from the landscape of planned economies. We do not count self-employed persons without employees on the

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[15] Multiple jobs are frequent in transition countries.

grounds that those are unlikely to be small firms but rather forms of quasi-unofficial economy or what is sometimes called "disguised unemployment" (Earle and Sakova, 2000). Finally, we interpret the existence of an employment contract as a sign that the person is working in the official sector rather than in the informal sector, a sign that the market is developing. This industrial regional score varies from 0 to 5 with an average of 2.37.

The quality of these indices of market liberalisation is limited by the lack of representativeness of the data at the regional level. However, there is no alternative regional index of private sector development or market liberalisation available for the whole set of countries.

4. RESULTS

Although simple correlations show that supporting the market and supporting democracy are highly correlated attitudes (the correlation coefficient between the first modality of question Q3.10 and question Q3.11 is 0.45), our identification strategy leads to a different picture. We find that democracy does increase support for market liberalisation, but that the reverse relation is not as clear-cut. This pattern is apparent even in descriptive statistics. Table A2 shows that at frontier zones, the support for a market economy tends to be higher on the border of the country that enjoys a higher level of democracy (according to the Freedom House Nations in Transit ranking). Table A3, however, shows that preferences for democracy within a given country do not seem to be consistently higher in the frontier zones where the market is most advanced.

Democracy increases support for the market

Table 1 presents the general regressions of support for the market (equation 1'') on, alternatively, the Freedom House Nations in Transit 2006 democracy index (Freedom House, 2006a) (columns 1 to 3), and on a dummy variable representing the relative advancement of democracy, for each group of PSUs located at the frontier zones of the survey (columns 4 to 7). The Freedom House Nations in Transit 2006 (Freedom House, 2006a) democracy index takes values from 1 to 7, with 1 representing the highest level of democratic progress and 7 the lowest; we have recoded it in order to present the score of democracy in an ascending order. The constructed dummy variable attributes a score of 1 to the PSUs located in the most democratic country of each pair, and 0 to PSUs located in the country which fares worst in terms of the political scale, according to the Freedom House Nations in Transit survey (Freedom House, 2006a and b), Polity IV (CIDCM, 2006) or other indices (see Table A4 in the Annex). For a given border we only retain the PSUs that are located at the frontier zone (30 km around the border). All regressions are thus performed on the sub-sample of people living in frontier zones. We control for frontier zone dummies and we adjust standard errors for clustering on frontier zones. Finally, in Table A7 (Annex), the regressions are performed within each border-zone.

Columns 1 and 4 in Table 2 analyse the determinants of the probability of declaring that *"a market economy is preferable to any other form of economic system"*. Both the coefficients on the democratic index and the more democratic dummy variable are significant. Column 1 displays the marginal effect of a change in the Freedom House Nations in Transit democratic score, while the coefficient on the variable "more democracy" represents the effect of a discrete change of this dummy variable from 0 to 1 (on the probability of supporting the market). Hence, column 4 in Table 2 shows that conditionally on living in a frontier zone, living on the "more democratic" side of the frontier, increases the probability of supporting market liberalisation by about 8.4 per cent.

Columns 2 and 5 analyse the determinants of the probability to declare that *"under some circumstances, a planned economy may be preferable to a market economy"*. Column 2 shows that an incremental change in the democracy score does not significantly affect preferences for the market. However, the coefficient on the "more democracy" dummy variable is significant at 5 per cent, as it captures more significant changes in democratic advances. Column 5 thus indicates that conditionally on living in a frontier zone, experiencing a more democratic regime reduces the probability of favouring a planned economy by roughly 6.7 percent.

Finally, columns 3 and 6 analyse the probability of declaring that *"for people like me it does not matter whether the economic system is organised as a market economy or a planned economy"*. It shows that democratic variation across frontier zones has no impact on such an attitude.

Other rows of Table 2 display the other correlates of attitudes to market liberalisation. We distinguish three income categories (the richest, middle and poorest quantile inside each country), six educational levels, occupational categories and employment status (self-employed versus employees). Self-employed workers tend to be more supportive of the market, while older people and the poorest third of the population are less so.

Table 2: Democracy increases support for market development
dprobit regressions of support for the market economy

	1 Market is preferable	2 Plan is preferable	3 Does not matter	4 Market is preferable	5 Plan is preferable	6 Does not matter
Democracy index	**0.040*****	**-0.026**	**-0.012**			
	[0.015]	[0.019]	[0.017]			
More democracy				**0.084****	**-0.066****	**-0.015**
				[0.034]	[0.028]	[0.026]
Adult (35-19)	-0.068***	0.052***	0.018	-0.069***	0.053***	0.016
	[0.015]	[0.016]	[0.018]	[0.015]	[0.016]	[0.018]
Mid-age (50-65)	-0.094***	0.056***	0.042*	-0.094***	0.056***	0.041*
	[0.021]	[0.020]	[0.024]	[0.020]	[0.020]	[0.023]
Old (>65)	-0.153***	0.060**	0.089***	-0.158***	0.063**	0.089***
	[0.024]	[0.030]	[0.025]	[0.024]	[0.030]	[0.024]
Poor	-0.066***	-0.010	0.071***	-0.063***	-0.011	0.071***
	[0.018]	[0.016]	[0.016]	[0.018]	[0.015]	[0.016]
Rich	0.015	-0.004	-0.012	0.011	-0.001	-0.010
	[0.021]	[0.015]	[0.014]	[0.020]	[0.014]	[0.013]
Male	-0.018	0.096***	-0.053	-0.014	0.100***	-0.060**
	[0.032]	[0.033]	[0.032]	[0.031]	[0.031]	[0.030]
Compulsory education	0.040	0.132***	-0.129***	0.047	0.131***	-0.135***
	[0.035]	[0.034]	[0.035]	[0.034]	[0.032]	[0.033]
Secondary education	0.056*	0.126***	-0.141***	0.062**	0.125***	-0.144***
	[0.032]	[0.028]	[0.030]	[0.031]	[0.028]	[0.027]
Professional education	0.109***	0.191***	-0.229***	0.115***	0.188***	-0.231***
	[0.034]	[0.034]	[0.026]	[0.033]	[0.033]	[0.024]
University education	0.027	0.199***	-0.147***	0.042	0.190**	-0.151***
	[0.076]	[0.076]	[0.045]	[0.078]	[0.077]	[0.042]
Postgraduate education	0.051***	-0.002	-0.048***	0.053***	-0.003	-0.049***
	[0.010]	[0.011]	[0.011]	[0.010]	[0.011]	[0.011]
Unemployed	0.003	-0.01	0.008	0.008	-0.014	0.009
	[0.027]	[0.028]	[0.025]	[0.027]	[0.027]	[0.024]
Self employed	0.101***	-0.089***	-0.009	0.116***	-0.098***	-0.013
	[0.027]	[0.018]	[0.025]	[0.027]	[0.018]	[0.023]
White collar worker	0.052	0.005	-0.069**	0.058	-0.004	-0.063**
	[0.036]	[0.027]	[0.032]	[0.036]	[0.027]	[0.031]
Blue collar worker	0.003	0.027	-0.029	0.001	0.024	-0.021
	[0.033]	[0.028]	[0.029]	[0.032]	[0.027]	[0.028]
Service worker	0.035	-0.009	-0.028	0.045	-0.017	-0.026
	[0.033]	[0.025]	[0.033]	[0.033]	[0.024]	[0.032]
Farmer, farm worker	0.040	0.012	-0.044	0.059	-0.003	-0.050
	[0.051]	[0.032]	[0.047]	[0.050]	[0.031]	[0.045]
Pensioner	-0.012	0.005	0.001	-0.002	-0.003	0.003
	[0.036]	[0.021]	[0.028]	[0.036]	[0.022]	[0.028]
Student	0.025	0.008	-0.033	0.031	0.001	-0.029
	[0.059]	[0.045]	[0.043]	[0.057]	[0.043]	[0.042]
Housewife	0.050	-0.024	-0.024	0.062	-0.036	-0.024
	[0.048]	[0.028]	[0.043]	[0.048]	[0.028]	[0.042]
Observations	6,750	6,750	6,750	6,970	6,970	6,970
log likelihood	-4,254.41	-3,691.65	-3,982.12	-4,391.74	-3,796.55	-4,041.41
Pseudo R2	0.0696	0.0328	0.0754	0.0746	0.0331	0.0829

Source: LITS, Freedom House Nations in Transit (2006a)

If one accepts the assumption that people living in a common frontier zone share the same practical experience of market development (and the same background culture), the lesson of Table 2 is that living in a country with a higher degree of democracy exerts a positive influence on the declared support for a market economy.

As a robustness check, we have run the same regression as column 4 of Table 2 within each frontier zone. The positive effect of democratic institutions on the support for the market proves particularly strong and significant at borders that are well integrated both culturally and economically (see Table A6 in the Annex for the quality of market integration at frontier zones). This is notably the case for the Moldova-Romania frontier or the Estonia-Latvia frontier. The effect is also strong for the Belarus-Lithuania, Belarus-Poland and Ukraine-Russia frontier zones, all formerly part of the USSR and of the Polish Empire and currently highly integrated.

The effect is globally well respected except for most Hungarian frontiers and the Bulgaria-Romania, Croatia-Serbia and Poland-Ukraine frontier zones. The unexpected results for Hungary are certainly explained by the difficult political situation in the country, which, at the time of the LITS, was going through a deep confidence crisis. Concerning the Bulgaria-Romania frontier, the fact that the development of democracy in the two countries is very close, as shown by the identical ranking of these countries by other democracy indices, such as *Polity IV* (CIDCM, 2006), might explain why the sign of the coefficient of "more democratic" is reversed. The same reason may explain why many coefficients are insignificant at the borders of countries that experience similar levels of democracy, such as the Czech Republic and Poland (which obtain the same ratings by both Freedom in the World (Freedom House, 2006b) and Polity IV (CIDCM, 2006)), Bulgaria and FYR Macedonia or Bosnia and Herzegovina and Croatia. Other results are impaired by the fact that economic integration may be only partial at some borders, such as the frontier between Croatia and Serbia, where heavy travel restrictions were relaxed only in 2003.

We verify that our results do not hold when the frontiers that were excluded from our sample for being closed or severely restricted are considered. For instance, the coefficient inside the Armenia-Azerbaijan border zone is -0.070 (standard error: 0.128); it is -0.3283 (standard error: 0.207) in the Kazakh-Uzbek frontier zone; -0.097 (standard error: 0.051) in the Kyrgyz-Uzbek zone and 0.004 (standard error: 0.696) in the Moldova-Ukraine zone. Considering all the closed border zones together (and controlling for border-zone dummies), the coefficient on the Freedom House democracy index is 0.039 (0.053) in the regression of support for market liberalisation. Hence the relationship is not significant in closed frontier zones, which is consistent with our interpretation of regional integration.

To go one step further in the attempt to control for "cultural" omitted factors, we now estimate equation (1'') within various sub-samples of frontier zones belonging to historically integrated regions. Table 3 presents the regressions by "cultural zones" as defined in section 2. Democratic advances still exert a positive and significant influence on the demand for the market among countries of the former USSR, countries of the former Yugoslavia, countries of the former Polish Empire and countries of the CIS, as well as among the sub-set of Central Asia.

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The effect is particularly strong in countries that have experienced a strong degree of integration in the past,[16] such as the USSR, and even more so, the CIS and Central Asia, where today's frontiers are often arbitrary. The effect is also significant in the former Yugoslavia and the Polish Empire. By contrast, it is not significant for the countries of the former Austro-Hungarian Empire. A possible interpretation of this is that the relation between democratic institutions and the support for the market is particularly strong for less developed countries. Another possible interpretation is that the countries of the former Austro-Hungarian Empire are too close in terms of democratic development for the effect to be sizeable.

Table 3: Democracy and support for the market within cultural areas
dprobit estimates of market support

	1 Austro Hungarian Empire	2 Ottoman Empire	3 Yugoslavia	4 Polish Empire	5 CIS	6 Central Asia	7 USSR
Democracy index	**0.031**	**0.137**	**0.068****	**0.0295****	**0.046*****	**0.231*****	**0.034*****
	[0.021]	[0.129]	[0.026]	[0.012]	[0.013]	[0.043]	[0.010]
Observations	1,656	1,920	2,134	1,734	2,354	740	2,994
Log likelihood	-1,022	-1,277	-1,373	-1,064	-1,458	-443	-2,008
Pseudo R2	0.072	0.032	0.041	0.094	0.081	0.117	0.073

Source: LITS, Freedom House Nations in Transit (2006a)

Notes: Controls: income categories, age categories, gender, occupation categories, self-employed, education. Standard errors are indicated into brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.
The Austro-Hungarian zone comprises Croatia, the Czech Republic, Hungary, the Slovak Republic and Slovenia. The Ottoman zone comprises Albania, Armenia, Bosnia and Herzegovina, Bulgaria, FYR Macedonia, Montenegro and Serbia. The Yugoslavian zone comprises Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Slovenia. The Commonwealth of Independent States (CIS) consists of Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, the Kyrgyz Republic, Moldova, Russia, Tajikistan, Ukraine and Uzbekistan. The former USSR comprises all of the CIS, plus Estonia, Latvia and Lithuania. Central Asia consists of Kazakhstan, the Kyrgyz Republic, Tajikistan and Uzbekistan. The Polish Empire zone comprises Belarus, Lithuania, Poland, Ukraine, Russia (western borders). The EU zone comprises Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

As a robustness check, we also test different indicators of democracy and different country rankings (see the Annex). The result that the development of democracy positively and significantly influences the demand for a market economy is preserved using the Freedom of the World (Freedom House, 2006b) or BTI (Bertelsmann Transformation Index) indicators (Bertelsmann Stiftung, 2005).

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[16] As these countries have a shared experience of a planned economy, it would be far-fetched to suspect some reverse causality running from people's current attitudes towards the market to the current degree of democracy.

Market liberalisation does not raise support for democracy

We now address the symmetric question whether market liberalisation enhances the support for democracy. We need to make sure that the attitude towards democracy that is observed is not caused by the degree of democratisation already reached in the country of the respondent. So we need to find groups of citizens who experience a common political environment with different degrees of market liberalisation. As explained in section 2, we rely on the evidence that there are wide regional differences within the countries of the former Soviet bloc and eastern and southern Europe (e.g. EBRD, 2006). We build an index of market progress at the regional level, which is based on the regional market structure (size and type of firms).

Table 4 shows the regressions of support for democracy on indices of regional market development. Because the impact of market development on attitudes towards democracy could be driven by metropolitan regions in which market liberalisation is well in advance of other regions, and where people are also likely to have different political attitudes, we include a control for the type of area (metropolitan/urban/rural) in all regressions. We checked that the results are essentially unchanged when these controls are not performed and when metropolitan regions are dropped from the sample.

Columns 1 to 3 present the regression of individual preferences for the political regime on our index of market development across all regions of a given country. Columns 4 to 6 present an alternative specification where we restrict the sample to open frontiers, and measure the effect of market development in the various frontier zones of a country. Lastly, columns 7 to 9 display the result of a third specification where the degree of market development of a frontier zone *j* is proxied by the degree of market development of the adjacent region *k* across the frontier (cf section 2). As explained in section 2, the two latter specifications are useful in order to avoid the risk that the observed relationship between market development and support for democracy is due to reverse causality.

Columns 1, 4 and 7 analyse the determinants of the probability to declare that "*democracy is preferable to any other form of political system*". Surprisingly, the index of market development has no impact on this variable, in any of the specifications. Identically, the probability of choosing the modality "*for people like me it does not matter whether a government is democratic or authoritarian*" (columns 3, 6 and 9) does not depend on the index of market development.

Columns 2, 5 and 8 analyse the determinants of the probability of declaring that "*under some circumstances, an authoritarian government may be preferable to a democratic one*". Here, market development has a negative and significant effect when the sample is restricted to frontier zones of a given country. Hence, conditionally living in a frontier zone, living close to a country where the market is more advanced and benefiting from this market development thanks to cross-border market integration, reduces individual support for authoritarian regime. However, this effect is not significant when all regions of the country are considered (columns 2, 5 and 8).

Market liberalisation thus does not appear to reinforce democratic values. Other effects indicate that the richer, better educated, younger, self-employed people and, surprisingly, farmers and farm-workers, are more supportive of democracy. On the contrary, the poor, those who have not completed compulsory education and women are less supportive of democracy and more likely to declare that the political system does not matter to them.

Table 4: Support for democracy and regional indices of market liberalisation
dprobit estimates of support for democracy/authoritarianism

	1	2	3	4	5	6	7	8	9
		Whole sample			Frontier zones only			Frontier zones only	
	Democracy preferable	Authoritarian government preferable	Does not matter	Democracy preferable	Authoritarian government preferable	Does not matter	Democracy preferable	Authoritarian government preferable	Does not matter
Industrial index of region	**-0.014**	**-0.001**	**0.012**						
	[0.030]	[0.019]	[0.029]						
Industrial index frontier-zone *j*				**-0.032**	**-0.183*****	**0.16**			
				[0.106]	[0.058]	[0.110]			
Industrial index frontier-zone *k*							**0.015**	**-0.115****	**0.068**
							[0.108]	[0.054]	[0.102]
Adult (35-19)	-0.024**	0.017**	0.006	-0.035**	0.022*	0.012	-0.034**	0.022	0.011
	[0.011]	[0.008]	[0.007]	[0.015]	[0.013]	[0.019]	[0.016]	[0.014]	[0.021]
Mid-age (50-65)	-0.028*	0.020**	0.007	-0.015	0.011	0.003	-0.017	0.008	0.009
	[0.016]	[0.010]	[0.009]	[0.025]	[0.016]	[0.024]	[0.027]	[0.016]	[0.027]
Old (>65)	-0.058***	0.026*	0.025*	-0.073**	0.008	0.053*	-0.090**	0.006	0.075**
	[0.022]	[0.014]	[0.013]	[0.037]	[0.021]	[0.030]	[0.041]	[0.020]	[0.031]
Poor	-0.056***	0	0.052***	-0.075***	0.014	0.057***	-0.078***	0.015	0.058***
	[0.010]	[0.006]	[0.009]	[0.017]	[0.012]	[0.015]	[0.018]	[0.012]	[0.014]
Rich	0.028***	-0.004	-0.026***	0.035*	-0.005	-0.029*	0.033*	-0.004	-0.029*
	[0.009]	[0.006]	[0.007]	[0.019]	[0.013]	[0.015]	[0.020]	[0.014]	[0.016]
Male	0.037***	0.003	-0.039***	0.027*	0.006	-0.031**	0.023	0.008	-0.029*
	[0.008]	[0.005]	[0.007]	[0.015]	[0.011]	[0.015]	[0.015]	[0.012]	[0.016]
Compulsory education	0.043**	0.032**	-0.052***	0.044	0.056**	-0.069**	0.018	0.041	-0.040
	[0.018]	[0.016]	[0.011]	[0.032]	[0.027]	[0.033]	[0.038]	[0.026]	[0.037]
Secondary education	0.104***	0.043***	-0.112***	0.101**	0.084***	-0.136***	0.069	0.072***	-0.106***
	[0.020]	[0.015]	[0.013]	[0.042]	[0.023]	[0.037]	[0.047]	[0.022]	[0.040]
Professional education	0.117***	0.049***	-0.129***	0.125***	0.085***	-0.161***	0.094**	0.074***	-0.130***
	[0.017]	[0.015]	[0.014]	[0.036]	[0.024]	[0.034]	[0.041]	[0.023]	[0.034]
University education	0.186***	0.056***	-0.191***	0.193***	0.109***	-0.222***	0.161***	0.109***	-0.207***
	[0.018]	[0.014]	[0.011]	[0.040]	[0.030]	[0.025]	[0.044]	[0.027]	[0.028]

Post graduate education	0.252***	0.015	-0.204***	0.169***	0.142**	-0.200***	0.140**	0.151**	-0.200***
	[0.025]	[0.025]	[0.012]	[0.060]	[0.066]	[0.032]	[0.062]	[0.062]	[0.039]
Unemployed	0.021	-0.015	-0.004	0.033	-0.034*	0.008	0.008	-0.016	0.011
	[0.018]	[0.013]	[0.015]	[0.032]	[0.019]	[0.023]	[0.029]	[0.019]	[0.021]
Self employed	0.023	-0.014	-0.009	0.03	-0.025	-0.005	0.002	-0.02	0.016
	[0.022]	[0.014]	[0.015]	[0.027]	[0.022]	[0.025]	[0.025]	[0.022]	[0.025]
White collar worker	0.089***	-0.014	-0.079***	0.081***	-0.008	-0.073***	0.066**	0.006	-0.074***
	[0.013]	[0.010]	[0.012]	[0.026]	[0.020]	[0.024]	[0.026]	[0.022]	[0.026]
Blue collar worker	0.029*	-0.012	-0.014	0.035	-0.008	-0.022	0.024	-0.002	-0.018
	[0.016]	[0.012]	[0.015]	[0.029]	[0.022]	[0.031]	[0.032]	[0.021]	[0.035]
Service worker	0.053***	-0.008	-0.043***	0.086***	-0.042**	-0.038	0.069***	-0.031*	-0.034
	[0.014]	[0.010]	[0.013]	[0.028]	[0.019]	[0.026]	[0.026]	[0.017]	[0.028]
Farmer, farm worker	0.060***	-0.004	-0.051***	0.069***	0.016	-0.082***	0.068**	0.029	-0.089***
	[0.017]	[0.013]	[0.017]	[0.026]	[0.024]	[0.023]	[0.033]	[0.028]	[0.028]
Pensioner	-0.002	-0.007	0.007	0.008	0.009	-0.014	-0.004	0.023	-0.015
	[0.018]	[0.010]	[0.019]	[0.034]	[0.017]	[0.030]	[0.037]	[0.016]	[0.033]
Student	0.128***	-0.038***	-0.085***	0.088	-0.054	-0.023	0.071	-0.039	-0.024
	[0.028]	[0.013]	[0.021]	[0.065]	[0.039]	[0.038]	[0.067]	[0.042]	[0.042]
Housewife	0.039**	-0.034**	-0.005	0.022	-0.031	0.013	-0.004	-0.014	0.02
	[0.018]	[0.013]	[0.019]	[0.035]	[0.025]	[0.030]	[0.035]	[0.026]	[0.032]
Observations	28909	28909	28955	7032	7032	7041	6274	6274	6281
log likelihood	-18624.11	-12203.71	-15662.88	-4511.66	-3055.29	-3848.54	-4051.73	-2682.95	-3491.07
Pseudo R2	0.0557	0.0297	0.0711	0.0685	0.0496	0.0814	0.0625	0.0456	0.0746

Source: LITS

Notes:
Controls: urban, rural or metropolitan area for columns 1 to 3. Omitted categories: young (17 to 34 years old), average income group, occupation in army, employees, lowest education. The industrial index is constructed at the regional level. Industrial index j is the index of market development of the zone where the respondent lives. Industrial index k measures the market development of the adjacent frontier zone. Standard errors are indicated in brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.

As the estimates of Table 4 are based on regional variations, it may seem confusing to pool the data of the various countries of the sample together. Therefore we run the same estimation of support for democracy within each country of the survey. Country-wise, regressions corroborate the finding that support for democracy does not increase with the market development indicator. Finally, we estimate the support for democracy within each zone of deeper regional and cultural integration (Tables 5.a and 5.b). Table 5.a displays the regressions on the entire sample; the industrial index measures the score of market development at the regional level. Table 5.b shows the regression on the sub-sample of frontier zones. The industrial index measures the score of market development of the adjacent frontier zone.

Essentially, regional market development again appears to exert no impact on the support for democracy. The industrial index of market development is only significant for the regions of the former Austro-Hungarian Empire; by contrast, the impact of the index is significantly negative in regions of Central Asia. Hence, the link between market development and preferences for democracy only appears in countries that are more affluent and face a higher degree of actual democracy.

Lindblom (1995) provides a possible interpretation of these findings. He defines markets and democracy as two distinct methods of popular controls over the elites. The former aims at outcomes (resources allocation) but gives no control over the processes that generate outcomes; symmetrically, the latter provides popular control over processes. In this framework, an interpretation of our findings is that the need to control processes becomes more pressing in situations where people have already secured the control over outcomes. It may also be the case that the relation is non-linear, in other words, for people to care about processes they need to have already reached a certain degree of empowerment. This would explain why the demand for democracy is stronger in societies that are already more advanced in terms of market liberalisation and democratisation.

Table 5.a: Support for democracy and regional indices of market liberalisation
dprobit estimates of support for democracy
Full sample

	1 Austro Hungarian Empire	2 Ottoman Empire	3 Former Yugoslavia	4 CIS	5 Central Asia	6 Polish Empire	7 USSR	8 EU
Industrial index	0.109**	-0.011	0.045	-0.077	-0.205	-0.002	-0.080**	0.032
	[0.050]	[0.042]	[0.044]	[0.048]	[0.096]	[0.045]	[0.034]	[0.045]
Observations	4,973	7,975	5,971	10,972	4,000	4,972	13,952	9,964
Log likelihood	-3,106	-5,138	-3,827	-7,167	-2,547	-3,253	-9,142	-6,394
Pseudo R2	0.062	0.062	0.055	0.054	0.054	0.056	0.050	0.059

Source: LITS

Notes: Controls: income, age categories, education categories, gender, occupation categories, urban, rural or metropolitan area, country dummies. Regions (in columns) are defined as in Table 3. The industrial index is constructed at the regional level. Standard errors are indicated in brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.

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Table 5b: Support for democracy and regional indices of market liberalisation
dprobit estimates of support to democracy
Sub-sample of frontier zones

	1 Austro Hungarian Empire	2 Ottoman Empire	3 Former Yugoslavia	4 CIS	5 Central Asia	6 Polish Empire	7 USSR	8 EU
Industrial index **Frontier zone *k***	0.123* [0.075]	-0.036 [0.085]	0.125 [0.082]	0.019 [0.133]	-0.123 [0.252]	-0.018 [0.087]	-0.035 [0.092]	-0.009 [0.073]
Observations	1,656	1,940	2,134	3,794	1,859	1,794	4,414	2,322
Log likelihood	-1,051	-1,250	-1,365	-2,452	-1,188	-1,161	-,869	-1,472
Pseudo R2	0.066	0.094	0.072	0.064	0.057	0.067	0.058	0.064

Source: LITS

Notes: Controls: income, age categories, education categories, gender, occupation categories, urban, rural or metropolitan area, country dummies. The industrial index measures the level of market development of the adjacent frontier zone *k*, when the respondent lives in frontier zone *j*. Standard errors are indicated in brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.

Finally, as a robustness check, we use alternative indicators of both the explained variable (support for democracy) and the explanatory variable (market development). First, we build an index of adhesion to democratic principles based on questions of the LITS. This index is based on the following.

Q3.12. *To what extent do you agree that the following are important for your country?*
- *Free and fair elections*
- *Law and order*
- *Freedom of speech*
- *Peace and stability*
- *A press that is independent from the government*
- *A strong political opposition*
- *A court system that defends individual rights against abuse by the state*
- *A court system that treats all citizens equally, rather than favouring some over others*
- *Protection of minority rights (religious, ethnics, etc)*
- *Freedom to travel abroad.*

Scale: Strongly disagree, disagree, neither agree nor disagree, agree, strongly agree, difficult to say.

The "value of democracy" index sums the number of times a person agrees or strongly agrees that the items listed in the above table are important. The index varies from 0 to 9, with an average of 4.5.

Table 6 shows the ordered probit regression of the "value of democracy" index. Column 1 displays the regression on the entire sample; the industrial index measures the score of market development at the regional level. Column 2 shows the regression on the sub-sample of frontier zones. The industrial index measures the score of market development of the adjacent frontier zone.

Table 6: The value of democracy and regional indices of market development ordered probit regressions of the score of declared importance of democracy

	1	2
	Entire sample (industrial index of zone *j*)	**Only frontier zones** (industrial index of adjacent zone *k*)
Industrial index	0.038	-0.3
	[0.090]	[0.232]
Observations	27,955	6,281
Log likelihood	-61,759	-13,689
Pseudo R2	0.019	0.027

Source: LITS.

Notes: Controls: income, age categories, education categories, gender, occupation categories, urban, rural or metropolitan area country dummies. Column 1: whole sample. Industrial index of the region *j* of the respondent. Column 2: only frontier zones. Industrial index of the adjacent frontier zone *k* when respondents live in region *j*. Standard errors are indicated in brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.

Again, regional market indices do not seem to influence the importance that citizens attach to democracy. The impact even seems to be significantly negative in regions of the CIS and the former Polish Empire.

Of course, the indices of market development that we use may be misconstrued and it is possible that better measures of market liberalisation would be found to influence support for democracy. We regret that indices of industrial concentration are not available at the regional level for the whole set of countries in the sample.[17] As an alternative to the industrial development index, we use an indicator of relative wealth. We calculate the average aggregate regional income based on the real expenditures declared by the households of the survey, relative to the national average.[18] This is based on the idea that aggregate income is an outcome of market development. Again, as shown by Table 7, this indicator does not have any significant impact on the attitudes to democracy or authoritarian regimes.[19]

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[17] In our view, indices of this type would be best suited, if they were available, than some often-used indicators based on governance, the protection of legal rights, the protection of minority shareholders or indices of price liberalisation. The latter have two important drawbacks: first they are only available at the national level and secondly, they often reflect the progress of the rule of law, i.e. of democracy itself, rather than that of the freedom of transactions on the market.

[18] Household expenditures were adjusted for household size using the modified OECD equivalence scale.

[19] Here we do not use frontier zone integration as there is no point in supposing that inhabitants of a given region experience the level of wealth of neighbouring regions.

Table 7: Support for democracy and relative regional income probit estimates of support for democracy

	1 Democracy preferable	2 Authoritarian government preferable	3 Does not matter
Regional level of expenditure	**0.021**	**-0.002**	**-0.018**
	[0.043]	[0.031]	[0.028]
Observations	27,960	27,960	27,995
Log likelihood	-18,089	-11,981	-15,212
Pseudo R2	0.055	0.027	0.073

Source: LITS.

Notes: Controls: income, age categories, education categories, gender, occupation categories, urban, rural or metropolitan area, country dummies. The industrial index is constructed as the average regional real level of expenditure. Standard errors are indicated in brackets. Robust standard errors are adjusted for clustering on frontier zones.
***, **, and * denote statistical significance of the estimated coefficients at the 1 per cent, 5 per cent and 10 per cent levels.

In summary, the degree of market development does not seem to have a sizable impact on the political support for democracy, or on the rejection of authoritarian regimes. In contradiction with current priors, developing market institutions is not a guarantee or a sufficient condition of the subsequent emergence of democracy.

5. CONCLUSION

The main result of this paper is that in transition countries, democracy appears to generate some popular support for a market economy, while economic liberalisation does not clearly increase support for democracy. These observations are consistent with the empirical observation that market economies can live without democracy, whereas there is no historical evidence of a democratic society without a market economy.

To be sure, these results only suggest that democracy encourages subjective support for a market economy. This does not mean that democracy is not likely to complicate the task of reformers, with the risk of impeding market liberalisation. The relationship between democracy and support for market liberalisation is particularly strong in the CIS, Central Asia and south-eastern Europe, as opposed to other countries of the European Union (e.g. central Europe). Hence, the link seems to be particularly relevant for "developing" countries, i.e. countries that are still in an earlier stage of democratic development.

Concerning the reverse relation, our results cast doubt on the idea that democracy need naturally emerge as a by-product of capitalism, particularly in less developed countries. The data do not support the idea that market liberalisation as such is sufficient to trigger the demand for democracy; identically, citizens of countries with less developed markets do not appear to be less supportive of democracy. Therefore, one cannot advocate the preferences of citizens to postpone the construction of democratic institutions.

In summary, our data do not support a widespread view concerning the optimal sequencing of reforms for developing countries: it seems that building democratic institutions can play as an ingredient in favor of market liberalisation, whereas early market development is no guarantee of popular support for democracy further down the line.

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ANNEX
Table A1: Descriptive statistics

Variable	Description	Mean	Standard deviation
Market preferable	1 if respondent prefers market economy to other form of economic system	0.43	0.50
Planned economy is preferable	1 if respondent prefers planned economy under certain circumstances	0.26	0.44
Does not matter_eco	1 if respondent answers "for people like me it does not matter" whether the economy is organised as a market economy or as a planned economy	0.31	0.46
Democracy preferable	1 if respondent prefers democracy to other form of political system	0.57	0.49
Authoritarian reg. preferable	1 if respondent prefers authoritarian regime under certain circumstances	0.16	0.37
Does not matter_pol	1 if respondent answers "for people like me it does not matter" whether a government is democratic or authoritarian	0.27	0.37
Old	1 if more than 65 years old	0.16	0.37
Mid age	1 if between 50 and 65 years old	0.24	0.43
Adult	1 if between 35 and 50 years old	0.31	0.46
Gender	1 if male	0.48	0.50
Unemployed	1 if actively looking for a job, waiting for an answer or finding no job available	0.09	0.29
White collar worker		0.17	0.38
Blue collar worker		0.18	0.38
Service worker		0.12	0.32
Farmer or farm worker		0.05	0.22
Pensioner		0.21	0.41
Student		0.03	0.16
Housewife		0.06	0.25
Out of the work force		0.05	0.22
Self-employed	1 if work as self-employed at their main job (regardless of occupation)	0.08	0.28
Support democracy	1 if respondent prefers democracy to other form of political system	0.57	0.49
Authoritarian	1 if respondent prefers authoritarian system	0.16	0.37
Does not matter	1 if respondent declares that the political system doesn't matter	0.27	0.44
Industrial index	Regional index; share of SMEs; private. post-1989-created enterprises. Min 1; Max 5	2.39	1.05
Imp_freel	Importance of free and fair elections. Min 1; Max 5	0.89	0.32
Imp_laword	Importance of law and order. Min 1; Max 5	0.59	0.49
Imp_freesp	Importance of freedom of speech. Min 1; Max 5	0.51	0.50
Imp_peace	Importance of peace and stability. Min 1; Max 5	0.65	0.48
Imp_indeprs	Importance of press independence. Min 1; Max 5	0.44	0.50
Imp_polopp	Importance of political opposition. Min 1; Max 5	0.39	0.49
Imp_courtin	Importance of courts to defend individual rights against abuse by state. Min 1; Max 5	0.55	0.50
Imp_courteq	Importance of equal treatment of citizens in courts. Min 1; Max 5	0.60	0.49
Imp_minor	Importance of minority rights protection. Min 1; Max 5	0.42	0.49
Imp_freeab	Importance of freedom to travel abroad. Min 1; Max 5	0.53	0.50
Imp_demo	Global index (sum) of importance of above democratic institutions. Min 0 (none is important); Max: 10 (all are very important)	5.38	3.59

Source: LITS

Table A2: Attitudes towards the market and democracy in frontier zones of adjacent countries, ranked by democracy level

	Country *i* Market preferable	Country *j* Market preferable	Country *i* Democracy preferable	Country *j* Democracy preferable
Estonia>Russia	0.56	0.33	0.68	0.48
Estonia>Latvia	0.46	0.17	0.50	0.56
Russia>Belarus	0.32	0.48	0.38	0.57
Ukraine>Russia	0.50	0.22	0.61	0.31
Russia>Kazakhstan	0.28	0.35	0.42	0.52
Latvia>Lithuania	0.32	0.50	0.51	0.59
Lithuania>Belarus	0.55	0.33	0.58	0.61
Albania>Montenegro	0.71	0.51	0.74	0.74
Georgia>Armenia	0.45	0.25	0.62	0.60
Turkey>Armenia	0.27	0.20	1.00	0.50
Georgia>Azerbaijan	0.35	0.39	0.50	0.44
Poland>Belarus	0.42	0.43	0.60	0.12
Ukraine>Belarus	0.55	0.41	0.58	0.49
Poland>Ukraine	0.13	0.46	0.47	0.51
Slovak>Poland	0.27	0.33	0.59	0.46
Romania>Ukraine	0.74	0.82	0.82	0.87
Slovak Rep.>Ukraine	0.48	0.50	0.52	0.51
Croatia>Bosnia	0.34	0.29	0.43	0.49
Slovenia>Croatia	0.55	0.40	0.70	0.58
Serbia>FYR Macedonia	0.90	0.27	0.92	0.40
Hungary>Serbia	0.57	0.38	0.80	0.42
Bulgaria>FYR Macedonia	0.25	0.54	0.43	0.56
Bulgaria>Romania	0.25	0.32	0.32	0.42
Romania>Moldova	0.59	0.41	0.68	0.62
Romania>Serbia	0.56	0.38	0.52	0.42
Hungary>Romania	0.69	0.69	0.75	0.75
Hungary>Croatia	0.24	0.37	0.41	0.49
Hungary>Romania	0.27	0.69	0.61	0.75
Slovak Rep.>Hungary	0.58	0.37	0.73	0.65
Slovak Rep.>Czech Rep.	0.49	0.41	0.64	0.40
Poland>Czech Rep.	0.45	0.48	0.58	0.62
Kyrgyz Rep.>Kazakhstan	0.49	0.27	0.53	0.43
Kyrgyz Rep.>Tajikistan	0.70	0.35	0.75	0.48

Source: LITS, Freedom House Nations in Transit (2006a). Notes: Symbols > or < indicate the country ranking in terms of democracy according to Freedom House Nations in Transit 2006. Average score inside each zone.

Table A3: Attitudes towards the market and democracy in frontier zones of selected countries

BELARUS	Frontier industrial index	Market preferable	Democracy preferable	ROMANIA	Frontier industrial index	Market preferable	Democracy preferable
Belarus-Poland	1.87	0.43	0.12	Romania-Serbia	2.39	0.56	0.52
Belarus-Ukraine	1.89	0.41	0.49	Romania-Bulgaria	2.43	0.32	0.42
Belarus-Russia	1.98	0.48	0.57	Romania-Hungary	2.58	0.69	0.75
Belarus-Lithuania	2.03	0.33	0.61	Romania-Moldova	2.64	0.59	0.68
CROATIA				**RUSSIA**			
Croatia-Bosnia	2.35	0.34	0.43	Russia-Mongolia	2.20	0.64	0.61
Croatia-Slovenia	2.31	0.4	0.58	Russia-Kazakhstan	2.26	0.28	0.42
HUNGARY				Russia-Estonia	2.33	0.33	0.48
Hungary-Slovak Rep.	2.33	0.37	0.65	Russia-Poland	2.33	0.45	0.57
Hungary-Croatia	2.38	0.12	0.34	Russia-Belarus	2.33	0.32	0.38
Hungary-Romania	2.48	0.27	0.61	Russia-Ukraine	2.51	0.22	0.31
Hungary-Serbia	2.53	0.57	0.8	**SERBIA**			
LATVIA				Serbia-FYR Macedonia	2.12	0.90	0.92
Latvia-Lithuania	2.90	0.32	0.51	Serbia-Romania	2.29	0.39	0.48
Latvia-Russia	2.90	0.24	0.43	Serbia-Hungary	2.40	0.38	0.42
Latvia-Estonia	3.38	0.17	0.56	**UKRAINE**			
LITHUANIA				Ukraine-Poland	2.25	0.46	0.51
Lithuania-Belarus	2.50	0.55	0.58	Ukraine-Belarus	2.32	0.55	0.58
Lithuania-Latvia	2.90	0.50	0.59	Ukraine-Russia	2.34	0.5	0.61
Lithuania-Russia	3.17	0.26	0.60	Ukraine-Romania	2.53	0.82	0.87
POLAND				Ukraine-Slovak Rep.	2.67	0.50	0.51
Poland-Belarus	1.94	0.42	0.60				
Poland-Ukraine	2.26	0.13	0.47				
Poland-Czech Rep.	2.43	0.45	0.58				
Poland-Slovak Rep.	2.77	0.33	0.46				

Source: LITS

Table A4: Descriptive statistics by country

	Support democracy (%)	Support authoritarian (%)	Support market (%)	Support plan (%)	Industrial index	Importance of democracy
Albania	66.10	9.40	65.15	13.14	2.30	7.23
Armenia	47.01	13.60	33.22	22.19	2.32	4.89
Azerbaijan	47.55	9.13	39.61	9.27	1.96	5.15
Belarus	52.04	17.06	48	19.08	1.94	4.33
Bosnia & Herz.	61.42	19.14	34.37	38.65	2.33	6.43
Bulgaria	45.90	17.74	36.79	24.72	2.61	5.89
Croatia	55.28	14.12	36.32	26.78	2.37	7.41
Czech Rep.	58.53	17.59	47.03	27.25	2.60	5.36
Estonia	61.11	12.23	49.47	18.45	2.78	6.03
FYR Macedonia	46.63	18.04	33.88	28.96	2.33	5.09
Georgia	58.13	11.63	38.00	23.04	2.28	5.73
Hungary	61.68	13.45	37.31	26.29	2.53	6.17
Kazakhstan	48.81	22.23	31.92	39.52	2.50	5.86
Kyrgyz Rep.	58.92	19.11	49.75	27.68	2.25	4.35
Latvia	55.97	19.59	39.11	26.16	2.75	5.99
Lithuania	54.42	10.31	41.64	17.12	2.73	5.72
Moldova	49.59	19.25	39.19	32.75	2.32	4.32
Mongolia	69.92	19.82	71.42	16.00	2.22	1.79
Montenegro	73.27	8.26	47.17	26.02	2.19	6.82
Poland	54.19	17.49	40.24	14.60	2.36	6.27
Romania	50.19	26.68	45.87	26.77	2.55	5.81
Russia	36.05	32.77	27.67	41.03	2.37	4.88
Serbia	51.02	14.00	44.52	21.21	2.33	6.80
Slovak Rep.	67.43	13.21	47.51	24.57	2.52	5.12
Slovenia	66.37	8.18	49.79	18.77	2.26	6.29
Tajikistan	62.74	15.87	51.35	28.18	2.21	4.26
Turkey	74.93	6.04	37.59	32.75	2.06	7.01
Ukraine	55.14	24.45	42.19	33.24	2.36	5.39
Uzbekistan	68.40	12.24	43.55	38.04	2.27	3.84

Source: LITS

Table A5: Indices of democracy and country rankings

	FREEDOM HOUSE		BTI	POLITY IV	
	Democracy (Nations in Transit) (i) Consolidated democracy	Freedom in the World (ii)	Ranking	Democracy indicator (iv)	Polity (v)
Slovenia	1.75	95	1	7	6
Estonia	1.96	95	2	7	6
Slovak Rep	1.96	91	5	9	9
Hungary	2.00	93	4	10	10
Latvia	2.07	89	9	8	8
Poland	2.14	92	7	10	10
Lithuania	2.21	90	6	10	10
Czech Rep.	2.25	92	3	10	10
Bulgaria	2.93	98	10	9	9
Romania	3.39	75	11	9	9
Croatia	3.71	84	8	7	7
Serbia	3.71	76(vi)	14 (vi)	6 (vi)	6 (vi)
Albania	3.79	63	16	7	7
FYR Macedonia	3.82	61	12	9	9
Montenegro	3.89	NA	NA	NA	NA
Bosnia and Herzegovina.	4.07	62	17	NA	NA
Ukraine	4.21	72	13	6	6
Georgia	4.86	61	21	7	7
Moldova	4.96	57	23	8	8
Armenia	5.14	41	19	5	5
Kyrgyz Rep	5.64	47	24	4	-3
Russia	5.75	35	20	7	7
Tajikistan	5.93	30	27	1	-3
Azerbaijan	5.93	33	25	0	-7
Kazakhstan	6.39	32	22	0	-6
Belarus	6.71	15	26	0	-7
Uzbekistan	6.82	3	28	0	-9
Mongolia	NA	83	18	10	10
Turkey	NA	65	15	8	7

Source: Freedom House Nations in Transit (2006a), Freedom House: Freedom in the World (2006b), Bertelsmann Stiftung (2005), Polity IV, CIDCM (2006).
NA – Not applicable

(i) The democracy score ratings from the Nations in Transit survey by Freedom House are based on a scale of 1 to 7, with 1 representing the highest level of democratic progress and 7 the lowest. The democracy score is an average of ratings for electoral process, civil society, independent media, independence of the judicial system and corruption.

(ii) The Freedom in the World survey provides an annual evaluation of the state of global freedom as experienced by individuals. The ratings process is based on a checklist of 10 political rights questions and 15 civil liberties questions. The political rights questions encompass electoral process, political pluralism and participation, and functioning of the government. The civil liberties questions are concerned with freedom of expression and belief, associational and organisational rights, rule of law, and personal autonomy and individual rights. The highest number of points that can be awarded to the political rights checklist is 40, and that to the civil liberties checklist is 60, with the highest score indicating more freedom. This index is thus more global than the democracy score and more concerned with the actual rights and social freedoms enjoyed by individuals.

(iii) The Bertelsmann Transformation Index (BTI) is a global ranking that analyses and evaluates development and transformation processes in 119 countries. This index is, however, not only concerned with democracy but also with the development of the market economy in each country, and for that reason is less well suited than indicators purely concerned with democracy for our identification strategy.

(iv) The Polity IV Democracy indicator is an additive 11-point scale (0-10), which is a weighted indicator of the competitiveness of political participation, the openness and competitiveness of executive recruitment, and constraints on the chief executive.

(v) The Polity indicator from Polity IV is a combined polity score that is computed by subtracting the 'autocracy score', which indicates how restricted or suppressed political participation is, from the democracy score. A negative ranking thus signifies that autocratic characteristics of a regime outweigh its democracy characteristics.

(vi) Serbia and Montenegro are pooled.

Table A6: Indices of industrial market development at frontier zones

Frontier Zone *i j*	Frontier zone *i*	Country *i*	Frontier zone *j*	Country *j*
Albania-Montenegro	2.27	2.36	2.43	2.24
Armenia-Georgia	2.00	2.36	2.38	2.24
Azerbaijan-Georgia	1.89	1.89	2.25	2.24
Belarus-Lithuania	1.95	1.92	2.53	2.70
Belarus-Poland	2.04	1.92	2.03	2.38
Belarus-Russia	2.00	1.92	2.00	2.38
Belarus-Ukraine	2.14	1.92	2.21	2.33
Bosnia-Croatia	2.42	2.38	2.38	2.37
Bosnia-Serbia	2.56	2.38	2.12	2.25
Bulgaria-FYR Macedonia	2.47	2.62	2.18	2.29
Croatia-Bosnia	2.38	2.37	2.42	2.38
Croatia-Slovenia	2.31	2.37	2.19	2.25
Czech-Poland	2.62	2.61	2.26	2.38
Czech Rep-Slovak Rep	2.80	2.61	2.28	2.49
Estonia-Russia	2.34	2.74	2.55	2.38
Estonia-Latvia	3.14	2.33	2.27	2.80
Kazakhstan-Kyrgyz Rep	2.65	2.48	2.32	2.25
Kazakhstan-Russia	2.57	2.48	2.38	2.38
Kyrgyz Rep-Tajikistan	2.00	2.25	2.55	2.20
Latvia-Lithuania	2.91	2.80	2.96	2.70
FYR Macedonia-Serbia	2.15	2.29	2.50	2.25
Moldova-Romania	2.35	2.26	2.93	2.56
Poland-Slovak Rep	2.58	2.38	2.55	2.49
Poland-Ukraine	2.27	2.38	3.14	2.33
Romania-Serbia	2.53	2.56	2.29	2.25
Russia-Ukraine	2.47	2.38	2.40	2.33
Slovak Rep-Ukraine	3.00	2.49	2.67	2.33

Source: LITS.